TY - JOUR

ID - 2024-53452-033

AN - 2024-53452-033

AU - Busch, Anne

AU - Roy, Sagnik

AU - Helbing, Dario Lucas

AU - Colic, Lejla

AU - Opel, Nils

AU - Besteher, Bianca

AU - Walter, Martin

AU - Bauer, Michael

AU - Refisch, Alexander

T1 - Gut microbiome in atypical depression

JF - Journal of Affective Disorders

JO - Journal of Affective Disorders

JA - J Affect Disord

Y1 - 2024/03/15/

VL - 349

SP - 277

EP - 285

PB - Elsevier Science

SN - 0165-0327

SN - 1573-2517

AD - Busch, Anne, Bioinstrumentezentrum (BIZ), Winzerlaerstr. 2, 07745, Jena, Germany

N1 - Accession Number: 2024-53452-033. PMID: 38211751 Partial author list: First Author & Affiliation: Busch, Anne; Friedrich Schiller University Jena, Jena, Germany, anne.busch@uni-jena.de. Release Date: 20240307. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Busch, Anne. Major Descriptor: Diagnostic and Statistical Manual; Immune System; Major Depression; Atypical Depression. Classification: Affective Disorders (3211). Population: Human (10); Male (30); Female (40). Location: Germany. Age Group: Adulthood (18 yrs & older) (300). Tests & Measures: Mini International Neuropsychiatric Interview DOI: 10.1037/t18597-000. Methodology: Empirical Study; Interview; Quantitative Study. References Available: Y. Page Count: 9. Issue Publication Date: Mar 15, 2024. Publication History: First Posted Date: Jan 9, 2024; Accepted Date: Jan 4, 2024; Revised Date: Dec 15, 2023; First Submitted Date: Sep 11, 2023. Copyright Statement: Elsevier B.V. 2024.

AB - Background: Recent studies showed that immunometabolic dysregulation is related to unipolar major depressive disorder (MDD) and that it more consistently maps to MDD patients endorsing an atypical symptom profile, characterized by energy-related symptoms including increased appetite, weight gain, and hypersomnia. Despite the documented influence of the microbiome on immune regulation and energy homeostasis, studies have not yet investigated microbiome differences among clinical groups in individuals with MDD. Methods: Fifteen MDD patients with atypical features according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5)-5, forty-four MDD patients not fulfilling the DSM-5 criteria for the atypical subtype, and nineteen healthy controls were included in the study. Participants completed detailed clinical assessment and stool samples were collected. Samples were sequenced for the prokaryotic 16S rRNA gene, in the V3-V4 variable regions. Only samples with no antibiotic exposure in the previous 12 months and a minimum of >2000 quality-filtered reads were included in the analyses. Results: There were no statistically significant differences in alpha- and beta-diversity between the MDD groups and healthy controls. However, within the atypical MDD group, there was an increase in the Verrucomicrobiota phylum, with Akkermansia as the predominant bacterial genus. Limitations: Cross-sectional data, modest sample size, and significantly increased body mass index in the atypical MDD group. Conclusions: There were no overall differences among the investigated groups. However, differences were found at several taxonomic levels. Studies in larger longitudinal samples with relevant confounders are needed to advance the understanding of the microbial influences on the clinical heterogeneity of depression. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

KW - Microbiome

KW - Depression

KW - Atypical depression

KW - Immunometabolic depression

KW - Humans

KW - Depression

KW - Depressive Disorder, Major

KW - Cross-Sectional Studies

KW - Gastrointestinal Microbiome

KW - RNA, Ribosomal, 16S

KW - Diagnostic and Statistical Manual

KW - Immune System

KW - Major Depression

KW - Atypical Depression

U1 - Sponsor: Deutsche Forschungsgemeinschaft, Germany. Grant: 390713860. Other Details: Under Germany’s Excellence Strategy (EXC 2051). Recipients: Busch, Anne

U1 - Sponsor: University of Jena, Germany. Grant: 2.11.3-A1/2020-06. Other Details: ProChance. Recipients: Busch, Anne

U1 - Sponsor: Medical Faculty Jena, Interdisciplinary Center of Clinical Research, Germany. Recipients: Colic, Lejla

U1 - Sponsor: German Federal Ministry for Education and Research, Germany. Grant: 01EE2305A; 01EE2305F; 01EW2010A. Recipients: Walter, Martin

U1 - Sponsor: Deutsche Forschungsgemeinschaft, Germany. Grant: 01EW2010A. Recipients: Walter, Martin

U1 - Sponsor: European Union, Horizon 2020, Europe. Grant: 857394. Recipients: Walter, Martin

DO - 10.1016/j.jad.2024.01.060

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2024-53452-033&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2019-04377-001

AN - 2019-04377-001

AU - Zhang, Jie

AU - Bi, Jiang‐Jiang

AU - Guo, Guo‐Jun

AU - Yang, Ling

AU - Zhu, Bin

AU - Zhan, Gao‐Feng

AU - Li, Shan

AU - Huang, Nian‐Nian

AU - Hashimoto, Kenji

AU - Yang, Chun

AU - Luo, Ai‐Lin

T1 - Abnormal composition of gut microbiota contributes to delirium‐like behaviors after abdominal surgery in mice

JF - CNS Neuroscience & Therapeutics

JO - CNS Neuroscience & Therapeutics

JA - CNS Neurosci Ther

Y1 - 2019/06//

VL - 25

IS - 6

SP - 685

EP - 696

PB - Wiley-Blackwell Publishing Ltd.

SN - 1755-5930

SN - 1755-5949

AD - Yang, Chun, Department of Anesthesiology, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

N1 - Accession Number: 2019-04377-001. PMID: 30680947 Other Journal Title: CNS Drug Reviews. Partial author list: First Author & Affiliation: Zhang, Jie; Department of Anesthesiology, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China. Other Publishers: Blackwell Publishing; Neva Press. Release Date: 20190128. Correction Date: 20210712. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Delirium; Gastrointestinal System; Microorganisms; Postsurgical Complications; Gastrointestinal Microbiota. Minor Descriptor: Abdomen; Mice. Classification: Physiological Processes (2540). Population: Animal (20); Male (30). Methodology: Empirical Study; Quantitative Study. References Available: Y. Page Count: 12. Issue Publication Date: Jun, 2019. Publication History: Accepted Date: Dec 22, 2018; Revised Date: Dec 2, 2018; First Submitted Date: Aug 9, 2018. Copyright Statement: CNS Neuroscience & Therapeutics Published by John Wiley & Sons Ltd. This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited. The Authors. 2019.

AB - Aims: Anesthesia and surgery can cause delirium‐like symptoms postoperatively. Increasing evidence suggests that gut microbiota is a physiological regulator of the brain. Herein, we investigated whether gut microbiota plays a role in postoperative delirium (POD). Methods: Mice were separated into non‐POD and POD phenotypes after abdominal surgery by applying hierarchical clustering analysis to behavioral tests. Fecal samples were collected, and 16S ribosomal RNA gene sequencing was performed to detect differences in gut microbiota composition among sham, non‐POD, and POD mice. Fecal bacteria from non‐POD and POD mice were transplanted into antibiotics‐induced pseudo‐germ‐free mice to investigate the effects on behaviors. Results: α‐diversity and β‐diversity indicated differences in gut microbiota composition between the non‐POD and POD mice. At the phylum level, the non‐POD mice had significantly higher levels of Tenericutes, which were not detected in the POD mice. At the class level, levels of Gammaproteobacteria were higher in the POD mice, whereas the non‐POD mice had significantly higher levels of Mollicutes, which were not detected in the POD mice. A total of 20 gut bacteria differed significantly between the POD and non‐POD mice. Interestingly, the pseudo‐germ‐free mice showed abnormal behaviors prior to transplant. The pseudo‐germ‐free mice that received fecal bacteria transplants from non‐POD mice but not from POD mice showed improvements in behaviors. Conclusions: Abnormal gut microbiota composition after abdominal surgery may contribute to the development of POD. A therapeutic strategy that targets gut microbiota could provide a novel alterative for POD treatment. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - abdominal surgery

KW - gut microbiota

KW - gut‐ brain axis

KW - microbiota transplant

KW - postoperative delirium

KW - Abdomen

KW - Animals

KW - Biodiversity

KW - Delirium

KW - Fecal Microbiota Transplantation

KW - Gastrointestinal Microbiome

KW - Germ-Free Life

KW - Male

KW - Mice, Inbred C57BL

KW - Postoperative Complications

KW - Random Allocation

KW - Delirium

KW - Gastrointestinal System

KW - Microorganisms

KW - Postsurgical Complications

KW - Gastrointestinal Microbiota

KW - Abdomen

KW - Mice

U1 - Sponsor: National Natural Science Foundation of China, China. Grant: 81500931; 81571047; 81703482; 81771159. Recipients: No recipient indicated

U1 - Sponsor: Bureau of Science and Technology Foundation of Changzhou, China. Grant: CJ20159022; CJ20160030. Recipients: No recipient indicated

U1 - Sponsor: Changzhou Municipal Committee of Health and Family Planning, Major Science and Technology Projects, China. Grant: ZD201505; ZD201407. Recipients: No recipient indicated

U1 - Sponsor: Japan Agency for Medical Research and Development, Japan. Recipients: No recipient indicated

DO - 10.1111/cns.13103

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-04377-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2020-07478-005

AN - 2020-07478-005

AU - Flowers, Stephanie A.

AU - Ward, Kristen M.

AU - Clark, Crystal T.

T1 - The gut microbiome in bipolar disorder and pharmacotherapy management

JF - Neuropsychobiology

JO - Neuropsychobiology

JA - Neuropsychobiology

Y1 - 2020///

VL - 79

IS - 1

SP - 43

EP - 49

PB - Karger

SN - 0302-282X

SN - 1423-0224

SN - 978-3-318-06395-0

SN - 978-3-318-06396-7

AD - Flowers, Stephanie A., University of Illinois at Chicago, College of Pharmacy, 833 S. Wood St., Chicago, IL, US, 60612

N1 - Accession Number: 2020-07478-005. PMID: 31722343 Partial author list: First Author & Affiliation: Flowers, Stephanie A.; Department of Pharmacy Practice, University of Illinois at Chicago, Chicago, IL, US, flowers9@uic.edu. Release Date: 20200604. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. ISBN: 978-3-318-06395-0; 978-3-318-06396-7. Language: English. Major Descriptor: Bipolar Disorder; Drug Therapy; Emotional States; Gastrointestinal System; Microorganisms. Minor Descriptor: Colon Disorders; Mental Health; Physical Disorders. Classification: Affective Disorders (3211). Population: Human (10). References Available: Y. Page Count: 7. Issue Publication Date: 2020. Publication History: First Posted Date: Nov 13, 2019; Accepted Date: Oct 31, 2019; First Submitted Date: Jul 12, 2018. Copyright Statement: S. Karger AG, Basel. 2019.

AB - The gut microbiome is a complex and dynamic community of commensal, symbiotic, and pathogenic microorganisms that exist in a bidirectional relationship with the host. Bacterial functions in the gut play a critical role in healthy host functioning, and its disruption can contribute to many medical conditions. The relationship between gut microbiota and the brain has gained attention in mental health due to the mounting evidence supporting the association of gut bacteria with mood and behavior. Patients with bipolar disorder exhibit an increased frequency of gastrointestinal illnesses such as inflammatory bowel disease, which mechanistically has been linked to microbial community function. While the heterogeneity in microbial communities between individuals might be associated with disease risk, it may also moderate the efficacy or adverse effects associated with the use of medication. The following review highlights published evidence linking the function of gut microbiota both to bipolar disorder risk and to the effect of medications that influence microbiota, inflammation, and mood symptoms. (PsycInfo Database Record (c) 2020 APA, all rights reserved)

KW - Gut microbiome

KW - Gut-brain axis

KW - Bipolar disorder

KW - Personalized medicine

KW - Mood disorders

KW - Bipolar Disorder

KW - Drug Therapy

KW - Emotional States

KW - Gastrointestinal System

KW - Microorganisms

KW - Colon Disorders

KW - Mental Health

KW - Physical Disorders

DO - 10.1159/000504496

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2020-07478-005&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2020-47614-001

AN - 2020-47614-001

AU - Zhu, Bin

AU - Shen, Jianqin

AU - Jiang, Riyue

AU - Jin, Lina

AU - Zhan, Gaofeng

AU - Liu, Jinfeng

AU - Sha, Qi

AU - Xu, Rongpeng

AU - Miao, Liying

AU - Yang, Chun

T1 - Abnormalities in gut microbiota and serum metabolites in hemodialysis patients with mild cognitive decline: A single-center observational study

JF - Psychopharmacology

JO - Psychopharmacology

JA - Psychopharmacology (Berl)

Y1 - 2020/09//

VL - 237

IS - 9

SP - 2739

EP - 2752

PB - Springer

SN - 0033-3158

SN - 1432-2072

AD - Miao, Liying, Department of Nephrology, Third Affiliated Hospital, Soochow University, Changzhou, China, 213003

N1 - Accession Number: 2020-47614-001. PMID: 32601991 Other Journal Title: Psychopharmacologia. Partial author list: First Author & Affiliation: Zhu, Bin; Department of Critical Care Medicine, Third Affiliated Hospital, Soochow University, Changzhou, China. Release Date: 20200702. Correction Date: 20240304. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Zhu, Bin. Major Descriptor: Blood Serum; Hemodialysis; Metabolites; Microorganisms; Mild Cognitive Impairment. Minor Descriptor: Cognitive Ability; Gastrointestinal System; Ribonucleic Acid; Gastrointestinal Microbiota. Classification: Medical Treatment of Physical Illness (3363). Population: Human (10); Male (30); Female (40). Location: China. Age Group: Adulthood (18 yrs & older) (300). Tests & Measures: Mini-Mental State Examination DOI: 10.1037/t07757-000. Methodology: Empirical Study; Quantitative Study. References Available: Y. Page Count: 14. Issue Publication Date: Sep, 2020. Publication History: First Posted Date: Jun 30, 2020; Accepted Date: May 20, 2020; First Submitted Date: Apr 14, 2020. Copyright Statement: Springer-Verlag GmbH Germany, part of Springer Nature. 2020.

AB - Rationale: Although a growing body of evidence indicates that the scores of cognitive function in hemodialysis patients are significantly lower than those of healthy individuals, underlying mechanisms have not been fully elucidated. Objectives: To investigate the roles of gut microbiota and serum metabolites in hemodialysis patients with mild cognitive decline (MCD). Methods: A total of 30 healthy individuals and 77 hemodialysis patients were enrolled and were classified into healthy control (HC), normal cognitive function (NCF), and MCD groups by evaluation of Montreal Cognitive Assessment. Fecal samples were analyzed by 16S rRNA and serum samples were analyzed by gas chromatography-mass spectrometry from all subjects. Results: The 16S rRNA study demonstrated that the gut microbiota profiles, including α- and β-diversity, and a number of 16 gut bacteria were significantly altered in the MCD group compared with those in HC or those with NCF. A metabonomics study showed that a total of 29 serum metabolites were altered in the MCD group. Receiver operating characteristic curves showed that Genus Bilophila and serum putrescine might be sensitive biomarkers to indicate MCD in patients with hemodialysis. Conclusions: These findings demonstrate gut microbiota and serum metabolites were probably involved in the pathogenesis of hemodialysis-related MCD. Therapeutic strategies targeting abnormalities in gut microbiota and serum metabolites may facilitate the beneficial effects for hemodialysis patients with MCD. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

KW - Hemodialysis

KW - Mild cognitive dysfunction

KW - Gut microbiota

KW - Metabolites

KW - Biomarkers

KW - Adult

KW - Biomarkers

KW - Cognitive Dysfunction

KW - Feces

KW - Female

KW - Gastrointestinal Microbiome

KW - Humans

KW - Male

KW - Metabolomics

KW - Middle Aged

KW - RNA, Ribosomal, 16S

KW - Renal Dialysis

KW - Renal Insufficiency, Chronic

KW - Blood Serum

KW - Hemodialysis

KW - Metabolites

KW - Microorganisms

KW - Mild Cognitive Impairment

KW - Cognitive Ability

KW - Gastrointestinal System

KW - Ribonucleic Acid

KW - Gastrointestinal Microbiota

U1 - Sponsor: National Natural Science Foundation of China, China. Grant: 81703482; 81974171. Recipients: No recipient indicated

U1 - Sponsor: Program of Bureau of Science and Technology Foundation of Changzhou, China. Grant: CJ20159022. Recipients: Zhu, Bin

U1 - Sponsor: Program of Bureau of Science and Technology Foundation of Changzhou, China. Grant: CJ20179028. Recipients: Miao, Liying

U1 - Sponsor: Changzhou Municipal Committee of Health and Family Planning, China. Grant: ZD201505. Other Details: Major Science and Technology Project. Recipients: Zhu, Bin

U1 - Sponsor: Changzhou Municipal Committee of Health and Family Planning, China. Grant: ZD201601. Other Details: Major Science and Technology Project. Recipients: Miao, Liying

DO - 10.1007/s00213-020-05569-x

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2020-47614-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - CHAP

ID - 2021-34459-022

AN - 2021-34459-022

AU - Brown, Lisa C.

AU - Cockburn, Chelsea L.

AU - Eyre, Harris A.

ED - Eyre, Harris A.

ED - Berk, Michael

ED - Lavretsky, Helen

ED - Reynolds, Charles F. III

T1 - An introduction to antidepressant pharmacomicrobiomics and implications in depression

T2 - Convergence mental health: A transdisciplinary approach to innovation.

Y1 - 2021///

SP - 329

EP - 344

CY - New York, NY

PB - Oxford University Press

SN - 9780197506271

SN - 9780197506295

N1 - Accession Number: 2021-34459-022. Partial author list: First Author & Affiliation: Brown, Lisa C.; Myriad Genetics, Brooklyn, NY, US. Release Date: 20210812. Correction Date: 20221128. Publication Type: Book (0200), Edited Book (0280). Format Covered: Print. Document Type: Chapter. ISBN: 9780197506271, ISBN Paperback; 9780197506295, ISBN Digital (undefined format). Language: English. Major Descriptor: Antidepressant Drugs; Drug Therapy; Major Depression; Biomedicine. Minor Descriptor: Biological Markers; Quality of Life. Classification: Clinical Psychopharmacology (3340). Population: Human (10). Intended Audience: Psychology: Professional & Research (PS). References Available: Y. Page Count: 16.

AB - With approximately 21% of individuals experiencing depression in a lifetime, major depressive disorder incurs a high burden of illness economically and on quality of life. In addition to the burden of a depressive episode, with each medication trial, individuals risk becoming treatment resistant and experiencing increased adverse events. There are many factors that can affect response to medication including genetics, epigenetics, environment, diagnosis, comorbidities, and others. It is therefore critical to develop tools that can lead to better treatment selection resulting in remission of depressive symptoms. The full mechanism of most antidepressants is poorly understood and therefore treatment decisions usually rely on clinical features. Another area of medicine that has become popular in the last decade is how a person's microbiome can affect health and investigators have begun to examine ways in that microbiomic markers moderate antidepressant response as part of the field of pharmacomicrobiomics (PMx). PMx may play an important role in antidepressant efficacy, and therefore, a strong understanding of the interplay between the microbiome and antidepressants may lead to tools to help personalize treatments for patients with depression. This chapter discusses the current state of PMx of antidepressant therapy and presents a roadmap for the future. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

KW - antidepressants

KW - depression

KW - microbiome

KW - microbiomic markers

KW - pharmacomicrobiomics

KW - quality of life

KW - Antidepressant Drugs

KW - Drug Therapy

KW - Major Depression

KW - Biomedicine

KW - Biological Markers

KW - Quality of Life

DO - 10.1093/med/9780197506271.003.0022

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2021-34459-022&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2021-92957-003

AN - 2021-92957-003

AU - Dabrowski, Wojciech

AU - Siwicka-Gieroba, Dorota

AU - Kotfis, Katarzyna

AU - Zaid, Sami

AU - Terpilowska, Sylwia

AU - Robba, Chiara

AU - Siwicki, Andrzej K.

T1 - The brain-gut axis-where are we now and how can we modulate these connections?

JF - Current Neuropharmacology

JO - Current Neuropharmacology

JA - Curr Neuropharmacol

Y1 - 2021///

VL - 19

IS - 8

SP - 1164

EP - 1177

PB - Bentham Science Publishers Ltd.

SN - 1570-159X

SN - 1875-6190

AD - Dabrowski, Wojciech, Department of Anesthesiology and Intensive Care, Medical University of Lublin, 20-954, Lublin, Poland

N1 - Accession Number: 2021-92957-003. Partial author list: First Author & Affiliation: Dabrowski, Wojciech; Department of Anesthesiology and Intensive Care, Medical University of Lublin, Lublin, Poland, w.dabrowski5@yahoo.com ORCID: 0000-0003-0449-2375. Release Date: 20211104. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Central Nervous System; Cytokines; Immunology; Microorganisms; Traumatic Brain Injury. Minor Descriptor: Blood Brain Barrier; Gastrointestinal System; Neuroinflammation. Classification: Neuropsychology & Neurology (2520). Population: Human (10); Animal (20). References Available: Y. Page Count: 14. Issue Publication Date: 2021. Publication History: Accepted Date: Oct 31, 2020; Revised Date: Sep 8, 2020; First Submitted Date: Jul 21, 2020. Copyright Statement: Bentham Science Publishers. 2021.

AB - A traumatic brain injury (TBI) initiates an inflammatory response with molecular cascades triggered by the presence of necrotic debris, including damaged myelin, hemorrhages and injured neuronal cells. Molecular cascades prominent in TBI-induced inflammation include the release of an excess of proinflammatory cytokines and angiogenic factors, the degradation of tight junctions (TJs), cytoskeletal rearrangements and leukocyte and protein extravasation promoted by increased expression of adhesion molecules. The brain-gut axis consists of a complex network involving neuroendocrine and immunological signaling pathways and bi-directional neural mechanisms. Importantly, modifying the gut microbiome alters this axis, and in turn may influence brain injury and neuroinflammatory processes. In recent years it has been demonstrated that the activity and composition of the gastrointestinal (GI) microbiome population influences the brain through all of above-mentioned pathways affecting homeostasis of the central nervous system (CNS). The GI microbiome is involved in the modulation of cellular and molecular processes which are fundamental to the progression of TBI-induced pathologies, including neuroinflammation, abnormal blood brain barrier (BBB) permeability, immune system responses, microglial activation, and mitochondrial dysfunction. It has been postulated that interaction between the brain and gut microbiome occurs mainly via the enteric nervous system and the vagus nerve through neuroactive compounds including serotonin or dopamine and activation by bacterial metabolites including endotoxin, neurotransmitters, neurotrophic factors, and cytokines. In recent years the multifactorial impact of selected immunomodulatory drugs on immune processes occurring in the CNS and involving the brain-gut axis has been under intensive investigation. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - Traumatic brain injury

KW - secondary brain damage

KW - trauma

KW - cells interactions

KW - microbiome

KW - immunomodulation

KW - Central Nervous System

KW - Cytokines

KW - Immunology

KW - Microorganisms

KW - Traumatic Brain Injury

KW - Blood Brain Barrier

KW - Gastrointestinal System

KW - Neuroinflammation

DO - 10.2174/1570159X18666201119155535

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2021-92957-003&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2019-67687-026

AN - 2019-67687-026

AU - Huang, Ying-ying

AU - Li, Xueli

AU - Li, Xiaojin

AU - Sheng, Yuan-yuan

AU - Zhuang, Peng-wei

AU - Zhang, Yan-jun

T1 - Neuroimmune crosstalk in central nervous system injury-induced infection and pharmacological intervention

JF - Brain Research Bulletin

JO - Brain Research Bulletin

JA - Brain Res Bull

Y1 - 2019/11//

VL - 153

SP - 232

EP - 238

PB - Elsevier Science

SN - 0361-9230

SN - 1873-2747

AD - Zhuang, Peng-wei, Tianjin University of Traditional Chinese Medicine, Tianjin State Key Laboratory of Modern Chinese Medicine, Tianjin Key Laboratory of Chinese Medicine Pharmacology, Tianjin, China, 301617

N1 - Accession Number: 2019-67687-026. PMID: 31536756 Partial author list: First Author & Affiliation: Huang, Ying-ying; Tianjin University of Traditional Chinese Medicine, Tianjin State Key Laboratory of Modern Chinese Medicine, Tianjin Key Laboratory of Chinese Medicine Pharmacology, Tianjin, China, huangyy9101@163.com. Release Date: 20191121. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Antibiotics; Central Nervous System; Drug Therapy; Infectious Disorders; Traumatic Brain Injury. Minor Descriptor: Hypothalamic Pituitary Adrenal Axis; Injuries; Pneumonia; Urogenital Disorders. Classification: Neuropsychology & Neurology (2520). Population: Animal (20). Methodology: Literature Review. Page Count: 7. Issue Publication Date: Nov, 2019. Publication History: First Posted Date: Sep 16, 2019; Accepted Date: Sep 12, 2019; Revised Date: Sep 8, 2019; First Submitted Date: Jun 30, 2019. Copyright Statement: Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/BY-NC-ND/4.0/). The Authors. 2019.

AB - Infection (such as pneumonia and urinary tract infection) is one of the leading causes of death in patients with acute central nervous system (CNS) injury, which also greatly affects the patients’ prognosis and quality of life. Antibiotics are commonly used for the treatment of various infections, however, available evidence demonstrate that prophylactic antibiotic treatments for CNS injury-induced infection have been unsuccessful. Effective approaches for prevention of CNS injury induced-infection remain scarce, therefore, better understanding the molecular and cellular mechanisms of infection post-CNS injury may aid in the development of efficacious therapeutic options. CNS injury-induced infection is confirmed affected by the sympathetic/parasympathetic nervous system, hypothalamic-pituitary-adrenal axis, and even brain-gut axis. In this review, we summarized the mechanisms of CNS injury- induced infection, crosstalk between the CNS and the immune system and current pharmacological intervention to provide ideas for the development of new anti- infective therapeutic strategies. (PsycINFO Database Record (c) 2019 APA, all rights reserved)

KW - Central nervous system injury

KW - Immunosuppression

KW - Sympathetic nervous system

KW - Parasympathetic nervous system

KW - HPA axis

KW - Intestinal flora

KW - Antibiotics

KW - Central Nervous System

KW - Drug Therapy

KW - Infectious Disorders

KW - Traumatic Brain Injury

KW - Hypothalamic Pituitary Adrenal Axis

KW - Injuries

KW - Pneumonia

KW - Urogenital Disorders

U1 - Sponsor: National Natural Science Foundation of China, China. Grant: 81773920. Recipients: No recipient indicated

DO - 10.1016/j.brainresbull.2019.09.003

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-67687-026&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2024-36069-028

AN - 2024-36069-028

AU - Chin Fatt, Cherise R.

AU - Trivedi, Madhukar H.

T1 - Microbes and mental health: Translating preclinical findings to the clinic

JF - Neuropsychopharmacology

JO - Neuropsychopharmacology

JA - Neuropsychopharmacology

Y1 - 2024/01//

VL - 49

IS - 1

SP - 345

EP - 346

PB - Nature Publishing Group

SN - 0893-133X

SN - 1740-634X

AD - Trivedi, Madhukar H.

N1 - Accession Number: 2024-36069-028. Partial author list: First Author & Affiliation: Chin Fatt, Cherise R.; Center for Depression Research and Clinical Care, Peter O’Donnell Jr. Brain Institute, University of Texas Southwestern Medical Center, Dallas, TX, US. Release Date: 20240108. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Trivedi, Madhukar H. Major Descriptor: Communication; Mental Health; Microorganisms; Physiology; Gastrointestinal Microbiota. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). References Available: Y. Page Count: 2. Issue Publication Date: Jan, 2024. Publication History: First Posted Date: Aug 8, 2023. Copyright Statement: The Author(s), under exclusive licence to American College of Neuropsychopharmacology. 2023.

AB - Almost 20 years ago, the landmark observation was made that germ-free mice, lacking all microbes, showed an exaggerated response to stress and thus ignited neuroscientists to explore the connection between gut microbes and behavior. A robust association between gut microbiota and anxiety-like behavior emerged in animal models. Based on these key research findings derived from animal studies, clinical studies have finally started to consider the role of the microbiome in psychiatric disorders in humans. Alterations in microbiota diversity and composition have been reported in major depression; however, most studies to date have considered associations between single bacterial taxa and clinical phenotype. Unfortunately, this approach does not consider the community nature of the gut microbiome and therefore ignores how bacteria-host communications influence host physiology. These host communications are critical because we know that it is not simply a single bacteria taxa that change host physiology—rather, it is the interplay of all of the bacteria within the host. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

KW - microbes

KW - mental health

KW - physiology

KW - Communication

KW - Mental Health

KW - Microorganisms

KW - Physiology

KW - Gastrointestinal Microbiota

U1 - Sponsor: Hersh Foundation. Other Details: The Dallas 2K (D2K) study. Recipients: No recipient indicated

U1 - Sponsor: Rose Foundation. Recipients: No recipient indicated

U1 - Sponsor: Center for Depression Research and Clinical Care. Recipients: Trivedi, Madhukar H. (Prin Inv)

U1 - Sponsor: Ontario Brain Institute, Canada. Recipients: Kennedy, Sidney (Prin Inv)

DO - 10.1038/s41386-023-01695-0

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2024-36069-028&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-27520-025

AN - 2023-27520-025

AU - Galley, Jeffrey D.

AU - Mashburn-Warren, Lauren

AU - Blalock, Lexie C.

AU - Lauber, Christian L.

AU - Carroll, Judith E.

AU - Ross, Kharah M.

AU - Hobel, Calvin

AU - Coussons-Read, Mary

AU - Dunkel Schetter, Christine

AU - Gur, Tamar L.

T1 - Maternal anxiety, depression and stress affects offspring gut microbiome diversity and bifidobacterial abundances

JF - Brain, Behavior, and Immunity

JO - Brain, Behavior, and Immunity

JA - Brain Behav Immun

Y1 - 2023/01//

VL - 107

SP - 253

EP - 264

PB - Elsevier Science

SN - 0889-1591

SN - 1090-2139

AD - Gur, Tamar L., Institute for Behavioral Medicine Research, 460 Medical Center Drive, Columbus, OH, US, 43210

N1 - Accession Number: 2023-27520-025. PMID: 36240906 Partial author list: First Author & Affiliation: Galley, Jeffrey D.; Department of Psychiatry and Behavioral Health, Ohio State University Wexner Medical Center, Columbus, OH, US. Release Date: 20230130. Correction Date: 20230316. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Dunkel Schetter, Christine. Major Descriptor: Anxiety; Gastrointestinal System; Major Depression; Microorganisms; Stress. Minor Descriptor: Affective Disorders; Cytokines; Offspring; Postnatal Period; Prenatal Development; Neurodevelopmental Disorders; Gastrointestinal Microbiota. Classification: Physiological Processes (2540). Population: Human (10). Location: US. Age Group: Childhood (birth-12 yrs) (100); Neonatal (birth-1 mo) (120); Infancy (2-23 mo) (140); Adulthood (18 yrs & older) (300). Tests & Measures: Overall Anxiety Severity and Impairment Scale DOI: 10.1037/t69085-000; Perceived Stress Scale DOI: 10.1037/t02889-000; Patient Health Questionnaire-9 DOI: 10.1037/t06165-000. Methodology: Empirical Study; Longitudinal Study; Quantitative Study. Supplemental Data: Appendixes Internet. References Available: Y. Page Count: 12. Issue Publication Date: Jan, 2023. Publication History: First Posted Date: Oct 12, 2022; Accepted Date: Oct 9, 2022; Revised Date: Sep 22, 2022; First Submitted Date: Jul 18, 2022. Copyright Statement: All rights reserved. Elsevier Inc. 2022.

AB - Uncovering mechanisms underlying fetal programming during pregnancy is of critical importance. Atypical neurodevelopment during the pre- and immediate postnatal period has been associated with long-term adverse health outcomes, including mood disorders and aberrant cognitive ability in offspring. Maternal factors that have been implicated in anomalous offspring development include maternal inflammation and tress, anxiety, and depression. One potential mechanism through which these factors perturb normal offspring postnatal development is through microbiome disruption. The mother is a primary source of early postnatal microbiome seeding for the offspring, and the transference of a healthy microbiome is key in normal neurodevelopment. Since psychological stress, mood disorders, and inflammation have all been implicated in altering maternal microbiome community structure, passing on aberrant microbial communities to the offspring that may then affect developmental outcomes. Therefore, we examined how maternal stress, anxiety and depression assessed with standardized instruments, and maternal inflammatory cytokine levels in the pre- and postnatal period are associated with the offspring microbiome within the first 13 months of life, utilizing full length 16S sequencing on infant stool samples, that allowed for species-level resolution. Results revealed that infants of mothers who reported higher anxiety and perceived stress had reduced alpha diversity. Additionally, the relative taxonomic quantitative abundances of Bifidobacterium dentium and other species that have been associated with either modulation of the gut-brain axis, or other beneficial health outcomes, were reduced in the offspring of mothers with higher anxiety, perceived stress, and depression. We also found associations between bifidobacteria and prenatal maternal pro-inflammatory cytokines IL-6, IL-8, and IL-10. In summary, specific microbial taxa involved in maintaining proper brain and immune function are lower in offspring born to mothers with anxiety, depression, or stress, providing strong evidence for a mechanism by which maternal factors may affect offspring health through microbiota dysregulation. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - Prenatal stress

KW - Bifidobacteria

KW - Gut microbiota

KW - Anxiety

KW - Depression

KW - postnatal development

KW - microbiome disruption

KW - neurodevelpoment disorders

KW - cytokine

KW - prenatal period

KW - infant development

KW - offspring

KW - Humans

KW - Female

KW - Mothers

KW - Anxiety

KW - Gastrointestinal System

KW - Major Depression

KW - Microorganisms

KW - Stress

KW - Affective Disorders

KW - Cytokines

KW - Offspring

KW - Postnatal Period

KW - Prenatal Development

KW - Neurodevelopmental Disorders

KW - Gastrointestinal Microbiota

U1 - Sponsor: Sponsor name not included. Grant: R01HD073491. Recipients: Dunkel Schetter, Christine (Prin Inv); Coussons-Read, Mary (Prin Inv)

U1 - Sponsor: Ohio State University, US. Other Details: Start-up funds. Recipients: Gur, Tamar L.

DO - 10.1016/j.bbi.2022.10.005

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-27520-025&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-05424-001

AN - 2023-05424-001

AU - Weber, Thomas

AU - Tatzl, Eva

AU - Kashofer, Karl

AU - Holter, Magdalena

AU - Trajanoski, Slave

AU - Berghold, Andrea

AU - Heinemann, Akos

AU - Holzer, Peter

AU - Herbert, Michael Karl

T1 - Fibromyalgia-associated hyperalgesia is related to psychopathological alterations but not to gut microbiome changes

JF - PLoS ONE

JO - PLoS ONE

JA - PLoS One

Y1 - 2022/09/23/

VL - 17

IS - 9

PB - Public Library of Science

SN - 1932-6203

AD - Weber, Thomas

N1 - Accession Number: 2023-05424-001. PMID: 36149895 Partial author list: First Author & Affiliation: Weber, Thomas; Department of Anesthesiology and Intensive Care Medicine, Medical University of Graz, Graz, Austria, webertom2002@yahoo.de ORCID: 0000-0001-5247-9357. Release Date: 20221031. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Gastrointestinal System; Major Depression; Microorganisms; Pathophysiology; Somatosensory Disorders. Minor Descriptor: Pain; Psychopathology. Classification: Psychological & Physical Disorders (3200). Population: Human (10); Male (30); Female (40). Location: Austria. Age Group: Adulthood (18 yrs & older) (300). Tests & Measures: German Pain Questionnaire; Depression-Anxiety-Stress Scale-German Version; ICD-10 Symptom-Rating Brief Description; Marburg Questionnaire for Quality of Life; Patient-Health-Questionnaire-15; Food Frequency Questionnaire. Methodology: Empirical Study; Quantitative Study. Supplemental Data: Other Internet. References Available: Y. ArtID: e0274026. Issue Publication Date: Sep 23, 2022. Publication History: First Posted Date: Sep 23, 2022; Accepted Date: Aug 20, 2022; First Submitted Date: Feb 9, 2022. Copyright Statement: This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. Weber et al. 2022.

AB - Fibromyalgia-syndrome (FMS) is a complex disease characterized by chronic widespread pain and additional symptoms including depression, cognitive dysfunction ('fibro-fog') and maldigestion. Our research team examined whether FMS-related pain parameters assessed by quantitative sensory testing (QST) and psychological disturbances are accompanied by alterations of the fecal microbiome. We recruited 25 patients with FMS and 26 age- and sex-matched healthy controls. Medical background, food habits, psychopathology and quality of life were assessed through questionnaires. Stool samples were analyzed by 16S rRNA gene amplification and sequencing. QST was performed according to the protocol of the German Network for Neuropathic Pain. QST showed that both lemniscal and spinothalamic afferent pathways are altered in FMS patients relative to healthy controls and that peripheral as well as central pain sensitization processes are manifest. Psychometric assessment revealed enhanced scores of depression, anxiety and stress. In contrast, neither the composition nor the alpha- and beta-diversity of the fecal microbiome was changed in FMS patients. FMS patients segregate from healthy controls in various parameters of QST and psychopathology, but not in terms of composition and diversity of the fecal microbiome. Despite consideration of several confounding factors, we conclude that the contribution of the gut microbiome to the pathophysiology of FMS is limited. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

KW - fibromyalgia

KW - hyperalgesia

KW - psychopathological alterations

KW - gut microbiome changes

KW - Gastrointestinal System

KW - Major Depression

KW - Microorganisms

KW - Pathophysiology

KW - Somatosensory Disorders

KW - Pain

KW - Psychopathology

U1 - Sponsor: City of Graz, Austria. Recipients: No recipient indicated

U1 - Sponsor: Austrian Society for Anaesthesiology, Austria. Recipients: No recipient indicated

U1 - Sponsor: Spectrum Therapeutics Austria, Austria. Recipients: No recipient indicated

U1 - Sponsor: Medical University of Graz, Austria. Other Details: Doctoral School Sustainable Health Research. Recipients: No recipient indicated

DO - 10.1371/journal.pone.0274026

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-05424-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-12725-001

AN - 2023-12725-001

AU - Zhang, Bohan

AU - Dong, Wenwen

AU - Ma, Zhixin

AU - Duan, Shuxian

AU - Han, Ruina

AU - Lv, Zhou

AU - Liu, Xinru

AU - Mao, Yanfei

T1 - Hyperbaric oxygen improves depression‐like behaviors in chronic stress model mice by remodeling gut microbiota and regulating host metabolism

JF - CNS Neuroscience & Therapeutics

JO - CNS Neuroscience & Therapeutics

JA - CNS Neurosci Ther

Y1 - 2023/01//

VL - 29

IS - 1

SP - 239

EP - 255

PB - Wiley-Blackwell Publishing Ltd.

SN - 1755-5930

SN - 1755-5949

AD - Liu, Xinru, Translational Medical Institute, Shanghai University, Shanghai, China, 200444

N1 - Accession Number: 2023-12725-001. Other Journal Title: CNS Drug Reviews. Partial author list: First Author & Affiliation: Zhang, Bohan; Department of Anesthesiology and Surgical Intensive Care Unit, Xinhua Hospital, Shanghai Jiaotong University, School of Medicine, Shanghai, China. Other Publishers: Blackwell Publishing; Neva Press. Release Date: 20221024. Correction Date: 20230126. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Chronic Stress; Mice; Oxygen; Gastrointestinal Microbiota. Minor Descriptor: Animal Behavior; Animal Models; Metabolism; Metabolites. Classification: Neuropsychology & Neurology (2520). Population: Animal (20); Male (30). Methodology: Empirical Study; Quantitative Study. Supplemental Data: Other Internet. References Available: Y. Page Count: 17. Issue Publication Date: Jan, 2023. Publication History: Accepted Date: Sep 30, 2022; Revised Date: Sep 9, 2022; First Submitted Date: Apr 21, 2022. Copyright Statement: Published by John Wiley & Sons Ltd. This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited. The Authors—CNS Neuroscience & Therapeutics. 2022.

AB - Aims: There is growing evidence that the gut microbiota plays a significant part in the pathophysiology of chronic stress. The dysbiosis of the gut microbiota closely relates to dysregulation of microbiota–host cometabolism. Composition changes in the gut microbiota related to perturbations in metabolic profiles are vital risk factors for disease development. Hyperbaric oxygen therapy is commonly applied as an alternative or primary therapy for various diseases. Therefore, a metabolic and gut bacteria perspective is essential to uncover possible mechanisms of chronic stress and the therapeutic effect of hyperbaric oxygenation. We determined that there were significantly disturbed metabolites and disordered gut microbiota between control and chronic stress group. The study aims to offer further information on the interactions between host metabolism, gut microbiota, and chronic stress. Methods: At present, chronic unpredictable mild stress is considered the most widespread method of modeling chronic stress in animals, so we used a chronic unpredictable mild stress mouse model to characterize changes in the metabolome and microbiome of depressed mice by combining 16S rRNA gene sequencing and UHPLC–MS/ MS-based metabolomics. Pearson's correlation-based clustering analysis was performed with above metabolomics and fecal microbiome data to determine gut microbiota-associated metabolites. Results: We found that 18 metabolites showed a significant correlation with campylobacterota. Campylobacterota associated metabolites were significantly enriched mainly in the d-glutamate and d-glutamine metabolism. Hyperoxia treatment may improve depression-like behaviors in chronic stress model mice through regulating the disrupted metabolites. Conclusions: Hyperbaric oxygen improves depression-like behaviors in chronic stress model mice by remodeling Campylobacterota associated metabolites. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - chronic stress

KW - gut microbiota

KW - hyperbaric oxygen

KW - metabolism

KW - Chronic Stress

KW - Mice

KW - Oxygen

KW - Gastrointestinal Microbiota

KW - Animal Behavior

KW - Animal Models

KW - Metabolism

KW - Metabolites

U1 - Sponsor: National Natural Science Foundation of China, China. Grant: 81772108. Recipients: No recipient indicated

DO - 10.1111/cns.13999

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-12725-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-27520-007

AN - 2023-27520-007

AU - Yahfoufi, Nour

AU - Kadamani, Anthony K.

AU - Aly, Sarah

AU - Al Sharani, Sara

AU - Liang, Jacky

AU - Butcher, James

AU - Stintzi, Alain

AU - Matar, Chantal

AU - Ismail, Nafissa

T1 - Pubertal consumption of R badensis subspecies acadiensis modulates LPS-induced immune responses and gut microbiome dysbiosis in a sex-specific manner

JF - Brain, Behavior, and Immunity

JO - Brain, Behavior, and Immunity

JA - Brain Behav Immun

Y1 - 2023/01//

VL - 107

SP - 62

EP - 75

PB - Elsevier Science

SN - 0889-1591

SN - 1090-2139

AD - Ismail, Nafissa, School of Psychology, Faculty of Social Sciences, University of Ottawa, 136 Jean-Jacques Lussier, Vanier Hall, Room 2076B, Ottawa, ON, Canada, K1N

N1 - Accession Number: 2023-27520-007. PMID: 36174885 Partial author list: First Author & Affiliation: Yahfoufi, Nour; Department of Cellular and Molecular Medicine, Faculty of Medicine, University of Ottawa, Ottawa, ON, Canada. Release Date: 20230130. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Matar, Chantal. Major Descriptor: Animal Sex Differences; Gastrointestinal System; Immune System; Microorganisms; Puberty. Minor Descriptor: Behavior Disorders; Cytokines; Mice; Neuroinflammation; Gastrointestinal Microbiota. Classification: Physiological Processes (2540). Population: Animal (20); Male (30); Female (40). Methodology: Empirical Study; Quantitative Study. Supplemental Data: Tables and Figures Internet. References Available: Y. Page Count: 14. Issue Publication Date: Jan, 2023. Publication History: First Posted Date: Sep 26, 2022; Accepted Date: Sep 22, 2022; Revised Date: Sep 5, 2022; First Submitted Date: Apr 25, 2022. Copyright Statement: All rights reserved. Elsevier Inc. 2022.

AB - Puberty is a critical period of development characterized by significant brain remodeling and increased vulnerability to immune challenges. Exposure to an immune challenge such as LPS during puberty can result in inflammation and gut dysbiosis which may lead to altered brain functioning and psychiatric illnesses later in life. However, treatment with probiotics during puberty has been found to mitigate LPS-induced peripheral and central inflammation, prevent LPS-induced changes to the gut microbiota and protect against enduring behavioural disorders in a sex-specific manner. Recent findings from our laboratory revealed that pubertal R. badensis subspecies acadiensis (R. badensis subsp. acadiensis) treatment prevents LPS-induced depression-like behavior and alterations in 5HT1A receptor expression in a sex-specific manner. However, the underlying mechanism remains unclear. Thus, the aim of this study was to gain mechanistic insights and to investigate the ability of R. badensis subsp. acadiensis consumption during puberty to mitigate the effects of LPS treatment on the immune system and the gut microbiome. Our results revealed that pubertal treatment with R. badensis subsp. acadiensis reduced sickness behaviors in females more than males in a time-specific manner. It also mitigated LPS-induced increases in pro-inflammatory cytokines in the blood and in TNFα mRNA expression in the prefrontal cortex and the hippocampus of female mice. There were sex-dependent differences in microbiome composition that persisted after LPS injection or R. badensis subsp. acadiensis consumption. R. badensis subsp. acadiensis had greater impact on the microbiota of male mice but female microbiota’s were more responsive to LPS treatment. This suggested that female mice microbiota’s may be more prone to modulation by this probiotic. These findings emphasize the sex-specific effects of probiotic use during puberty on the structure of the gut microbiome and the immune system and highlight the critical role of gut colonization with probiotics during adolescence on immunomodulation and prevention of the enduring effects of infections. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - Probiotic

KW - LPS

KW - Inflammation

KW - Neuroinflammation

KW - Cytokines

KW - Microbiome

KW - Puberty

KW - R. badensis

KW - acadiensis

KW - immune responses

KW - gut microbiome dysbiosis

KW - sex-specific manner

KW - behavioural disorders

KW - Animal Sex Differences

KW - Gastrointestinal System

KW - Immune System

KW - Microorganisms

KW - Puberty

KW - Behavior Disorders

KW - Cytokines

KW - Mice

KW - Neuroinflammation

KW - Gastrointestinal Microbiota

U1 - Sponsor: Natural Sciences and Engineering Research Council. Grant: 532223–18. Other Details: Collaborative Research and Development Grant. Recipients: Matar, Chantal

U1 - Sponsor: University of Ottawa, Faculty of Graduate and Postgraduate Studies, Canada. Other Details: Scholarship. Recipients: Yahfoufi, Nour

U1 - Sponsor: University of Ottawa, Faculty of Health Sciences, Canada. Other Details: Nutrition and Mental Health Doctoral Scholarship, Nutrition and Mental Health initiative. Recipients: Yahfoufi, Nour

U1 - Sponsor: Government of Canada, Canada. Grant: OGI-149. Other Details: Genome Canada and the Ontario Genomics Institute. Recipients: Stintzi, Alain

U1 - Sponsor: Canadian Institutes of Health Research, Canada. Grant: ECD-144627. Recipients: Stintzi, Alain

U1 - Sponsor: Ontario Ministry of Economic Development and Innovation, Canada. Grant: 13440. Recipients: Stintzi, Alain

DO - 10.1016/j.bbi.2022.09.013

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-27520-007&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2021-51908-001

AN - 2021-51908-001

AU - Di Gesù, Claudia M.

AU - Matz, Lisa M.

AU - Buffington, Shelly A.

T1 - Diet-induced dysbiosis of the maternal gut microbiome in early life programming of neurodevelopmental disorders

JF - Neuroscience Research

JO - Neuroscience Research

JA - Neurosci Res

Y1 - 2021/07//

VL - 168

SP - 3

EP - 19

PB - Elsevier Science

SN - 0168-0102

SN - 1872-8111

AD - Buffington, Shelly A., Department of Neuroscience, Cell Biology, & Anatomy, University of Texas Medical Branch, Galveston, TX, US, 77555

N1 - Accession Number: 2021-51908-001. PMID: 33992660 Partial author list: First Author & Affiliation: Di Gesù, Claudia M.; Department of Neuroscience, Cell Biology, & Anatomy, University of Texas Medical Branch, Galveston, TX, US, ORCID: 0000-0002-1651-4693. Release Date: 20210603. Correction Date: 20210729. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Buffington, Shelly A. Major Descriptor: Brain Development; Diets; Postnatal Period; Neurodevelopmental Disorders; Gastrointestinal Microbiota. Minor Descriptor: Animal Models; Mental Health. Classification: Neuropsychology & Neurology (2520); Neurological Disorders & Brain Damage (3297). Population: Human (10); Animal (20). Methodology: Literature Review. References Available: Y. Page Count: 17. Issue Publication Date: Jul, 2021. Publication History: First Posted Date: May 13, 2021; Accepted Date: May 10, 2021; Revised Date: May 10, 2021; First Submitted Date: Apr 26, 2021. Copyright Statement: All rights reserved. Elsevier B.V. and Japan Neuroscience Society. 2021.

AB - The maternal gut microbiome plays a critical role in fetal and early postnatal development, shaping fundamental processes including immune maturation and brain development, among others. Consequently, it also contributes to fetal programming of health and disease. Over the last decade, epidemiological studies and work in preclinical animal models have begun to uncover a link between dysbiosis of the maternal gut microbiome and neurodevelopmental disorders in offspring. Neurodevelopmental disorders are caused by both genetic and environmental factors, and their interactions; however, clinical heterogeneity, phenotypic variability, and comorbidities make identification of underlying mechanisms difficult. Among environmental factors, exposure to maternal obesity in utero confers a significant increase in risk for neurodevelopmental disorders. Obesogenic diets in humans, non-human primates, and rodents induce functional modifications in maternal gut microbiome composition, which animal studies suggest are causally related to adverse mental health outcomes in offspring. Here, we review evidence linking maternal diet-induced gut dysbiosis to neurodevelopmental disorders and discuss how it could affect pre- and early postnatal brain development. We are hopeful that this burgeoning field of research will revolutionize antenatal care by leading to accessible prophylactic strategies, such as prenatal probiotics, to improve mental health outcomes in children affected by maternal diet-induced obesity. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - Fetal programming

KW - Maternal diet

KW - Gut microbiome

KW - Vertical transmission

KW - Neurodevelopmental disorders

KW - Social behavior

KW - Social determinants of health

KW - Prenatal probiotics

KW - Animals

KW - Diet

KW - Dysbiosis

KW - Female

KW - Gastrointestinal Microbiome

KW - Humans

KW - Neurodevelopmental Disorders

KW - Pregnancy

KW - Primates

KW - Brain Development

KW - Diets

KW - Postnatal Period

KW - Neurodevelopmental Disorders

KW - Gastrointestinal Microbiota

KW - Animal Models

KW - Mental Health

U1 - Sponsor: Brain & Behavior Research Foundation. Grant: 28298. Other Details: NARSAD Young Investigator Grant. Recipients: Buffington, Shelly A.

DO - 10.1016/j.neures.2021.05.003

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2021-51908-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2019-53698-001

AN - 2019-53698-001

AU - Nguyen, Tanya T.

AU - Hathaway, Hugh

AU - Kosciolek, Tomasz

AU - Knight, Rob

AU - Jeste, Dilip V.

T1 - Gut microbiome in serious mental illnesses: A systematic review and critical evaluation

JF - Schizophrenia Research

JO - Schizophrenia Research

JA - Schizophr Res

Y1 - 2021/08//

VL - 234

SP - 24

EP - 40

PB - Elsevier Science

SN - 0920-9964

SN - 1573-2509

AD - Nguyen, Tanya T., University of California San Diego, 9500 Gilman Drive #0664, La Jolla, CA, US, 92093

N1 - Accession Number: 2019-53698-001. PMID: 31495702 Partial author list: First Author & Affiliation: Nguyen, Tanya T.; Department of Psychiatry, University of California San Diego, La Jolla, CA, US, ttn050@ucsd.edu ORCID: 0000-0002-9510-9564. Release Date: 20190909. Correction Date: 20230119. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Nguyen, Tanya T. Major Descriptor: Bacterial Infections; Bipolar Disorder; Gastrointestinal System; Microorganisms; Schizophrenia. Minor Descriptor: Digestive System; Psychosis; Serious Mental Illness. Classification: Psychological Disorders (3210). Population: Human (10). Methodology: Literature Review; Systematic Review. References Available: Y. Page Count: 17. Issue Publication Date: Aug, 2021. Publication History: First Posted Date: Sep 5, 2019; Accepted Date: Aug 22, 2019; Revised Date: Aug 19, 2019; First Submitted Date: Jun 20, 2019. Copyright Statement: All rights reserved. Elsevier B.V. 2019.

AB - Schizophrenia and bipolar disorder (BD) are associated with debilitating psychiatric and cognitive dysfunction, worse health outcomes, and shorter life expectancies. The pathophysiological understanding of and therapeutic resources for these neuropsychiatric disorders are still limited. Humans harbor over 1000 unique bacterial species in our gut, which have been linked to both physical and mental/cognitive health. The gut microbiome is a novel and promising avenue to understand the attributes of psychiatric diseases and, potentially, to modify them. Building upon our previous work, this systematic review evaluates the most recent evidence of the gut microbiome in clinical populations with serious mental illness (SMI). Sixteen articles that met our selection criteria were reviewed, including cross-sectional cohort studies and longitudinal treatment trials. All studies reported alterations in the gut microbiome of patients with SMI compared to non-psychiatric comparison subjects (NCs), and beta-diversity was consistently reported to be different between schizophrenia and NCs. Ruminococcaceae and Faecalibacterium were relatively decreased in BD, and abundance of Ruminococcaceae was reported across several investigations of SMI to be associated with better clinical characteristics. Lactic acid bacteria were relatively more abundant in SMI and associated with worse clinical outcomes. There was very limited evidence for the efficacy of probiotic or prebiotic interventions in SMI. As microbiome research in psychiatry is still nascent, the extant literature has several limitations. We critically evaluate the current data, including experimental approaches. There is a need for more unified methodological standards in order to arrive at robust biological understanding of microbial contributions to SMI. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - Schizophrenia

KW - Bipolar disorder

KW - First episode psychosis

KW - Bacteria

KW - Microbes

KW - Probiotics

KW - Bipolar Disorder

KW - Cross-Sectional Studies

KW - Gastrointestinal Microbiome

KW - Humans

KW - Mental Disorders

KW - Schizophrenia

KW - Bacterial Infections

KW - Bipolar Disorder

KW - Gastrointestinal System

KW - Microorganisms

KW - Schizophrenia

KW - Digestive System

KW - Psychosis

KW - Serious Mental Illness

U1 - Sponsor: National Institute of Mental Health, US. Grant: K23 MH118435-01A1. Recipients: Nguyen, Tanya T.

U1 - Sponsor: National Institute of Mental Health, US. Grant: 2R01 MH094151-06; 5T32 MH019934-24. Recipients: Jeste, Dilip V.

U1 - Sponsor: UC San Diego Sam, US. Recipients: No recipient indicated

U1 - Sponsor: Rose Stein Institute for Research on Aging. Recipients: No recipient indicated

U1 - Sponsor: UC San Diego Center for Microbiome Innovation, US. Recipients: No recipient indicated

U1 - Sponsor: University of Oxford, United Kingdom. Other Details: Student bursary. Recipients: No recipient indicated

U1 - Sponsor: National Health Service Bursary. Recipients: No recipient indicated

U1 - Sponsor: Green Templeton College. Other Details: Learning Grant. Recipients: No recipient indicated

DO - 10.1016/j.schres.2019.08.026

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-53698-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2019-39787-001

AN - 2019-39787-001

AU - Pearson-Leary, Jiah

AU - Zhao, Chunyu

AU - Bittinger, Kyle

AU - Eacret, Darrell

AU - Luz, Sandra

AU - Vigderman, Abigail S.

AU - Dayanim, Gabriel

AU - Bhatnagar, Seema

T1 - The gut microbiome regulates the increases in depressive-type behaviors and in inflammatory processes in the ventral hippocampus of stress vulnerable rats

JF - Molecular Psychiatry

JO - Molecular Psychiatry

JA - Mol Psychiatry

Y1 - 2020/05//

VL - 25

IS - 5

SP - 1068

EP - 1079

PB - Nature Publishing Group

SN - 1359-4184

SN - 1476-5578

AD - Bhatnagar, Seema

N1 - Accession Number: 2019-39787-001. Partial author list: First Author & Affiliation: Pearson-Leary, Jiah; Department of Anesthesiology and Critical Care, Children’s Hospital of Philadelphia, Philadelphia, PA, US. Release Date: 20190715. Correction Date: 20200611. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Bhatnagar, Seema. Major Descriptor: Animal Behavior; Gastrointestinal System; Inflammation; Microorganisms; Stress. Minor Descriptor: Animal Models; Hippocampus; Major Depression; Rats. Classification: Physiological Psychology & Neuroscience (2500); Affective Disorders (3211). Population: Animal (20); Male (30). Methodology: Empirical Study; Quantitative Study. Supplemental Data: Tables and Figures Internet; Text Internet. References Available: Y. Page Count: 12. Issue Publication Date: May, 2020. Publication History: First Posted Date: Mar 4, 2019; Accepted Date: Feb 11, 2019; Revised Date: Jan 24, 2019; First Submitted Date: Jun 21, 2018. Copyright Statement: Springer Nature Limited. 2019.

AB - Chronic exposure to stress is associated with increased incidence of depression, generalized anxiety, and PTSD. However, stress induces vulnerability to such disorders only in a sub-population of individuals, as others remain resilient. Inflammation has emerged as a putative mechanism for promoting stress vulnerability. Using a rodent model of social defeat, we have previously shown that rats with short-defeat latencies (SL/vulnerable rats) show increased anxiety- and depression-like behaviors, and these behaviors are mediated by inflammation in the ventral hippocampus. The other half of socially defeated rats show long-latencies to defeat (LL/resilient) and are similar to controls. Because gut microbiota are important activators of inflammatory substances, we assessed the role of the gut microbiome in mediating vulnerability to repeated social defeat stress. We analyzed the fecal microbiome of control, SL/vulnerable, and LL/resilient rats using shotgun metagenome sequencing and observed increased expression of immune-modulating microbiota, such as Clostridia, in SL/vulnerable rats. We then tested the importance of gut microbiota to the SL/vulnerable phenotype. In otherwise naive rats treated with microbiota from SL/vulnerable rats, there was higher microglial density and IL-1β expression in the vHPC, and higher depression-like behaviors relative to rats that received microbiota from LL/resilient rats, non-stressed control rats, or vehicle-treated rats. However, anxiety-like behavior during social interaction was not altered by transplant of the microbiome of SL/vulnerable rats into non-stressed rats. Taken together, the results suggest the gut microbiome contributes to the depression-like behavior and inflammatory processes in the vHPC of stress vulnerable individuals. (PsycInfo Database Record (c) 2020 APA, all rights reserved)

KW - gut microbiome

KW - depressive-type behaviors

KW - inflammatory processes

KW - ventral hippocampus

KW - stress vulnerable rats

KW - Animal Behavior

KW - Gastrointestinal System

KW - Inflammation

KW - Microorganisms

KW - Stress

KW - Animal Models

KW - Hippocampus

KW - Major Depression

KW - Rats

U1 - Sponsor: Defense Advanced Research Projects Agency. Recipients: Bhatnagar, Seema

U1 - Sponsor: Army Research Office, US. Grant: W911NF1010093. Recipients: Bhatnagar, Seema

DO - 10.1038/s41380-019-0380-x

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-39787-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2020-67281-001

AN - 2020-67281-001

AU - Simon, Dennis W.

AU - Rogers, Matthew B.

AU - Gao, Yuan

AU - Vincent, Garret

AU - Firek, Brian A.

AU - Janesko-Feldman, Keri

AU - Vagni, Vincent

AU - Kochanek, Patrick M.

AU - Ozolek, John A.

AU - Mollen, Kevin P.

AU - Clark, Robert S. B.

AU - Morowitz, Michael J.

T1 - Depletion of gut microbiota is associated with improved neurologic outcome following traumatic brain injury

JF - Brain Research

JO - Brain Research

JA - Brain Res

Y1 - 2020/11/15/

VL - 1747

PB - Elsevier Science

SN - 0006-8993

SN - 1872-6240

AD - Simon, Dennis W., Children’s Hospital of Pittsburgh, 4401 Penn Avenue, Pittsburgh, PA, US, 15224

N1 - Accession Number: 2020-67281-001. PMID: 32798452 Partial author list: First Author & Affiliation: Simon, Dennis W.; Department of Critical Care Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA, US, dennis.simon2@chp.edu. Release Date: 20200924. Correction Date: 20210712. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Simon, Dennis W. Major Descriptor: Gastrointestinal System; Intestines; Mice; Microorganisms; Traumatic Brain Injury. Minor Descriptor: Conditioned Fear; Hippocampus; Brain Lesions (Experimental); Gastrointestinal Microbiota. Classification: Physiological Processes (2540); Neurological Disorders & Brain Damage (3297). Population: Animal (20); Male (30). Methodology: Empirical Study; Quantitative Study. References Available: Y. ArtID: 147056. Issue Publication Date: Nov 15, 2020. Publication History: First Posted Date: Aug 13, 2020; Accepted Date: Aug 11, 2020; Revised Date: Jul 20, 2020; First Submitted Date: May 9, 2020. Copyright Statement: All rights reserved. Elsevier B.V. 2020.

AB - Signaling between intestinal microbiota and the brain influences neurologic outcome in multiple forms of brain injury. The impact of gut microbiota following traumatic brain injury (TBI) has not been well established. Our objective was to compare TBI outcomes in specific pathogen-free mice with or without depletion of intestinal bacteria. Adult male C57BL6/J SPF mice (n = 6/group) were randomized to standard drinking water or ampicillin (1 g/L), metronidazole (1 g/L), neomycin (1 g/L), and vancomycin (0.5 g/L) (AMNV) containing drinking water 14 days prior to controlled cortical impact (CCI) model of TBI. 16S rRNA gene sequencing of fecal pellets was performed and alpha and beta diversity determined. Hippocampal neuronal density and microglial activation was assessed 72 h post-injury by immunohistochemistry. In addition, mice (n = 8–12/group) were randomized to AMNV or no treatment initiated immediately after CCI and memory acquisition (fear conditioning) and lesion volume assessed. Mice receiving AMNV had significantly reduced alpha diversity (p < 0.05) and altered microbiota community composition compared to untreated mice (PERMANOVA: p < 0.01). Mice receiving AMNV prior to TBI had increased CA1 hippocampal neuronal density (15.2 ± 1.4 vs. 8.8 ± 2.1 cells/0.1 mm; p < 0.05) and a 26.6 ± 6.6% reduction in Iba-1 positive cells (p < 0.05) at 72 h. Mice randomized to AMNV immediately after CCI had attenuated associative learning deficit on fear conditioning test (%freeze Cue: 63.7 ± 2.7% vs. 41.0 ± 5.1%, p < 0.05) and decreased lesion volume (27.2 ± 0.8 vs. 24.6 ± 0.7 mm3, p < 0.05). In conclusion, depletion of intestinal microbiota was consistent with a neuroprotective effect whether initiated before or after injury in a murine model of TBI. Further investigations of the role of gut microbiota in TBI are warranted. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - Head injury

KW - Antibiotic

KW - Microbiome

KW - Inflammation

KW - Gut-brain axis

KW - Gastrointestinal System

KW - Intestines

KW - Mice

KW - Microorganisms

KW - Traumatic Brain Injury

KW - Conditioned Fear

KW - Hippocampus

KW - Brain Lesions (Experimental)

KW - Gastrointestinal Microbiota

U1 - Sponsor: Eunice Kennedy Shriver National Institute of Child Health and Human Development, US. Grant: T32 HD40686. Recipients: Simon, Dennis W.

U1 - Sponsor: Children’s Hospital of Pittsburgh RAC, US. Recipients: Simon, Dennis W.; Morowitz, Michael J.

U1 - Sponsor: National Institute of Neurological Disorders and Stroke, US. Grant: R21 NS115173. Recipients: Simon, Dennis W.; Clark, Robert S. B.; Morowitz, Michael J.

DO - 10.1016/j.brainres.2020.147056

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2020-67281-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - CHAP

ID - 2022-62908-008

AN - 2022-62908-008

AU - Rotem-Kohavi, Naama

AU - Keane, James

AU - Clarke, Gerard

AU - Dinan, Timothy G.

AU - Cryan, John F.

AU - McCarthy, Fergus P.

AU - Oberlander, Tim F.

AU - O'Mahony, Siobhain M.

ED - Wazana, Ashley

ED - Székely, Eszter

ED - Oberlander, Tim F.

T1 - The microbiome-gut-brain axis: A new window to view the impact of prenatal stress on early neurodevelopment

T2 - Prenatal stress and child development.

Y1 - 2021///

SP - 165

EP - 191

CY - Cham

PB - Springer Nature Switzerland AG

SN - 978-3-030-60158-4

SN - 978-3-030-60159-1

AD - O'Mahony, Siobhain M., APC Microbiome Ireland, University College Cork, Cork, Ireland

N1 - Accession Number: 2022-62908-008. Partial author list: First Author & Affiliation: Rotem-Kohavi, Naama; School of Medicine, University of British Columbia, Vancouver, BC, Canada. Release Date: 20220620. Correction Date: 20221128. Publication Type: Book (0200), Edited Book (0280). Format Covered: Print. Document Type: Chapter. ISBN: 978-3-030-60158-4, ISBN Hardcover; 978-3-030-60159-1, ISBN Digital (undefined format). Language: English. Major Descriptor: Brain; Hypothalamic Pituitary Adrenal Axis; Immune System; Prenatal Development; Psychopathology. Minor Descriptor: Anxiety; Drug Therapy; Major Depression; Mental Health; Serotonin. Classification: Psychophysiology (2560); Psychological Disorders (3210). Population: Human (10); Animal (20). Intended Audience: Psychology: Professional & Research (PS). References Available: Y. Page Count: 27. Copyright Statement: Springer Nature Switzerland AG. 2021.

AB - Prenatal maternal stress that results from general and pregnancy-specific forms of anxiety and depression, ranging in severity from everyday hassles to experiences of traumatic events, adversely impacts neurodevelopment and increases risks for psychopathology in the offspring. To date, the focus of investigations has been on the assessment of factors that alter fetal brain development via transplacental mechanisms. Attention has to date focused on developmental outcomes associated with transplacental transfer of maternal cortisol and psychotropic medications used to treat stress-related disorders; however, behavioral outcomes across childhood vary and findings remain conflicting and even contradictory. Emerging attention is now focusing on the role of the gastrointestinal microbiome as a key extra-placental stress transfer mechanism during pregnancy. In this chapter, we evaluate empirical evidence for the role of the microbiome-gut-brain axis in a non-transplacental prenatal stress mechanism and links with early brain development. We explore, in both human and animal studies, potential sensitivities for several mechanisms noted to mediate the stress stimuli’s neurodevelopmental effects, including hypothalamic-pituitary-adrenal (HPA) axis activity; altered serotonin signaling; changes in placental function; and immune system dysregulation. Special attention is paid to emerging evidence that the gut microbiome may play a consolidating role in shaping these key stress-responsive systems. It is well established that the gut microbiome utilizes neuroendocrine, neuroimmune, and autonomic nervous system pathways to mediate changes in brain function and behavior. Disturbances in the composition of gut microorganisms are a hallmark feature of many neurodevelopmental disorders and such disturbances in the gestational microbiome associated with prenatal stress that can be transferred from mothers to her offspring has been documented, which raised novel questions about whether these changes are associated with early brain development. Fresh approaches are called for refocus on tracking molecular and microbial markers reflective of the underlying etiologies throughout gestation toward identifying biological signatures that correspond to critical periods of vulnerability. Moving forward, targeted manipulation of the gut microbiome via dietary and bacterial-based interventions may prove decisive in conferring resilience to the detrimental consequences of prenatal stress during these critical neurodevelopmental windows. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

KW - Microbiome-gut-brain axis

KW - Extra-placental stress transfer mechanism

KW - Prenatal stress

KW - mental health

KW - Early brain development

KW - Hypothalamic-pituitary-adrenal (HPA) axis

KW - Serotonin signaling

KW - Immune system dysregulation

KW - Psychotropic mediations

KW - Brain

KW - Hypothalamic Pituitary Adrenal Axis

KW - Immune System

KW - Prenatal Development

KW - Psychopathology

KW - Anxiety

KW - Drug Therapy

KW - Major Depression

KW - Mental Health

KW - Serotonin

DO - 10.1007/978-3-030-60159-1\_8

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2022-62908-008&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2020-78618-006

AN - 2020-78618-006

AU - Yahfoufi, Nour

AU - Matar, Chantal

AU - Ismail, Nafissa

T1 - Adolescence and aging: Impact of adolescence inflammatory stress and microbiota alterations on brain development, aging, and neurodegeneration

JF - The Journals of Gerontology: Series A: Biological Sciences and Medical Sciences

JO - The Journals of Gerontology: Series A: Biological Sciences and Medical Sciences

JA - J Gerontol A Biol Sci Med Sci

Y1 - 2020/07//

VL - 75

IS - 7

SP - 1251

EP - 1257

PB - Oxford University Press

SN - 1079-5006

SN - 1758-535X

AD - Ismail, Nafissa, School of Psychology, University of Ottawa, 136 Jean-Jacques Lussier, Vanier 2076B, Ottawa, ON, Canada, K1N 6N5

N1 - Accession Number: 2020-78618-006. PMID: 31917834 Other Journal Title: Journal of Gerontology. Partial author list: First Author & Affiliation: Yahfoufi, Nour; Cellular and Molecular Medicine Department, Faculty of Medicine, University of Ottawa, Ottawa, ON, Canada. Other Publishers: Gerontological Society of America. Release Date: 20210819. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Matar, Chantal. Major Descriptor: Aging; Microorganisms; Puberty; Neurodegeneration; Neuroinflammation. Minor Descriptor: Mental Disorders; Mice; Neurodegenerative Diseases; Rats; Stress. Classification: Neuropsychology & Neurology (2520); Neurological Disorders & Brain Damage (3297). Population: Human (10); Animal (20). Age Group: Adolescence (13-17 yrs) (200). Methodology: Literature Review. References Available: Y. Page Count: 7. Issue Publication Date: Jul, 2020. Publication History: First Posted Date: Jan 10, 2020; First Submitted Date: Oct 17, 2019. Copyright Statement: Published by Oxford University Press on behalf of The Gerontological Society of America. This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/ by-nc/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. The Author(s). 2020.

AB - Puberty/adolescence is a critical phase during neurodevelopment with numerous structural, neurochemical, and molecular changes occurring in response to genetic and environmental signals. A consequence of this major neuronal reorganizing and remodeling is a heightened level of vulnerability to stressors and immune challenges. The gut microbiota is a fundamental modulator of stress and immune responses and has been found to play a role in mental health conditions and neurodegenerative disorders. Environmental insults (stress, infection, neuroinflammation, and use of antibiotics) during adolescence can result in dysbiosis subsidizing the development of brain disorders later in life. Also, pubertal neuroinflammatory insults can alter neurodevelopment, impact brain functioning in an enduring manner, and contribute to neurological disorders related to brain aging, such as Alzheimer’s disease, Parkinson’s disease, and depression. Exposure to probiotics during puberty can mitigate inflammation, reverse dysbiosis, and decrease vulnerabilities to brain disorders later in life. The goal of this review is to reveal the consequences of pubertal exposure to stress and immune challenges on the gut microbiota, immune reactivity within the brain, and the risk or resilience to stress-induced mental illnesses and neurodegenerative disorders. We propose that the consumption of probiotics during adolescence contribute to the prevention of brain pathologies in adulthood. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - Puberty

KW - Adolescence

KW - Neurodegeneration

KW - Neuroinflammation

KW - Microbiota

KW - Adolescent

KW - Aging

KW - Brain

KW - Gastrointestinal Microbiome

KW - Humans

KW - Inflammation

KW - Neurodegenerative Diseases

KW - Stress, Psychological

KW - Aging

KW - Microorganisms

KW - Puberty

KW - Neurodegeneration

KW - Neuroinflammation

KW - Mental Disorders

KW - Mice

KW - Neurodegenerative Diseases

KW - Rats

KW - Stress

U1 - Sponsor: Natural Sciences and Engineering Research Council. Grant: 532223-18. Other Details: Collaborative Research and Development Grant. Recipients: Matar, Chantal

U1 - Sponsor: University of Ottawa, Faculty of Health Sciences, Nutrition and Mental Health initiative, Canada. Recipients: No recipient indicated

DO - 10.1093/gerona/glaa006

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2020-78618-006&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2019-00400-001

AN - 2019-00400-001

AU - Gao, Wei

AU - Salzwedel, Andrew P.

AU - Carlson, Alexander L.

AU - Xia, Kai

AU - Azcarate-Peril, M. Andrea

AU - Styner, Martin A.

AU - Thompson, Amanda L.

AU - Geng, Xiujuan

AU - Goldman, Barbara D.

AU - Gilmore, John H.

AU - Knickmeyer, Rebecca C.

T1 - Gut microbiome and brain functional connectivity in infants-a preliminary study focusing on the amygdala

JF - Psychopharmacology

JO - Psychopharmacology

JA - Psychopharmacology (Berl)

Y1 - 2019/05/01/

VL - 236

IS - 5

SP - 1641

EP - 1651

PB - Springer

SN - 0033-3158

SN - 1432-2072

AD - Gao, Wei, Department of Biomedical Sciences and Imaging, Biomedical Imaging Research Institute, Cedars-Sinai Medical Center, PACT Room 400.7S, 116 N Robertson Blvd., Los Angeles, CA, US, 90048

N1 - Accession Number: 2019-00400-001. PMID: 30604186 Other Journal Title: Psychopharmacologia. Partial author list: First Author & Affiliation: Gao, Wei; Department of Biomedical Sciences and Imaging, Biomedical Imaging Research Institute, Cedars-Sinai Medical Center, Los Angeles, CA, US, wei.gao@cshs.org ORCID: 0000-0002-9260-2601. Release Date: 20190107. Correction Date: 20190822. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Gao, Wei. Major Descriptor: Amygdala; Gastrointestinal System; Microorganisms; Risk Factors; Brain Connectivity. Minor Descriptor: Brain Development; Cognitive Development; Communities. Classification: Consumer Opinion & Attitude Testing (2229). Population: Human (10); Male (30); Female (40). Age Group: Childhood (birth-12 yrs) (100); Infancy (2-23 mo) (140). Tests & Measures: Bayley Mental Development Index; Mullen Scales of Early Learning. Methodology: Empirical Study; Longitudinal Study; Prospective Study; Quantitative Study. Page Count: 11. Issue Publication Date: May 1, 2019. Publication History: First Posted Date: Jan 2, 2019; Accepted Date: Dec 21, 2018; First Submitted Date: Sep 22, 2018. Copyright Statement: Springer-Verlag GmbH Germany, part of Springer Nature. 2019.

AB - Recently, there has been a surge of interest in the possibility that microbial communities inhabiting the human gut could affect cognitive development and increase risk for mental illness via the 'microbiome-gut-brain axis.' Infancy likely represents a critical period for the establishment of these relationships, as it is the most dynamic stage of postnatal brain development and a key period in the maturation of the microbiome. Indeed, recent reports indicate that characteristics of the infant gut microbiome are associated with both temperament and cognitive performance. The neural circuits underlying these relationships have not yet been delineated. To address this gap, resting-state fMRI scans were acquired from 39 1-year-old human infants who had provided fecal samples for identification and relative quantification of bacterial taxa. Measures of alpha diversity were generated and tested for associations with measures of functional connectivity. Primary analyses focused on the amygdala as manipulation of the gut microbiota in animal models alters the structure and neurochemistry of this brain region. Secondary analyses explored functional connectivity of nine canonical resting-state functional networks. Alpha diversity was significantly associated with functional connectivity between the amygdala and thalamus and between the anterior cingulate cortex and anterior insula. These regions play an important role in processing/responding to threat. Alpha diversity was also associated with functional connectivity between the supplementary motor area (SMA, representing the sensorimotor network) and the inferior parietal lobule (IPL). Importantly, SMA-IPL connectivity also related to cognitive outcomes at 2 years of age, suggesting a potential pathway linking gut microbiome diversity and cognitive outcomes during infancy. These results provide exciting new insights into the gut-brain axis during early human development and should stimulate further studies into whether microbiome-associated changes in brain circuitry influence later risk for psychopathology. (PsycINFO Database Record (c) 2019 APA, all rights reserved)

KW - Amygdala

KW - Functional connectivity

KW - Gut microbiome

KW - Infant brain development

KW - Amygdala

KW - Gastrointestinal System

KW - Microorganisms

KW - Risk Factors

KW - Brain Connectivity

KW - Brain Development

KW - Cognitive Development

KW - Communities

U1 - Sponsor: National Institutes of Health, US. Grant: R01DA042988; R01DA043678; R21NS088975; R21DA043171; R03DA036645. Recipients: Gao, Wei

U1 - Sponsor: National Institutes of Health, US. Grant: R01MH070890; R01HD053000. Recipients: Gilmore, John H.

U1 - Sponsor: National Institutes of Health, US. Grant: R01 MH092335; R33MH104330. Other Details: RKS. Recipients: No recipient indicated

U1 - Sponsor: National Institutes of Health, US. Grant: T32 NS007432. Recipients: Carlson, Alexander L.

U1 - Sponsor: Cedars-Sinai Precision Medicine Initiative. Recipients: Gao, Wei

DO - 10.1007/s00213-018-5161-8

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-00400-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2016-31590-001

AN - 2016-31590-001

AU - Neufeld, Karen-Anne McVey

AU - Luczynski, Pauline

AU - Oriach, Clara Seira

AU - Dinan, Timothy G.

AU - Cryan, John F.

T1 - What’s bugging your teen?—The microbiota and adolescent mental health

JF - Neuroscience and Biobehavioral Reviews

JO - Neuroscience and Biobehavioral Reviews

JA - Neurosci Biobehav Rev

Y1 - 2016/11//

VL - 70

SP - 300

EP - 312

PB - Elsevier Science

SN - 0149-7634

SN - 1873-7528

AD - Cryan, John F., APC Microbiome Institute, University College Cork, Cork, Ireland

N1 - Accession Number: 2016-31590-001. Partial author list: First Author & Affiliation: Neufeld, Karen-Anne McVey; APC Microbiome Institute, University College Cork, Cork, Ireland. Release Date: 20160627. Correction Date: 20161110. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Adolescent Development; Environmental Effects; Hypothalamic Pituitary Adrenal Axis; Mental Health; Neural Plasticity. Classification: Developmental Psychology (2800). Population: Human (10). Age Group: Adolescence (13-17 yrs) (200). Methodology: Literature Review. References Available: Y. Page Count: 13. Issue Publication Date: Nov, 2016. Publication History: First Posted Date: Jun 7, 2016; Accepted Date: Jun 6, 2016; Revised Date: Jun 4, 2016; First Submitted Date: Mar 4, 2016. Copyright Statement: All rights reserved. Elsevier Ltd. 2016.

AB - Human adolescence is a time of enormous developmental change, second only to infancy and early childhood in terms of brain shaping and growth. It is also a period in life when the young adult is faced with distinct environmental challenges and stressors. Interestingly, we now know that these external sources of stress all have an impact on the intestinal microbiota. Given that there is now a significant body of knowledge indicating a role for the microbiota-gut-brain axis in development and function of the brain, and potentially the emergence of psychiatric illnesses, we need to draw our attention to the intestinal microbiota in the adolescent. As psychiatric illnesses frequently first manifest during the teenage years it may be that the intestinal bacteria are playing an as yet unidentified role in disease pathogenesis. Identifying a role for the microbiota in psychiatric illnesses opens up an exciting opportunity for therapeutic advances via bacterial manipulation. This could prove to be a beneficial and novel avenue for treatment of mental illnesses in the developing teen. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

KW - Adolescence

KW - Microbiota-gut-brain

KW - axis

KW - Development

KW - Psychiatric illnesses

KW - Early life challenges

KW - Probiotics

KW - Hypothalamic-pituitary-adrenal axis

KW - Brain plasticity Critical windows

KW - Adolescent Development

KW - Environmental Effects

KW - Hypothalamic Pituitary Adrenal Axis

KW - Mental Health

KW - Neural Plasticity

DO - 10.1016/j.neubiorev.2016.06.005

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2016-31590-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2015-46912-007

AN - 2015-46912-007

AU - Hammer, Adam M.

AU - Morris, Niya L.

AU - Earley, Zachary M.

AU - Choudhry, Mashkoor A.

T1 - The first line of defense: The effects of alcohol on post-burn intestinal barrier, immune cells, and microbiome

JF - Alcohol Research: Current Reviews

JO - Alcohol Research: Current Reviews

JA - Alcohol Res

Y1 - 2015///

VL - 37

IS - 2

SP - 209

EP - 222

PB - Superintendent of Documents

SN - 2168-3492

SN - 2169-4796

N1 - Accession Number: 2015-46912-007. PMID: 26695746 Other Journal Title: Alcohol Health & Research World; Alcohol Research & Health. Partial author list: First Author & Affiliation: Hammer, Adam M.; Alcohol Research Program, Loyola University Chicago, Health Sciences Division, Maywood, IL, US. Other Publishers: National Institute on Alcohol Abuse and Alcoholism. Release Date: 20151102. Correction Date: 20230119. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Choudhry, Mashkoor A. Major Descriptor: Alcohol Abuse; Alcoholism; Ethanol; Immune System; Intestines. Minor Descriptor: Animal Models; Trauma. Classification: Psychopharmacology (2580). Population: Human (10); Animal (20). References Available: Y. Page Count: 14. Issue Publication Date: 2015.

AB - Alcohol (ethanol) is one of the most globally abused substances, and is one of the leading causes of premature death in the world. As a result of its complexity and direct contact with ingested alcohol, the intestine represents the primary source from which alcohol-associated pathologies stem. The gut is the largest reservoir of bacteria in the body, and under healthy conditions, it maintains a barrier preventing bacteria from translocating out of the intestinal lumen. The intestinal barrier is compromised following alcohol exposure, which can lead to life-threatening systemic complications including sepsis and multiple organ failure. Furthermore, alcohol is a major confounding factor in pathology associated with trauma. Experimental data from both human and animal studies suggest that alcohol perturbs the intestinal barrier and its function, which is exacerbated by a 'second hit' from traumatic injury. This article highlights the role of alcohol-mediated alterations of the intestinal epithelia and its defense against bacteria within the gut, and the impact of alcohol on intestinal immunity, specifically on T cells and neutrophils. Finally, it discusses how the gut microbiome both contributes to and protects the intestines from dysbiosis after alcohol exposure and trauma. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - Alcohol use

KW - abuse

KW - and dependence

KW - alcohol consumption

KW - alcohol exposure

KW - alcohol effects and consequences

KW - burns

KW - immunity

KW - immune cells

KW - microbiome

KW - intestine

KW - gut

KW - intestinal lumen

KW - intestinal barrier

KW - bacteria

KW - sepsis

KW - organ failure

KW - trauma

KW - T cells

KW - neutrophils

KW - dysbiosis

KW - human studies

KW - animal models

KW - Alcohol Drinking

KW - Alcoholism

KW - Bacterial Translocation

KW - Burns

KW - Dysbiosis

KW - Gastrointestinal Microbiome

KW - Humans

KW - Intestinal Mucosa

KW - Neutrophils

KW - Sepsis

KW - T-Lymphocytes

KW - Alcohol Abuse

KW - Alcoholism

KW - Ethanol

KW - Immune System

KW - Intestines

KW - Animal Models

KW - Trauma

U1 - Sponsor: National Institutes of Health, US. Grant: R01–AA–015731; R01–AA–015731–08S1. Recipients: Choudhry, Mashkoor A.

U1 - Sponsor: National Institutes of Health, US. Grant: T32–AA–013527. Other Details: To Elizabeth J. Kovacs. Recipients: No recipient indicated

U1 - Sponsor: Dr. Ralph and Marian C. Falk Medical Research Trust. Other Details: To Elizabeth J. Kovacs. Recipients: No recipient indicated

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2015-46912-007&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - CHAP

ID - 2024-24037-016

AN - 2024-24037-016

AU - Toljan, Sanja

ED - Demarin, Vida

ED - Battistin, Leontino

ED - Budinčević, Hrvoje

T1 - Therapeutic interventions in psycho-neuro-endocrino-immunology (PNEI)

T2 - Mind, brain and education.

Y1 - 2023///

SP - 151

EP - 170

CY - Cham

PB - Springer Nature Switzerland AG

SN - 978-3-031-33012-4

SN - 978-3-031-33013-1

AD - Toljan, Sanja, Clinics for Otorhinolaryngology, Surgery and Anesthesiology “Orlando”, Zagreb, Croatia

N1 - Accession Number: 2024-24037-016. Partial author list: First Author & Affiliation: Toljan, Sanja; Clinics for Otorhinolaryngology, Surgery and Anesthesiology 'Orlando', Zagreb, Croatia, info@poliklinika-orlando.hr. Release Date: 20240201. Publication Type: Book (0200), Edited Book (0280). Format Covered: Print. Document Type: Chapter. ISBN: 978-3-031-33012-4, ISBN Hardcover; 978-3-031-33013-1, ISBN Digital (undefined format). Language: English. Major Descriptor: Cognition; Human Biological Rhythms; Intervention; Nutrition; Pharmacology; Psychoneuroendocrinology; Therapeutic Processes. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Intended Audience: Psychology: Professional & Research (PS). References Available: Y. Page Count: 20. Copyright Statement: The Author(s), under exclusive license to Springer Nature Switzerland AG. 2023.

AB - Psycho-neuro-endocrino-immunology (PNEI) is modern systems biology based on evidence-based discoveries of human body function. It brings new approach in understanding how cognition and emotions shape neural system and affects many functional axes in body, especially the brain –gut axis, being the most explored nowadays. The main goal of PNEI is to fight inflammation by modifying circadian rhythm, nutrition and cognition and using pharmacology to modulate inflammatory response and enhance protective mechanisms in body. Using the knowledge about brain-gut, brain-heart, brain-liver, brain-lungs, brain-skin, but also connecting brain with each and every organ and cell, PNEI establishes therapeutic interventions that can be practiced along the bedside. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

KW - Psycho-neuro-endocrino-immunology PNEI

KW - Circadian rhythm maintenance

KW - Anti-inflammatory diet

KW - Cognitive-behavioral therapy

KW - Low dose medicine

KW - Cognition

KW - Human Biological Rhythms

KW - Intervention

KW - Nutrition

KW - Pharmacology

KW - Psychoneuroendocrinology

KW - Therapeutic Processes

DO - 10.1007/978-3-031-33013-1\_16

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2024-24037-016&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2021-06626-001

AN - 2021-06626-001

AU - Weaver, Jessica L.

T1 - The brain-gut axis: A prime therapeutic target in traumatic brain injury

JF - Brain Research

JO - Brain Research

JA - Brain Res

Y1 - 2021/02/15/

VL - 1753

PB - Elsevier Science

SN - 0006-8993

SN - 1872-6240

AD - Weaver, Jessica L., Division of Trauma, Surgical Critical Care, Burns, and Acute Care Surgery, Department of Surgery, University of California, San Diego School of Medicine, 200 W Arbor Drive #8896, San Diego, CA, US, 92103-8896

N1 - Accession Number: 2021-06626-001. PMID: 33359374 Partial author list: First Author & Affiliation: Weaver, Jessica L.; Division of Trauma, Surgical Critical Care, Burns, and Acute Care Surgery, Department of Surgery, University of California, San Diego School of Medicine, San Diego, CA, US, jlweaver@ucsd.edu. Release Date: 20210111. Correction Date: 20210211. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Gastrointestinal System; Inflammation; Intestines; Traumatic Brain Injury. Minor Descriptor: Animal Models; Interspecies Interaction; Nerve Tissues; Treatment. Classification: Neuropsychology & Neurology (2520); Neurological Disorders & Brain Damage (3297). Population: Human (10); Animal (20). Methodology: Literature Review. References Available: Y. ArtID: 147225. Issue Publication Date: Feb 15, 2021. Publication History: First Posted Date: Dec 24, 2020; Accepted Date: Dec 1, 2020; Revised Date: Nov 27, 2020; First Submitted Date: Aug 27, 2020. Copyright Statement: All rights reserved. Elsevier B.V. 2021.

AB - Traumatic brain injury (TBI) is a significant cause of morbidity and mortality in trauma patients. The primary focus of treating TBI is to prevent additional injury to the damaged brain tissue, known as secondary brain injury. This treatment can include treating the body’s inflammatory response. Despite promise in animal models, anti-inflammatory therapy has failed to improve outcomes in human patients, suggesting a more targeted and precise approach may be needed. There is a bidirectional axis between the intestine and the brain that contributes to this inflammation in acute and chronic injury. The mechanisms for this interaction are not completely understood, but there is evidence that neural, inflammatory, endocrine, and microbiome signals all participate in this process. Therapies that target the intestine as a source of inflammation have potential to lessen secondary brain injury and improve outcomes in TBI patients, but to develop these treatments we need to better understand the mechanisms behind this intestinal inflammatory response. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - Traumatic brain injury

KW - Gut-brain axis

KW - Intestinal injury

KW - Intestinal permeability

KW - Microbiome

KW - Gastrointestinal System

KW - Inflammation

KW - Intestines

KW - Traumatic Brain Injury

KW - Animal Models

KW - Interspecies Interaction

KW - Nerve Tissues

KW - Treatment

DO - 10.1016/j.brainres.2020.147225

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2021-06626-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2011-04324-006

AN - 2011-04324-006

AU - O'Mahony, Siobhain M.

AU - Hyland, Niall P.

AU - Dinan, Timothy G.

AU - Cryan, John F.

T1 - Maternal separation as a model of brain–gut axis dysfunction

JF - Psychopharmacology

JO - Psychopharmacology

JA - Psychopharmacology (Berl)

Y1 - 2011/03//

VL - 214

IS - 1

SP - 71

EP - 88

PB - Springer

SN - 0033-3158

SN - 1432-2072

AD - O'Mahony, Siobhain M., Alimentary Pharmabiotic Centre, Biosciences Institute, University College Cork, Cork, Ireland

N1 - Accession Number: 2011-04324-006. PMID: 20886335 Other Journal Title: Psychopharmacologia. Partial author list: First Author & Affiliation: O'Mahony, Siobhain M.; Alimentary Pharmabiotic Centre, Biosciences Institute, University College Cork, Cork, Ireland, somahony@ucc.ie. Release Date: 20110321. Correction Date: 20170213. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: O'Mahony, Siobhain M. Major Descriptor: Animal Maternal Deprivation; Brain; Mental Disorders; Stress. Minor Descriptor: Anxiety; Irritable Bowel Syndrome; Rodents. Classification: Psychophysiology (2560). Population: Human (10); Animal (20). Methodology: Literature Review. References Available: Y. Page Count: 18. Issue Publication Date: Mar, 2011. Publication History: First Posted Date: Oct 1, 2010; Accepted Date: Aug 28, 2010; First Submitted Date: Apr 1, 2010. Copyright Statement: Springer-Verlag. 2010.

AB - Rationale: Early life stress has been implicated in many psychiatric disorders ranging from depression to anxiety. Maternal separation in rodents is a well-studied model of early life stress. However, stress during this critical period also induces alterations in many systems throughout the body. Thus, a variety of other disorders that are associated with adverse early life events are often comorbid with psychiatric illnesses, suggesting a common underlying aetiology. Irritable bowel syndrome (IBS) is a functional gastrointestinal disorder that is thought to involve a dysfunctional interaction between the brain and the gut. Essential aspects of the brain–gut axis include spinal pathways, the hypothalamic pituitary adrenal axis, the immune system, as well as the enteric microbiota. Accumulating evidence suggest that stress, especially in early life, is a predisposing factor to IBS. Objective: The objective of this review was to assess and compile the most relevant data on early life stress and alterations at all levels of the brain gut axis. Results: In this review, we describe the components of the brain–gut axis individually and how they are altered by maternal separation. The separated phenotype is characterised by alterations of the intestinal barrier function, altered balance in enteric microflora, exaggerated stress response and visceral hypersensitivity, which are all evident in IBS. Conclusion: Thus, maternally separated animals are an excellent model of brain–gut axis dysfunction for the study of disorders such as IBS and for the development of novel therapeutic interventions. (PsycINFO Database Record (c) 2017 APA, all rights reserved)

KW - maternal separation

KW - brain

KW - irritable bowel syndrome

KW - psychiatric disorders

KW - anxiety

KW - brain gut axis

KW - rodents

KW - Animals

KW - Brain

KW - Disease Models, Animal

KW - Gastrointestinal Tract

KW - Humans

KW - Irritable Bowel Syndrome

KW - Life Change Events

KW - Maternal Deprivation

KW - Rodentia

KW - Stress, Psychological

KW - Animal Maternal Deprivation

KW - Brain

KW - Mental Disorders

KW - Stress

KW - Anxiety

KW - Irritable Bowel Syndrome

KW - Rodents

U1 - Sponsor: Science Foundation Ireland, Ireland. Other Details: Alimentary Pharmabiotic Centre funded through the Irish Government’s National Development Plan. Recipients: No recipient indicated

U1 - Sponsor: Science Foundation Ireland, Ireland. Grant: 02/CE/B124; 07/CE/B1368. Recipients: O'Mahony, Siobhain M.; Hyland, Niall P.; Dinan, Timothy G.; Cryan, John F.

U1 - Sponsor: GlaxoSmithKline. Other Details: Alimentary Pharmabiotic Centre. Recipients: No recipient indicated

U1 - Sponsor: European Community, Seventh Framework Programme (FP7). Grant: 201714. Date: from 2007 to 2013. Recipients: Cryan, John F.

DO - 10.1007/s00213-010-2010-9

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2011-04324-006&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2024-60184-013

AN - 2024-60184-013

AU - Rodríguez-Moreno, Carla B.

AU - Cañeque-Rufo, Héctor

AU - Flor-García, Miguel

AU - Terreros-Roncal, Julia

AU - Moreno-Jiménez, Elena P.

AU - Pallas-Bazarra, Noemí

AU - Bressa, Carlo

AU - Larrosa, Mar

AU - Cafini, Fabio

AU - Llorens-Martín, María

T1 - Azithromycin preserves adult hippocampal neurogenesis and behavior in a mouse model of sepsis

JF - Brain, Behavior, and Immunity

JO - Brain, Behavior, and Immunity

JA - Brain Behav Immun

Y1 - 2024/03//

VL - 117

SP - 135

EP - 148

PB - Elsevier Science

SN - 0889-1591

SN - 1090-2139

AD - Cafini, Fabio, Faculty of Biomedical and Health Sciences, Universidad Europea de Madrid, Madrid, Spain

N1 - Accession Number: 2024-60184-013. PMID: 38211636 Partial author list: First Author & Affiliation: Rodríguez-Moreno, Carla B.; Department of Molecular Neuropathology, Centro de Biologia Molecular 'Severo Ochoa' (CBMSO), Spanish Research Council (CSIC), Universidad Autonoma de Madrid (UAM), Madrid, Spain. Release Date: 20240314. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Cafini, Fabio. Major Descriptor: Antibiotics; Cytokines; Hippocampus; Mice; Neurons; Neurogenesis; Gastrointestinal Microbiota; Respiratory Drugs. Classification: Neuropsychology & Neurology (2520). Population: Animal (20); Male (30); Female (40). Methodology: Empirical Study; Quantitative Study. References Available: Y. Page Count: 14. Issue Publication Date: Mar, 2024. Publication History: First Posted Date: Jan 9, 2024; Accepted Date: Jan 8, 2024; Revised Date: Dec 11, 2023; First Submitted Date: Oct 8, 2023. Copyright Statement: Published by Elsevier Inc. This is an open access article under the CC BY-NC license (http://creativecommons.org/licenses/by-nc/4.0/). The Author(s). 2024.

AB - The mammalian hippocampus can generate new neurons throughout life. Known as adult hippocampal neurogenesis (AHN), this process participates in learning, memory, mood regulation, and forgetting. The continuous incorporation of new neurons enhances the plasticity of the hippocampus and contributes to the cognitive reserve in aged individuals. However, the integrity of AHN is targeted by numerous pathological conditions, including neurodegenerative diseases and sustained inflammation. In this regard, the latter causes cognitive decline, mood alterations, and multiple AHN impairments. In fact, the systemic administration of Lipopolysaccharide (LPS) from E. coli to mice (a model of sepsis) triggers depression-like behavior, impairs pattern separation, and decreases the survival, maturation, and synaptic integration of adult-born hippocampal dentate granule cells. Here we tested the capacity of the macrolide antibiotic azithromycin to neutralize the deleterious consequences of LPS administration in female C57BL6J mice. This antibiotic exerted potent neuroprotective effects. It reversed the increased immobility time during the Porsolt test, hippocampal secretion of pro-inflammatory cytokines, and AHN impairments. Moreover, azithromycin promoted the synaptic integration of adult-born neurons and functionally remodeled the gut microbiome. Therefore, our data point to azithromycin as a clinically relevant drug with the putative capacity to ameliorate the negative consequences of chronic inflammation by modulating AHN and hippocampal-related behaviors. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

KW - Adult hippocampal neurogenesis

KW - Azithromycin

KW - LPS

KW - Retrovirus

KW - Gut microbiome

KW - Cytokines

KW - Antibiotics

KW - Cytokines

KW - Hippocampus

KW - Mice

KW - Neurons

KW - Neurogenesis

KW - Gastrointestinal Microbiota

KW - Respiratory Drugs

U1 - Sponsor: European Research Council (ERC), Europe. Grant: 2020-101001916. Other Details: CoG. Recipients: Cafini, Fabio

U1 - Sponsor: Spanish Ministry of Economy and Competitiveness, Spain. Grant: PID2020-113007RB-I00. Recipients: Llorens-Martín, María

U1 - Sponsor: Center for Networked Biomedical Research on Neurodegenerative Diseases (CIBERNED), Spain. Recipients: Llorens-Martín, María

U1 - Sponsor: Fundación Tatiana Pérez de Guzmán. Other Details: Neuroscience Doctoral fellowship. Recipients: Moreno-Jiménez, Elena P.

U1 - Sponsor: EMBO. Other Details: Scientific Exchange Grant. Recipients: Moreno-Jiménez, Elena P.

U1 - Sponsor: Sponsor name not included. Grant: SAF-2017-82185-R. Other Details: “Formacion de Personal Investigador” (FPI) contract. Recipients: Flor-García, Miguel; Llorens-Martín, María

U1 - Sponsor: Spanish Ministry of Economy and Competitiveness, Spain. Grant: PRE2018-085233. Recipients: Flor-García, Miguel

U1 - Sponsor: Universidad Autónoma de Madrid, Spain. Date: from 2017. Other Details: Doctoral fellowship, FPI-UAM program. Recipients: Terreros-Roncal, Julia

U1 - Sponsor: Fundación Universitaria San Pablo CEU-Banco Santander. Other Details: Fellowship. Recipients: Cañeque-Rufo, Héctor

DO - 10.1016/j.bbi.2024.01.005

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2024-60184-013&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-56441-001

AN - 2023-56441-001

AU - Morel, Cassandre

AU - Martinez Sanchez, Ines

AU - Cherifi, Yamina

AU - Chartrel, Nicolas

AU - Diaz Heijtz, Rochellys

T1 - Perturbation of maternal gut microbiota in mice during a critical perinatal window influences early neurobehavioral outcomes in offspring

JF - Neuropharmacology

JO - Neuropharmacology

JA - Neuropharmacology

Y1 - 2023/05/15/

VL - 229

SP - 1

EP - 15

PB - Elsevier Science

SN - 0028-3908

SN - 1873-7064

AD - Diaz Heijtz, Rochellys, Department of Neuroscience, Karolinska Institutet, 171 77, Stockholm, Sweden

N1 - Accession Number: 2023-56441-001. Other Journal Title: International Journal of Neuropharmacology. Partial author list: First Author & Affiliation: Morel, Cassandre; Department of Neuroscience, Karolinska Institutet, Stockholm, Sweden. Release Date: 20230417. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Morel, Cassandre. Major Descriptor: Antibiotics; Male Animals; Mice; Perinatal Period; Behavioral Genetics; Animal Offspring; Gastrointestinal Microbiota. Classification: Physiological Processes (2540). Population: Animal (20); Male (30); Female (40). Methodology: Empirical Study; Quantitative Study. Supplemental Data: Tables and Figures Internet. References Available: Y. Page Count: 15. ArtID: 109479. Issue Publication Date: May 15, 2023. Publication History: First Posted Date: Mar 2, 2023; Accepted Date: Feb 24, 2023; Revised Date: Feb 20, 2023; First Submitted Date: Dec 16, 2022. Copyright Statement: Elsevier Ltd. 2023.

AB - The gut microbiota is increasingly recognized as a key environmental factor that shapes host development and physiology, including neural circuits formation and function. Concurrently, there has been growing concern that early-life antibiotic exposure may alter brain developmental trajectories, increasing the risk for neurodevelopmental disorders such as autism spectrum disorder (ASD). Here, we assessed whether perturbation of the maternal gut microbiota in mice during a narrow critical perinatal window (last week of pregnancy and first three postnatal days), induced by exposure to a commonly used broad-spectrum oral antibiotic (ampicillin), influences offspring neurobehavioral outcomes relevant to ASD. Our results demonstrate that neonatal offspring from antibiotic-treated dams display an altered pattern of ultrasonic communication, which was more pronounced in males. Moreover, juvenile male, but not female, offspring from antibiotic-treated dams showed reduced social motivation and social interaction, as well as context-dependent anxiety-like behavior. However, no changes were observed in locomotor or exploratory activity. This behavioral phenotype of exposed juvenile males was associated with reduced gene expression of the oxytocin receptor (OXTR) and several tight-junction proteins in the prefrontal cortex, a key region involved in the regulation of social and emotional behaviors, as well as a mild inflammatory response in the colon. Further, juvenile offspring from exposed dams also showed distinct alterations in several gut bacterial species, including, Lactobacillus murinus, and Parabacteroides goldsteinii. Overall, this study highlights the importance of the maternal microbiome in early-life, and how its perturbation by a widely used antibiotic could contribute to atypical social and emotional development of offspring in a sex-dependent manner. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - gut microbiota

KW - mice

KW - neurobehavioral outcomes

KW - animal offspring

KW - Antibiotics

KW - Male Animals

KW - Mice

KW - Perinatal Period

KW - Behavioral Genetics

KW - Animal Offspring

KW - Gastrointestinal Microbiota

U1 - Sponsor: Normandie Regional Council. Other Details: Scholarship. Recipients: Morel, Cassandre

U1 - Sponsor: Karolinska Institutet. Recipients: Morel, Cassandre

U1 - Sponsor: Swedish Research Council, Sweden. Grant: 2018–06232. Recipients: No recipient indicated

U1 - Sponsor: Swedish Brain Foundation, Sweden. Grant: FO2020-0088; FO2022-0199. Recipients: No recipient indicated

U1 - Sponsor: Foundation Freemasons-Children’s house, Sweden. Recipients: No recipient indicated

U1 - Sponsor: Institut National de la Santé et de la Recherche Médicale. Recipients: Chartrel, Nicolas

U1 - Sponsor: University of Rouen, France. Recipients: Chartrel, Nicolas

DO - 10.1016/j.neuropharm.2023.109479

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-56441-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-40457-026

AN - 2023-40457-026

AU - Lynch, Caoimhe M. K.

AU - Cowan, Caitlin S. M.

AU - Bastiaanssen, Thomaz F. S.

AU - Moloney, Gerard M.

AU - Theune, Nigel

AU - van de Wouw, Marcel

AU - Zanuy, Eva Florensa

AU - Ventura-Silva, Ana Paula

AU - Codagnone, Martin G.

AU - Villalobos-Manríquez, Francisca

AU - Segalla, Matilde

AU - Koc, Fatma

AU - Stanton, Catherine

AU - Ross, Paul

AU - Dinan, Timothy G.

AU - Clarke, Gerard

AU - Cryan, John F.

T1 - Critical windows of early-life microbiota disruption on behaviour, neuroimmune function, and neurodevelopment

JF - Brain, Behavior, and Immunity

JO - Brain, Behavior, and Immunity

JA - Brain Behav Immun

Y1 - 2023/02//

VL - 108

SP - 309

EP - 327

PB - Elsevier Science

SN - 0889-1591

SN - 1090-2139

AD - Cowan, Caitlin S. M., Office of the Vice President for Research & Innovation, University College Cork, 4th Floor Food Science Building, College Rd., Cork, Ireland

N1 - Accession Number: 2023-40457-026. Partial author list: First Author & Affiliation: Lynch, Caoimhe M. K.; APC Microbiome Ireland, University College Cork, Cork, Ireland. Release Date: 20230213. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Microorganisms; Microglia; Gastrointestinal Microbiota. Minor Descriptor: Adolescent Development; Animal Models; Mice; Myelin Sheath; Neural Development; Neuroimmunology; Adolescent Behavior. Classification: Neuropsychology & Neurology (2520); Developmental Psychology (2800). Population: Animal (20); Male (30); Female (40). Methodology: Empirical Study; Quantitative Study. Supplemental Data: Appendixes Internet; Tables and Figures Internet. References Available: Y. Page Count: 19. Issue Publication Date: Feb, 2023. Publication History: First Posted Date: Dec 17, 2022; Accepted Date: Dec 14, 2022; Revised Date: Nov 11, 2022; First Submitted Date: Jul 14, 2022. Copyright Statement: Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/). The Authors. 2022.

AB - Numerous studies have emphasised the importance of the gut microbiota during early life and its role in modulating neurodevelopment and behaviour. Epidemiological studies have shown that early-life antibiotic exposure can increase an individual’s risk of developing immune and metabolic diseases. Moreover, preclinical studies have shown that long-term antibiotic-induced microbial disruption in early life can have enduring effects on physiology, brain function and behaviour. However, these studies have not investigated the impact of targeted antibiotic-induced microbiota depletion during critical developmental windows and how this may be related to neurodevelopmental outcomes. Here, we addressed this gap by administering a broad-spectrum oral antibiotic cocktail (ampicillin, gentamicin, vancomycin, and imipenem) to mice during one of three putative critical windows: the postnatal (PN; P2-9), pre-weaning (PreWean; P12-18), or post-weaning (Wean; P21-27) developmental periods and assessed the effects on physiology and behaviour in later life. Our results demonstrate that targeted microbiota disruption during early life has enduring effects into adolescence on the structure and function of the caecal microbiome, especially for antibiotic exposure during the weaning period. Further, we show that microbial disruption in early life selectively alters circulating immune cells and modifies neurophysiology in adolescence, including altered myelin-related gene expression in the prefrontal cortex and altered microglial morphology in the basolateral amygdala. We also observed sex and time-dependent effects of microbiota depletion on anxiety-related behavioural outcomes in adolescence and adulthood. Antibiotic-induced microbial disruption had limited and subtle effects on social behaviour and did not have any significant effects on depressive-like behaviour, short-term working, or recognition memory. Overall, this study highlights the importance of the gut microbiota during critical windows of development and the subtle but long-term effects that microbiota-targeted perturbations can have on brain physiology and behaviour. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - Early life

KW - Gut microbiota

KW - Critical windows

KW - Development

KW - Behaviour

KW - Myelin

KW - Microglia

KW - Adolescence

KW - Adulthood

KW - Immune

KW - Microorganisms

KW - Microglia

KW - Gastrointestinal Microbiota

KW - Adolescent Development

KW - Animal Models

KW - Mice

KW - Myelin Sheath

KW - Neural Development

KW - Neuroimmunology

KW - Adolescent Behavior

U1 - Sponsor: Science Foundation Ireland, Ireland. Grant: SFI/12/RC/2273\_P2. Other Details: APC Microbiome Ireland is a Research Centre. Recipients: No recipient indicated

DO - 10.1016/j.bbi.2022.12.008

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-40457-026&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-40457-015

AN - 2023-40457-015

AU - Kraaij, Robert

AU - Schuurmans, Isabel K.

AU - Radjabzadeh, Djawad

AU - Tiemeier, Henning

AU - Dinan, Timothy G.

AU - Uitterlinden, André G.

AU - Hillegers, Manon

AU - Jaddoe, Vincent W. V.

AU - Duijts, Liesbeth

AU - Moll, Henriette

AU - Rivadeneira, Fernando

AU - Medina-Gomez, Carolina

AU - Jansen, Pauline W.

AU - Cecil, Charlotte A. M.

T1 - The gut microbiome and child mental health: A population-based study

JF - Brain, Behavior, and Immunity

JO - Brain, Behavior, and Immunity

JA - Brain Behav Immun

Y1 - 2023/02//

VL - 108

SP - 188

EP - 196

PB - Elsevier Science

SN - 0889-1591

SN - 1090-2139

AD - Cecil, Charlotte A. M., Department of Child and Adolescent Psychiatry/Psychology, Erasmus MC, Rotterdam, Netherlands

N1 - Accession Number: 2023-40457-015. Partial author list: First Author & Affiliation: Kraaij, Robert; Department of Internal Medicine, Erasmus University Medical Center, Rotterdam, Netherlands, r.kraaij@erasmusmc.nl. Release Date: 20230213. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Cecil, Charlotte A. M. Major Descriptor: Child Psychiatry; Emotional Disturbances; Gastrointestinal System; Mental Health; Microorganisms. Minor Descriptor: Epidemiology; Mental Disorders. Classification: Psychological Disorders (3210). Population: Human (10); Male (30); Female (40). Location: Netherlands. Age Group: Childhood (birth-12 yrs) (100); School Age (6-12 yrs) (180). Tests & Measures: Child Behavior Checklist. Methodology: Empirical Study; Quantitative Study. Supplemental Data: Tables and Figures Internet. References Available: Y. Page Count: 9. Issue Publication Date: Feb, 2023. Publication History: First Posted Date: Dec 6, 2022; Accepted Date: Dec 3, 2022; First Submitted Date: Nov 30, 2022. Copyright Statement: Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/). The Author(s). 2022.

AB - The link between the gut microbiome and the brain has gained increasing scientific and public interest for its potential to explain psychiatric risk. While differences in gut microbiome composition have been associated with several mental health problems, evidence to date has been largely based on animal models and human studies with modest sample sizes. In this cross-sectional study in 1,784 ten-year-old children from the multi-ethnic, population-based Generation R Study, we aimed to characterize associations of the gut microbiome with child mental health problems. Gut microbiome was assessed from stool samples using 16S rRNA sequencing. We focused on overall psychiatric symptoms as well as with specific domains of emotional and behavioral problems, assessed via the maternally rated Child Behavior Checklist. While we observed lower gut microbiome diversity in relation to higher overall and specific mental health problems, associations were not significant. Likewise, we did not identify any taxonomic feature associated with mental health problems after multiple testing correction, although suggestive findings indicated depletion of genera previously associated with psychiatric disorders, including Hungatella, Anaerotruncus and Oscillospiraceae. The identified compositional abundance differences were found to be similar across all mental health problems. Finally, we did not find significant enrichment for specific microbial functions in relation to mental health problems. In conclusion, based on the largest sample examined to date, we do not find clear evidence of associations between gut microbiome diversity, taxonomies or functions and mental health problems in the general pediatric population. In future, the use of longitudinal designs with repeated measurements of microbiome and psychiatric outcomes will be critical to identify whether and when associations between the gut microbiome and mental health emerge across development and into adulthood. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - Microbiome

KW - Child mental health

KW - Gut-brain-axis

KW - Epidemiology

KW - Psychiatry

KW - Population-based

KW - Child Psychiatry

KW - Emotional Disturbances

KW - Gastrointestinal System

KW - Mental Health

KW - Microorganisms

KW - Epidemiology

KW - Mental Disorders

U1 - Sponsor: Erasmus MC, Rotterdam, Netherlands. Other Details: General Design of the Generation R Study. Recipients: No recipient indicated

U1 - Sponsor: Erasmus University Rotterdam, Netherlands. Recipients: No recipient indicated

U1 - Sponsor: Netherlands Organisation for Health Research and Development, Netherlands. Recipients: No recipient indicated

U1 - Sponsor: Netherlands Organisation for Scientific Research, Netherlands. Recipients: No recipient indicated

U1 - Sponsor: Ministry of Health, Welfare and Sport. Recipients: No recipient indicated

U1 - Sponsor: Ministry of Youth and Families. Recipients: No recipient indicated

U1 - Sponsor: European Union, Europe. Grant: 848158; 733206. Other Details: Horizon 2020 Research and Innovation Programme, EarlyCause, LIFECYCLE. Recipients: No recipient indicated

U1 - Sponsor: European Research Council (ERC), Europe. Grant: 101039672. Other Details: European Union’s Horizon 2020 Research and Innovation Programme, TEMPO. Recipients: Cecil, Charlotte A. M.

U1 - Sponsor: Erasmus MC, mRACE, Netherlands. Other Details: Profiling of the human gut microbiome. Recipients: Radjabzadeh, Djawad

DO - 10.1016/j.bbi.2022.12.006

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-40457-015&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2022-78978-024

AN - 2022-78978-024

AU - Caputi, Valentina

AU - Bastiaanssen, Thomaz F. S.

AU - Peterson, Veronica

AU - Sajjad, Jahangir

AU - Simons, Luuk P.

AU - Murphy, Amy

AU - Stanton, Catherine

AU - McNamara, Brian

AU - Shorten, George D.

AU - Cryan, John F.

AU - O'Mahony, Siobhain M.

T1 - Sex, pain, and the microbiome: The relationship between baseline gut microbiota composition, gender and somatic pain in healthy individuals

JF - Brain, Behavior, and Immunity

JO - Brain, Behavior, and Immunity

JA - Brain Behav Immun

Y1 - 2022/08//

VL - 104

SP - 191

EP - 204

PB - Elsevier Science

SN - 0889-1591

SN - 1090-2139

AD - O'Mahony, Siobhain M., Department of Anatomy and Neuroscience, University College Cork, Western Gateway Building, Cork, Ireland

N1 - Accession Number: 2022-78978-024. Partial author list: First Author & Affiliation: Caputi, Valentina; APC Microbiome Ireland, University College Cork, Cork, Ireland. Release Date: 20220721. Correction Date: 20221128. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Human Sex Differences; Pain; Pain Thresholds; Somatization; Gastrointestinal Microbiota. Minor Descriptor: Dyspareunia; Interleukins; Proteins; Threshold Determination; Tumor Necrosis Factor. Classification: Physical & Somatic Disorders (3290). Population: Human (10); Male (30); Female (40). Location: Germany. Age Group: Adulthood (18 yrs & older) (300); Young Adulthood (18-29 yrs) (320); Thirties (30-39 yrs) (340). Tests & Measures: Beck Depression Inventory DOI: 10.1037/t00741-000. Methodology: Empirical Study; Quantitative Study. References Available: Y. Page Count: 14. Issue Publication Date: Aug, 2022. Publication History: First Posted Date: Jun 7, 2022; Accepted Date: Jun 5, 2022; Revised Date: May 19, 2022; First Submitted Date: Feb 14, 2022. Copyright Statement: Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/). The Author(s). 2022.

AB - Background and Aim: Relative to men, women present with pain conditions more commonly. Although consistent differences exist between men and women in terms of physiological pain sensitivity, the underlying mechanisms are incompletely understood and yet could inform the development of effective sex specific treatments for pain. The gut microbiota can modulate nervous system functioning, including pain signaling pathways. We hypothesized that the gut microbiota and critical components of the gut-brain axis might influence electrical pain thresholds. Further, we hypothesized that sex, menstrual cycle, and hormonal contraceptive use might account for inter-sex differences in pain perception. Methods: Healthy, non-obese males (N = 15) and females (N = 16), (nine of whom were using hormonal contraceptives), were recruited. Male subjects were invited to undergo testing once, whereas females were invited three times across the menstrual cycle, based on self-reported early follicular (EF), late follicular (LF), or mid-luteal (ML) phase. On test days, electrical stimulation on the right ankle was performed; salivary cortisol levels were measured in the morning; levels of lipopolysaccharide-binding protein (LBP), soluble CD14 (sCD14), pro-inflammatory cytokines were assessed in plasma, and microbiota composition and short-chain fatty acids (SCFAs) levels were determined in fecal samples. Results: We observed that the pain tolerance threshold/pain sensation threshold (PTT/PST) ratio was significantly lesser in women than men, but not PST or PTT alone. Further, hormonal contraceptive use was associated with increased LBP levels (LF & ML phase), whilst sCD14 levels or inflammatory cytokines were not affected. Interestingly, in women, hormonal contraceptive use was associated with an increase in the relative abundance of Erysipelatoclostridium, and the relative abundances of certain bacterial genera correlated positively with pain sensation thresholds (Prevotella and Megasphera) during the LF phase and cortisol awakening response (Anaerofustis) during the ML phase. In comparison with men, women displayed overall stronger associations between i) SCFAs data, ii) cortisol data, iii) inflammatory cytokines and PTT and PST. Discussion and conclusion: Our findings support the hypothesis that the gut microbiota may be one of the factors determining the physiological inter-sex differences in pain perception. Further research is needed to investigate the molecular mechanisms by which specific sex hormones and gut microbes modulate pain signaling pathways, but this study highlights the possibilities for innovative individual targeted therapies for pain management. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

KW - gender

KW - pain threshold

KW - pain sensitivity

KW - microbiota

KW - gut permeability

KW - hormonal contraceptives

KW - cortisol

KW - Human Sex Differences

KW - Pain

KW - Pain Thresholds

KW - Somatization

KW - Gastrointestinal Microbiota

KW - Dyspareunia

KW - Interleukins

KW - Proteins

KW - Threshold Determination

KW - Tumor Necrosis Factor

U1 - Sponsor: Science Foundation Ireland (SFI), Ireland. Other Details: APC Microbiome Ireland. Recipients: No recipient indicated

U1 - Sponsor: SFI. Grant: SFI/12/RC/2273. Recipients: No recipient indicated

DO - 10.1016/j.bbi.2022.06.002

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2022-78978-024&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2021-64551-001

AN - 2021-64551-001

AU - Wang, Yuanyuan

AU - Jiang, Riyue

AU - Wu, Zifeng

AU - Zhou, Ling

AU - Xu, Jiali

AU - Huang, Chaoli

AU - Yang, Ling

AU - Zhu, Bin

AU - Yan, Enshi

AU - Liu, Cunming

AU - Yang, Chun

T1 - Gut microbiota is involved in the antidepressant-like effect of (S)-norketamine in an inflammation model of depression

JF - Pharmacology, Biochemistry and Behavior

JO - Pharmacology, Biochemistry and Behavior

JA - Pharmacol Biochem Behav

Y1 - 2021/08//

VL - 207

PB - Elsevier Science

SN - 0091-3057

SN - 1873-5177

AD - Liu, Cunming, Department of Anesthesiology and Perioperative Medicine, First Affiliated Hospital of Nanjing Medical University, Nanjing, China, 210029

N1 - Accession Number: 2021-64551-001. Partial author list: First Author & Affiliation: Wang, Yuanyuan; Department of Anesthesiology and Perioperative Medicine, First Affiliated Hospital of Nanjing Medical University, Nanjing, China. Release Date: 20210805. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Yang, Chun. Major Descriptor: Gastrointestinal System; Inflammation; Ketamine; Major Depression; Microorganisms. Minor Descriptor: Measurement; Neural Receptors; Lipopolysaccharide. Classification: Physiological Psychology & Neuroscience (2500). Population: Animal (20); Male (30). Methodology: Empirical Study; Quantitative Study. References Available: Y. ArtID: 173226. Issue Publication Date: Aug, 2021. Publication History: First Posted Date: Jul 1, 2021; Accepted Date: Jun 29, 2021; Revised Date: Jun 29, 2021; First Submitted Date: Jun 15, 2021. Copyright Statement: Elsevier Inc. 2021.

AB - The non-competitive glutamatergic N-methyl-d-aspartate receptor (NMDAR) antagonist, (R, S)-ketamine (ketamine), is known to exert rapid and long-lasting antidepressant-like effects. However, the widely use of ketamine is restricted owing to severe psychotomimetic side-effects and abuse liability. Very recently, we demonstrated that a major metabolite of ketamine, norketamine, in particular the (S)-enantiomer, had a potent antidepressant-like effect. We here examined the effects of a low-dose of norketamine enantiomers on depression symptoms and detected the changes in the composition of gut microbiota. In the behavioral tests, (S)-norketamine, but not (R)-norketamine, showed antidepressant-like effects in the lipopolysaccharide (LPS)-induced mice. At the genus level, (S)-norketamine, but not (R)-norketamine, significantly attenuated the increase in the levels of Escherichia-Shigella and Adlercreutzia, as well as the reduction in the levels of Harryflintia. At the species level, both (S)-norketamine and (R)-norketamine significantly attenuated the increase in the levels of bacterium ic1379 and Bacteroides sp. Marseille-P3166. Notably, (S)-norketamine was more potent than (R)-norketamine at reducing the levels of bacterium ic1379 and Bacteroides sp. Marseille-P3166. Furthermore, (S)-norketamine, but not (R)-norketamine, significantly attenuated the increased levels of Bacteroides caecigallinarum. In conclusion, this study suggests that the antidepressant-like effects of (S)-norketamine might be associated with the changes in the composition of gut microbiota. Therapeutic strategies improving the gut microbiota might facilitate the benefits for depression treatment. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - Depression

KW - Gut microbiota

KW - (R)-Norketamine

KW - (S)-Norketamine

KW - Lipopolysaccharide

KW - Gastrointestinal System

KW - Inflammation

KW - Ketamine

KW - Major Depression

KW - Microorganisms

KW - Measurement

KW - Neural Receptors

KW - Lipopolysaccharide

U1 - Sponsor: National Natural Science Foundation of China, China. Grant: 81703482; 81974171. Recipients: Yang, Chun

U1 - Sponsor: National Natural Science Foundation of China, China. Grant: 82070405. Recipients: Yang, Ling

U1 - Sponsor: Science and Technology Support (Social Development) Project of Bureau of Science and Technology of Changzhou, China. Grant: CE20195044. Recipients: Yang, Ling

DO - 10.1016/j.pbb.2021.173226

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2021-64551-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2019-01259-001

AN - 2019-01259-001

AU - Kan, Janice M.

AU - Cowan, Caitlin S. M.

AU - Ooi, Chee Y.

AU - Kasparian, Nadine A.

T1 - What can the gut microbiome teach us about the connections between child physical and mental health? A systematic review

JF - Developmental Psychobiology

JO - Developmental Psychobiology

JA - Dev Psychobiol

Y1 - 2019/07//

VL - 61

IS - 5

SP - 700

EP - 713

PB - John Wiley & Sons

SN - 0012-1630

SN - 1098-2302

AD - Kan, Janice M., Discipline of Paediatrics, School of Women’s and Children’s Health, UNSW Sydney, Randwick, NSW, Australia

N1 - Accession Number: 2019-01259-001. PMID: 30618044 Partial author list: First Author & Affiliation: Kan, Janice M.; Discipline of Paediatrics, School of Women’s and Children’s Health, UNSW Medicine, University of New South Wales (UNSW), Sydney, NSW, Australia, janice.kan@unsw.edu.au ORCID: 0000-0001-8326-755X. Release Date: 20190110. Correction Date: 20190729. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Kasparian, Nadine A. Major Descriptor: Gastrointestinal System; Mental Health; Microorganisms; Pediatrics. Minor Descriptor: Allergic Skin Disorders; Irritable Bowel Syndrome; Life Span; Systematic Review; Randomized Controlled Trials. Classification: Developmental Psychology (2800). Population: Human (10). Age Group: Childhood (birth-12 yrs) (100). Methodology: Literature Review; Systematic Review. Page Count: 14. Issue Publication Date: Jul, 2019. Publication History: Accepted Date: Nov 20, 2018; Revised Date: Nov 19, 2018; First Submitted Date: Jul 17, 2018. Copyright Statement: Wiley Periodicals, Inc. 2019.

AB - A deeper understanding of the gut–brain axis is of significance in pediatrics, given the influential role of early childhood experiences and exposures in shaping the microbiome, and health, across the life course. This systematic review synthesized evidence on the connection between the gut microbiome and mental health in children with physical illness. Six electronic databases were systematically searched and data extracted according to the Preferred Reporting Items for Systematic reviews and Meta‐Analyses (PRISMA) guidelines. Of 1,476 identified articles, 11 articles reporting on nine unique studies (all randomized controlled trials) were included. Most studies examined the gut microbiome in infants with colic, while the remaining studies investigated outcomes in children aged 1 day to 18 years at risk for atopic dermatitis or irritable bowel syndrome. Baseline and postintervention gut microbiome differences varied across studies. Findings on psychological functioning also varied, with only half of the captured studies showing a positive effect of intervention on psychological well‐being. Only two studies analyzed the association between the gut microbiome and psychological outcomes, each with a different pattern of results. As the field moves forward, it will be critical to gain a better understanding of the microbiome characteristics that influence mental health outcomes in pediatric populations. (PsycINFO Database Record (c) 2019 APA, all rights reserved)

KW - childhood

KW - chronic illness

KW - mental health

KW - microbiome

KW - physical health

KW - quality of life

KW - Gastrointestinal System

KW - Mental Health

KW - Microorganisms

KW - Pediatrics

KW - Allergic Skin Disorders

KW - Irritable Bowel Syndrome

KW - Life Span

KW - Systematic Review

KW - Randomized Controlled Trials

U1 - Sponsor: National Health and Medical Research Council, Australia. Grant: APP1081001. Recipients: Kasparian, Nadine A.

U1 - Sponsor: UNSW, Medicine Neuroscience, Mental Health and Addictions Theme, Australia. Date: from 2017. Other Details: Seed Funding. Recipients: No recipient indicated

U1 - Sponsor: SPHERE Mindgardens Clinical Academic Group. Recipients: Kasparian, Nadine A.

U1 - Sponsor: European Union, Horizon 2020 Research and Innovation Program, Europe. Grant: 797592. Other Details: Under the Marie Skłodowska‐Curie Grant Agreement (GutMIND). Recipients: Cowan, Caitlin S. M.

U1 - Sponsor: National Heart Foundation of Australia, Australia. Other Details: Future Leader Fellowship. Recipients: Kasparian, Nadine A.

U1 - Sponsor: Commonwealth Fund. Date: from 2018 to 2019. Other Details: Harkness Fellowship in Health Care Policy & Practice. Recipients: No recipient indicated

DO - 10.1002/dev.21819

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-01259-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2023-68885-093

AN - 2023-68885-093

AU - Centner, Ann Marie

T1 - The role of smoking and vaping in atherosclerosis

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2023///

VL - 84

IS - 9-B

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 979-8377619444

N1 - Accession Number: 2023-68885-093. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Centner, Ann Marie; The Florida State University, Nutrition, Food & Exercise Science, US. Release Date: 20230612. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI29395665. ISBN: 979-8377619444. Language: English. Major Descriptor: Aging; Atherosclerosis; Cardiovascular Disorders; Mice; Nicotine; Tobacco Smoking; Apolipoprotein E; Vaping. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Animal (20); Male (30); Female (40). Location: US. Methodology: Empirical Study; Quantitative Study.

AB - Collectively, cardiovascular diseases (CVD) are the leading cause of disability and death in the United States (US), with risks for certain conditions differing between sexes. For example, males are more likely to be afflicted with coronary heart disease (CHD) while females are more likely to suffer from strokes. Tobacco cigarette use is the number one modifiable risk factor for CVD. Cigarette smoke is known to exacerbate atherosclerosis (arterial plaque build-up) and cellular aging (senescence). However, the role of nicotine and its primary metabolite cotinine in these processes is yet to be elucidated. With the growing use of nicotine-containing aerosols in recent years, the impact of nicotine on health is a relevant concern. A number of recent studies and health education sites focus on nicotine aerosol-induced adverse lung function, neglecting cardiovascular (CV) impairments and diseases. Critical review of the present scientific literature leads to the hypothesis that nicotine mediates the effects of cigarette smoke in the CV system by increasing mitogen-activated protein kinases (MAPK) signaling and cell migration, inflammation, and oxidative stress through NADPH oxidase 1 (Nox1) to induce vascular smooth muscle cell (VSMC) senescence. Cellular senescence is a protective mechanism against tumor growth and occurs when cells are exposed to a high degree of stress. The stress can be intrinsic such as telomere shortening or extrinsic such as by tobacco cigarette smoking, a known accelerator of tissue aging. This process describes cells stuck in irreversible cell cycle arrest. While these cells can no longer proliferate, they can influence the microenvironment around them by secreting pro-inflammatory molecules, growth factors, as well as ECM components and proteases. Any somatic cell capable of cell division can become senescent. This encompasses adipose cells, smooth muscle cells, endothelial cells, epithelial cells, astrocyte glial cells, and beta cells. Senescent cells accumulate over the lifespan and their location varies from person to person corresponding with their unique afflictions. This is because senescent cells are associated with many age-related diseases and conditions such as atherosclerosis, Alzheimer's disease (AD), type 2 diabetes, and frailty and these are experienced at different rates between each individual. Two tissues that have been heavily researched in the context of aging are the skin and the liver. Both these tissues contain a high number of senescent cells with a strong positive correlation to age. Accumulation of senescent VSMCs in the atherosclerotic lesion cap is detrimental as it increases the pathogenesis of atherosclerosis by promoting an unstable plaque phenotype. Thus, nicotine, and most likely its metabolite cotinine, adversely influence atherosclerosis. In addition, changes in gut microbiota are associated with many diseases including CVD; an area not explored in relation to E-liquids. Other harmful compounds in E-cigarette aerosols include flavorings, which have been shown to negatively influence endothelial cells (ECs) of the vascular endothelium, however their effect on VSMCs remains to be elucidated.This dissertation includes both in vitro and in vivo experiments. VSMCs isolated from the aortas of male and female C57BL/6 wild-type mice were used for in vitro experiments. For in vivo experiments, a common mouse model of atherosclerosis, the Apolipoprotein E knock out model (ApoE-/-), was used. ApoE is responsible for binding chylomicrons and VLDL (very low-density lipoprotein) for delivery to the LDL receptor on the liver. Unlike wild-type mice, the ApoE-/- mice accumulate aortic plaque quickly when fed high fat diet and over time on normal chow diet due to the accumulation of cholesterol in their circulation. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - Smoking

KW - Atherosclerosis

KW - Cardiovascular diseases

KW - Tobacco cigarette

KW - Endothelial cells

KW - Aging

KW - Atherosclerosis

KW - Cardiovascular Disorders

KW - Mice

KW - Nicotine

KW - Tobacco Smoking

KW - Apolipoprotein E

KW - Vaping

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-68885-093&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2022-25909-001

AN - 2022-25909-001

AU - Matisz, C. E.

AU - Gruber, A. J.

T1 - Neuroinflammatory remodeling of the anterior cingulate cortex as a key driver of mood disorders in gastrointestinal disease and disorders

JF - Neuroscience and Biobehavioral Reviews

JO - Neuroscience and Biobehavioral Reviews

JA - Neurosci Biobehav Rev

Y1 - 2022/02//

VL - 133

PB - Elsevier Science

SN - 0149-7634

SN - 1873-7528

AD - Matisz, C. E., University of Lethbridge, Canadian Center for Behavioural Neuroscience, 4401 University Drive, W, Lethbridge, AB, Canada, T1K 3M4

N1 - Accession Number: 2022-25909-001. Partial author list: First Author & Affiliation: Matisz, C. E.; University of Lethbridge, Canadian Center for Behavioural Neuroscience, Lethbridge, AB, Canada, chelsea.matisz@uleth.ca. Release Date: 20220203. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Matisz, C. E. Major Descriptor: Affective Disorders; Gastrointestinal Disorders; Inflammation; Cingulate Cortex; Neuroinflammation. Minor Descriptor: Anxiety; Major Depression; Schema. Classification: Affective Disorders (3211). Population: Human (10); Animal (20). Methodology: Literature Review. References Available: Y. ArtID: 104497. Issue Publication Date: Feb, 2022. Publication History: First Posted Date: Dec 17, 2021; Accepted Date: Dec 9, 2021; Revised Date: Nov 10, 2021; First Submitted Date: Dec 11, 2020. Copyright Statement: All rights reserved. Elsevier Ltd. 2021.

AB - Most gastrointestinal diseases and disorders (GIDD) are associated with depression, anxiety, and cognitive dysfunction. This suggests that shared features of GIDD, particularly chronic pain and inflammation, affect specific neural targets. The critical review of clinical and animal research presented here reveals that anterior cingulate cortex (ACC) is a primary target. It is particularly sensitive to neuroinflammation, and its function accounts for altered mental function emergent in GIDD. We propose that peripherally-triggered neuroinflammation normally signals injury/illness to ACC, which increases threat assessment and pain sensitivity to cope with increased vulnerability. Chronic peripheral inflammation over-drives this process, leading to long-term ACC structural remodeling, and excessive threat signaling. This evokes anxiodepressive phenotypes even without direct evidence of threats because ACC utilizes schemas to infer affective outcomes (e.g. pain) based on complex contextual information. This activates the autonomic nervous system, exacerbates immune dysfunction, and promotes further gut pathology. This theory provides a mechanistic account of bidirectional interactions among gastrointestinal, immunological, and neural systems in GIDD, and is likely applicable to other chronic inflammatory conditions. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

KW - Anterior cingulate cortex

KW - Prefrontal cortex

KW - Mood disorders

KW - Depression

KW - Anxiety

KW - Cognition

KW - Gut inflammation

KW - Neuroinflammation

KW - Microglia

KW - Astrocytes

KW - Inflammatory bowel disease

KW - Crohn’ s disease

KW - Ulcerative colitis

KW - Irritable bowel syndrome

KW - Celiac disease

KW - Functional dyspepsia diabetes

KW - Fibromyalgia

KW - Rheumatoid arthritis

KW - Brain fog

KW - Antidepressants

KW - Anti-Inflammatory

KW - vagus stimulation

KW - Microbiota

KW - Autonomic nervous system

KW - Sympathetic nervous system

KW - Peripheral nervous system

KW - Negative schemas

KW - Memory

KW - Affective Disorders

KW - Gastrointestinal Disorders

KW - Inflammation

KW - Cingulate Cortex

KW - Neuroinflammation

KW - Anxiety

KW - Major Depression

KW - Schema

U1 - Sponsor: Alberta Innovates Health Solutions, Canada. Other Details: PDF. Recipients: Matisz, C. E.

U1 - Sponsor: Natural Sciences and Engineering Research Council, Canada. Other Details: Discovery grant. Recipients: Gruber, A. J.

DO - 10.1016/j.neubiorev.2021.12.020

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2022-25909-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2021-26900-019

AN - 2021-26900-019

AU - Kelly, Deanna L.

AU - Kane, Maureen A.

AU - Fraser, Claire M.

AU - Sayer, MacKenzie A.

AU - Grant-Beurmann, Silvia

AU - Liu, Tian

AU - Gold, James A.

AU - Notarengelo, Francesca M.

AU - Vyas, Gopal R.

AU - Richardson, Charles M.

AU - August, Sharon M.

AU - Kotnana, Bhuvaneswari

AU - Miller, Jordyn

AU - Liu, Fang

AU - Buchanan, Robert W.

T1 - Prebiotic treatment increases serum butyrate in people with schizophrenia: Results of an open-label inpatient pilot clinical trial

JF - Journal of Clinical Psychopharmacology

JO - Journal of Clinical Psychopharmacology

JA - J Clin Psychopharmacol

Y1 - 2021/03//Mar-Apr, 2021

VL - 41

IS - 2

SP - 200

EP - 202

PB - Lippincott Williams & Wilkins

SN - 0271-0749

SN - 1533-712X

AD - Kelly, Deanna L.

N1 - Accession Number: 2021-26900-019. PMID: 33587401 Partial author list: First Author & Affiliation: Kelly, Deanna L.; Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, MD, US, dlkelly@som.umaryland.edu. Release Date: 20211007. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Letter. Language: English. Major Descriptor: Blood Serum; Drug Therapy; Microorganisms; Schizophrenia; Treatment. Minor Descriptor: Diets; Gastrointestinal System; Psychiatric Symptoms. Classification: Clinical Psychopharmacology (3340). Population: Human (10); Male (30); Female (40). Age Group: Adulthood (18 yrs & older) (300); Young Adulthood (18-29 yrs) (320); Thirties (30-39 yrs) (340); Middle Age (40-64 yrs) (360). Tests & Measures: Schedule for Assessment of Negative Symptoms; MATRICS Consensus Cognitive Battery; Side Effect Checklist; Brief Psychiatric Rating Scale DOI: 10.1037/t01554-000; Clinical Global Impression Scale. Methodology: Clinical Trial; Empirical Study; Quantitative Study. References Available: Y. Page Count: 3. Issue Publication Date: Mar-Apr, 2021. Publication History: Accepted Date: Nov 19, 2020; First Submitted Date: Sep 24, 2020. Copyright Statement: All rights reserved. Wolters Kluwer Health, Inc. 2021.

AB - E merging research suggests disruptions of the gut microbiota affect brain development and function and may play a role in the etiopathophysiology of psychiatric disorders. Butyrate is one of the 3 major short-chain fatty acids that are produced by bacterial fermentation and plays a critical role in maintaining the integrity of the gut/ blood barrier and in modulating several aspects of brain function, including cognition. People with schizophrenia are characterized by marked cognitive impairments, and currently, no treatments are available to improve cognitive performance. There is growing evidence linking disturbances in the gut microbiota to schizophrenia and the underlying pathophysiology of the illness. Here, we present the encouraging results of a small pilot study, in which we examined the effects of oligofructose-enriched inulin (OEI) treatment, a prebiotic that is taken up by butyrate-producing bacteria in the colon, and measured changes in butyrate concentrations after OEI treatment. Secondarily, we examined psychiatric symptoms and cognitive changes. Although our sample size is small and pilot in nature, we were rigorous in our controlling of the environment (all inpatients on the same unit for at least a month), patient severity, and medications (all treatment resistant and all taking clozapine, adjunct antipsychotics, and stool softeners) and diet (similar standardized diet). In addition, all symptom raters were independent of treatment or care and were deemed reliable to gold standard ratings. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - prebiotic treatment

KW - serum butyrate

KW - schizophrenia

KW - etiopathophysiology

KW - Blood Serum

KW - Drug Therapy

KW - Microorganisms

KW - Schizophrenia

KW - Treatment

KW - Diets

KW - Gastrointestinal System

KW - Psychiatric Symptoms

U1 - Sponsor: University of Maryland (UMB), School of Medicine, Department of Psychiatry, US. Recipients: No recipient indicated

U1 - Sponsor: UMB, School of Pharmacy Mass Spectrometry Center, US. Recipients: No recipient indicated

U1 - Sponsor: Institute for Genome Sciences. Recipients: No recipient indicated

DO - 10.1097/JCP.0000000000001364

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2021-26900-019&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2019-68373-112

AN - 2019-68373-112

AU - Seaman, Lauren Catherine

T1 - Leveraging the tools and techniques of precision medicine to better understand the biological underpinnings of psychiatric disorders and psychotropic treatment effects

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2020///

VL - 81

IS - 2-B

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-1085679145

N1 - Accession Number: 2019-68373-112. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Seaman, Lauren Catherine; University of California, Los Angeles, Chemistry 0153, US. Release Date: 20200210. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI13899906. ISBN: 978-1085679145. Language: English. Major Descriptor: Disease Management; Drugs; Mental Disorders; Treatment Effectiveness Evaluation; Precision Medicine. Minor Descriptor: Biology; Environmental Effects; Pathophysiology; Pharmacodynamics. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Age Group: Childhood (birth-12 yrs) (100). Methodology: Empirical Study; Quantitative Study.

AB - The dawn of a new era of medicine has begun as clinicians and researchers shift their focus to more individual-centric diagnostic, treatment, and disease management strategies. Precision medicine is a multidisciplinary approach to human health care that takes into account a person's genetic makeup, behaviors, and environmental factors when evaluating pathophysiology, tailoring treatments, and designing novel therapeutic moieties. In this dissertation I break down the critical subfields of this discipline to explain and apply the emerging tools and techniques we now have at our disposal to better understand the underlying biology of complex human psychiatric disorders.We begin with pharmacokinetics and pharmacodynamics, two branches of precision medicine that are involved directly with the temporal dynamics of pharmaceutical therapies and aid in disentanglement of how the body processes drugs versus how the drugs affect our bodies. I discuss detailed research across three separate drugs; risperidone, methamphetamine, and nicotine, integrating quantitative metabolic studies, genetic assessment, neuroimaging, and receptor analysis to clearly define inter-patient variability in risk and response. Following this is work I accomplished in the realm of gene and environment interactions in young children experiencing anxiety disorders, which over time, led to what I hold as my largest contribution to the personalized medicine field; microbiome and host interactions. I am attempting to unlock a more direct, biological mechanism to something known as antipsychotic-induced weight gain (AIWG) through the examination of bile acids and the gut microbiome and their crosstalk and interplay with host physiology. Results are abundant throughout this document and each study presented here within brings a unique piece of the precision medicine puzzle to the table.Pharmacokinetics, pharmacodynamics, genomic technology, gene-environment interactions, and the host-microbiome axis are the salient concepts in my toolbox of personalized medicine techniques that I believe can be leveraged in a variety of combinations to accomplish large goals in the medical and biotechnology fields. Whether it be through careful patient assessment with companion diagnostics, proper medication selection based on risk vs. reward value in harmony with an individual's personal makeup, perseverance of high level disease progression and treatment monitoring, or even one day tailoring drug discovery to the highly specific receptors and biological pathways involved in these grievous diseases, it is clear precision medicine will pave the way for a better life for many people in the future. (PsycINFO Database Record (c) 2020 APA, all rights reserved)

KW - psychiatric disorders

KW - psychotropic treatment effects

KW - disease management

KW - environmental factors

KW - pathophysiology

KW - biology

KW - pharmacodynamics

KW - personalized medicine

KW - Disease Management

KW - Drugs

KW - Mental Disorders

KW - Treatment Effectiveness Evaluation

KW - Precision Medicine

KW - Biology

KW - Environmental Effects

KW - Pathophysiology

KW - Pharmacodynamics

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-68373-112&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2021-01502-001

AN - 2021-01502-001

AU - Donovan, Meghan

AU - Mackey, Calvin S.

AU - Platt, Grayson N.

AU - Rounds, Jacob

AU - Brown, Amber N.

AU - Trickey, Darryl J.

AU - Liu, Yan

AU - Jones, Kathryn M.

AU - Wang, Zuoxin

T1 - Social isolation alters behavior, the gut-immune-brain axis, and neurochemical circuits in male and female prairie voles

JF - Neurobiology of Stress

JO - Neurobiology of Stress

JA - Neurobiol Stress

Y1 - 2020/11//

VL - 13

PB - Elsevier Science

SN - 2352-2895

AD - Donovan, Meghan, Department of Psychology and Program in Neuroscience, Florida State University, 1107 W. Call St., Tallahassee, FL, US, 32306

N1 - Accession Number: 2021-01502-001. PMID: 33344730 Partial author list: First Author & Affiliation: Donovan, Meghan; Department of Psychology and Program in Neuroscience, Florida State University, Tallahassee, FL, US, meghan.donovan@va.gov. Release Date: 20210906. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Wang, Zuoxin. Major Descriptor: Animal Sex Differences; Gastrointestinal System; Microorganisms; Oxytocin; Social Isolation. Minor Descriptor: Anxiety; Behavior Change; Neurochemistry; Voles. Classification: Physiological Processes (2540). Population: Animal (20); Male (30); Female (40). Methodology: Empirical Study; Quantitative Study. Supplemental Data: Tables and Figures Internet. References Available: Y. ArtID: 100278. Issue Publication Date: Nov, 2020. Publication History: First Posted Date: Nov 24, 2020; Accepted Date: Nov 18, 2020; Revised Date: Nov 18, 2020; First Submitted Date: Jul 28, 2020. Copyright Statement: Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/). The Authors. 2020.

AB - The absence of social support, or social isolation, can be stressful, leading to a suite of physical and psychological health issues. Growing evidence suggests that disruption of the gut-immune-brain axis plays a crucial role in the negative outcomes seen from social isolation stress. However, the mechanisms remain largely unknown. The socially monogamous prairie vole (Microtus ochrogaster) has been validated as a useful model for studying negative effects of social isolation on the brain and behaviors, yet how the gut microbiome and central immune system are altered in isolated prairie voles are still unknown. Here, we utilized this social rodent to examine how social isolation stress alters the gut-immune-brain axis and relevant behaviors. Adult male and female prairie voles (n = 48 per sex) experienced social isolation or were cohoused with a same-sex cagemate (control) for six weeks. Thereafter, their social and anxiety-like behaviors, neuronal circuit activation, neurochemical expression, and microgliosis in key brain regions, as well as gut microbiome alterations from the isolation treatment were examined. Social isolation increased anxiety-like behaviors and impaired social affiliation. Isolation also resulted in sex- and brain region-specific alterations in neuronal activation, neurochemical expression, and microgliosis. Further, social isolation resulted in alterations to the gut microbiome that were correlated with key brain and behavioral measures. Our data suggest that social isolation alters the gut-immune-brain axis in a sex-dependent manner and that gut microbes, central glial cells, and neurochemical systems may play a critical, integrative role in mediating negative outcomes from social isolation. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - Social isolation

KW - Gut microbiome-immune-brain axis

KW - Anaeroplasma

KW - Microglia

KW - Oxytocin

KW - Sex difference

KW - prairie voles

KW - social behavior

KW - neurochemistry

KW - behavior change

KW - anxiety

KW - Animal Sex Differences

KW - Gastrointestinal System

KW - Microorganisms

KW - Oxytocin

KW - Social Isolation

KW - Anxiety

KW - Behavior Change

KW - Neurochemistry

KW - Voles

U1 - Sponsor: National Institute of Mental Health, US. Grant: R01-108527; R01-109450; R21-111998. Recipients: Wang, Zuoxin

U1 - Sponsor: US Department of Agriculture, National Institute of Food and Agriculture, US. Grant: 2014-67013-21579. Recipients: Jones, Kathryn M.

U1 - Sponsor: National Institutes of Health, US. Grant: T32 MH093311. Other Details: P.K. Keel and L.A. Eckel. Recipients: Donovan, Meghan

U1 - Sponsor: US Department of Veterans Affairs, Office of Academic Affiliations, US. Other Details: Advanced Fellowship Program in Mental Illness Research and Treatment. Recipients: Donovan, Meghan

DO - 10.1016/j.ynstr.2020.100278

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2021-01502-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2016-13627-003

AN - 2016-13627-003

AU - Neufeld, Karen-Anne McVey

AU - Luczynski, Pauline

AU - Dinan, Timothy G.

AU - Cryan, John F.

T1 - Reframing the teenage wasteland: Adolescent microbiota-gut-brain axis

JF - The Canadian Journal of Psychiatry / La Revue canadienne de psychiatrie

JO - The Canadian Journal of Psychiatry / La Revue canadienne de psychiatrie

JA - Can J Psychiatry

Y1 - 2016/04//

VL - 61

IS - 4

SP - 214

EP - 221

PB - Sage Publications

SN - 0706-7437

SN - 1497-0015

AD - Cryan, John F., Department of Anatomy and Neuroscience, APC Microbiome Institute, University College Cork, 2.33 Western Gateway Building, Western Rd., Cork, Ireland

N1 - Accession Number: 2016-13627-003. Other Journal Title: The Canadian Psychiatric Association Journal / La Revue de l'Association des psychiatres du Canada. Partial author list: First Author & Affiliation: Neufeld, Karen-Anne McVey; APC Microbiome Institute, University College Cork, Cork, Ireland. Other Publishers: Canadian Psychiatric Assn. Release Date: 20170406. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Adolescent Development; Intestines; Mental Disorders; Microorganisms. Minor Descriptor: Early Experience. Classification: Developmental Psychology (2800). Population: Human (10). Age Group: Adolescence (13-17 yrs) (200). References Available: Y. Page Count: 8. Issue Publication Date: Apr, 2016. Copyright Statement: The Author(s). 2016.

AB - Human adolescence is arguably one of the most challenging periods of development. The young adult is exposed to a variety of stressors and environmental stimuli on a backdrop of significant physiological change and development, which is especially apparent in the brain. It is therefore unsurprising that many psychiatric disorders are first observable during this time. The human intestine is inhabited by trillions of microorganisms, and evidence from both preclinical and clinical research focusing on the established microbiota-gut-brain axis suggests that the etiology and pathophysiology of psychiatric disorders may be influenced by intestinal dysbiosis. Provocatively, many if not all of the challenges faced by the developing teen have a documented impact on these intestinal commensal microbiota. In this review, we briefly summarize what is known about the developing adolescent brain and intestinal microbiota, discuss recent research investigating the microbiota-gut-brain axis during puberty, and propose that pre- and probiotics may prove useful in both the prevention and treatment of psychiatric disorders specifically benefitting the young adult. (PsycINFO Database Record (c) 2017 APA, all rights reserved)

AB - L’adolescence humaine est sans aucun doute l’une des périodes les plus difficiles du développement. Le jeune adulte est exposé à une variété de stresseurs et de stimuli environnementaux dans un contexte de changement et de développement physiologique significatif, qui est spécialement apparent dans le cerveau. Il n’est donc pas étonnant que nombre de troubles psychiatriques sont d’abord observables à cette période. L’intestin humain est habité de mille milliards de microorganismes, et des données probantes d’études cliniques et précliniques portant sur l’axe établi microbiote-intestin-cerveau suggèrent que l’étiologie et la pathophysiologie des troubles psychiatriques peuvent être influencées par la dysbiose intestinale. Disons audacieusement que les nombreuses sinon toutes les difficultés avec lesquelles l’adolescent en développement est aux prises ont un impact documenté sur ces microbiotes intestinaux commensaux. Dans cette revue, nous résumons brièvement ce qui est connu du cerveau en développement de l’adolescent et des microbiotes intestinaux, nous discutons de la recherche récente sur l’axe microbiote-intestin-cerveau durant la puberté, et nous proposons que les pré-biotiques et les pro-biotiques peuvent se révéler utiles dans la prévention et le traitement des troubles psychiatriques qui touchent spécifiquement le jeune adulte. (PsycINFO Database Record (c) 2017 APA, all rights reserved)

KW - adolescence

KW - microbiota-gut-brain axis

KW - development

KW - psychiatric illnesses

KW - early life challenges

KW - probiotics

KW - hypothalamic-pituitary-adrenal axis

KW - brain plasticity

KW - critical windows

KW - Adolescent Development

KW - Intestines

KW - Mental Disorders

KW - Microorganisms

KW - Early Experience

DO - 10.1177/0706743716635536

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2016-13627-003&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2022-36832-018

AN - 2022-36832-018

AU - Ni, Jiayuan

AU - Xu, Rongpeng

AU - Miao, Liying

AU - Zhu, Bin

T1 - The role of Tregs on the butyrate-mediated demyelination and remyelination

JF - Brain, Behavior, and Immunity

JO - Brain, Behavior, and Immunity

JA - Brain Behav Immun

Y1 - 2022/03//

VL - 101

SP - 180

EP - 181

PB - Elsevier Science

SN - 0889-1591

SN - 1090-2139

AD - Zhu, Bin

N1 - Accession Number: 2022-36832-018. Partial author list: First Author & Affiliation: Ni, Jiayuan; Department of Critical Care Medicine, Third Affiliated Hospital of Soochow University, Changzhou, China. Release Date: 20220317. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Comment/Reply. Language: English. Major Descriptor: Hippocampus; Microorganisms; Myelin Sheath; Physiology. Minor Descriptor: Fatty Acids; Intestines; Metabolites; Mice; Animal Cognition. Classification: Neuropsychology & Neurology (2520). References Available: Y. Page Count: 2. Issue Publication Date: Mar, 2022. Publication History: First Posted Date: Jan 12, 2022; Accepted Date: Jan 10, 2022; First Submitted Date: Jan 8, 2022. Copyright Statement: All rights reserved. Elsevier Inc. 2022.

AB - Comments on an article by C. E. Keogh et al. (see record [rid]2020-97974-040[/rid]). Keogh et al. found that myelination can be destroyed during the growth process following antibiotics-induced neonatal dysbiosis of gut microbiota, thus leading to cognitive and behavioral dysfunction. In addition, this study confirmed that butyrate reversed myelination impairment caused by neonatal dysbiosis of gut microbiota, and suggested that this process was associated with abnormal expression of oligodendrocyte. However, the mechanisms underlying butyrateinduced ameliorative effects of myelination need to be further elucidated. Tregs, a kind of T cell subset, can inhibit autoimmune response, and prevent the occurrence of immunopathological damage and maintain immunologic balance action of the body. On the one hand, the reason why Tregs can ameliorate demyelination via suppressing an excessive host immune response has not been determined. The study has shown that absence of Tregs during acute infection resulted in increased demyelination. In conclusion, butyrate can reverse impairment of myelination induced by neonatal gut microbiota dysbiosis. The mechanisms may be related to the Tregs-induced suppression of demyelination through inhibition of inflammatory responses in the CNS. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

KW - Myelin

KW - microbiota-gut-brain axis

KW - cognitive functions

KW - hippocampus

KW - anxiety

KW - mice

KW - Hippocampus

KW - Microorganisms

KW - Myelin Sheath

KW - Physiology

KW - Fatty Acids

KW - Intestines

KW - Metabolites

KW - Mice

KW - Animal Cognition

U1 - Sponsor: Changzhou Health Commission, Program of Major Science and Technology Project, China. Grant: ZD202101. Recipients: No recipient indicated

DO - 10.1016/j.bbi.2022.01.012

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2022-36832-018&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2019-81194-001

AN - 2019-81194-001

AU - Murray, Emma

AU - Smith, Kevin B.

AU - Stoby, Karlene S.

AU - Thomas, Bronwen J.

AU - Swenson, Michael J.

AU - Arber, Lauren A.

AU - Frenette, Emilie

AU - Ismail, Nafissa

T1 - Pubertal probiotic blocks LPS-induced anxiety and the associated neurochemical and microbial outcomes, in a sex dependent manner

JF - Psychoneuroendocrinology

JO - Psychoneuroendocrinology

JA - Psychoneuroendocrinology

Y1 - 2020/02//

VL - 112

PB - Elsevier Science

SN - 0306-4530

SN - 1873-3360

AD - Ismail, Nafissa, School of Psychology, University of Ottawa, 136 Jean-Jacques Lussier, Vanier 2076B, Ottawa, ON, Canada, K1N 6N5

N1 - Accession Number: 2019-81194-001. Partial author list: First Author & Affiliation: Murray, Emma; Neuroimmunology, Stress and Endocrinology (NISE) Lab, School of Psychology, Faculty of Social Science, University of Ottawa, Ottawa, ON, Canada. Release Date: 20200113. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Ismail, Nafissa. Major Descriptor: Gastrointestinal System; Neurochemistry; Stress; Chemical Exposure. Minor Descriptor: Animal Sex Differences; Drugs; Mental Disorders; Mental Health; Microorganisms; Puberty. Classification: Psychopharmacology (2580). Population: Animal (20); Male (30); Female (40). Methodology: Empirical Study; Quantitative Study. Supplemental Data: Experimental Materials Internet. References Available: Y. ArtID: 104481. Issue Publication Date: Feb, 2020. Publication History: Accepted Date: Oct 11, 2019; Revised Date: Sep 18, 2019; First Submitted Date: Jun 10, 2019. Copyright Statement: All rights reserved. Elsevier Ltd. 2019.

AB - Puberty is a critical period of neural development, and exposure to stress and inflammation during this period is thought to increase vulnerability to mental illness. The gut microbiome influences brain functioning and behavior and impacts mental health. Yet, the role of the gut microbiome during puberty, a period during which mental health conditions tend to onset, remains largely uninvestigated. We first examined age and sex differences in gut microbial changes among CD-1 mice exposed to an immune challenge (lipopolysaccharide; LPS) at 6 weeks of age (during the pubertal stress-sensitive period) or at 10 weeks of age (in adulthood) (Experiment 1). Compared to their adult counterparts, pubertal males and females showed more significant changes in gut microbial composition following LPS treatment, including the depletion of numerous bacterial genera such as Lactobacillus. Given the beneficial effects of Lactobacillus strains on stress and behaviour, we next investigated whether replenishment of the gut with the probiotic Lactobacillus reuteri (L. reuteri) throughout pubertal development would modulate LPS-induced sickness and enduring effects on memory dysfunction, anxiety-like behaviour and stress reactivity in adulthood (Experiment 2). LPS treatment at 6 weeks of age created enduring changes in anxiety-like behaviors among males only. Similarly, only males showed the protective effects of L. reuteri supplementation during puberty in preventing longstanding LPS-induced changes in anxiety-like behavior and stress-induced brain activation. These findings demonstrate that colonizing the gut with L. reuteri during puberty modulates sickness responses and enduring behavioural and neurochemical outcomes in a sex-specific manner. Therefore, colonizing the gut with beneficial microbes may protect against the development of mental illnesses in adulthood. (PsycINFO Database Record (c) 2020 APA, all rights reserved)

KW - Adolescence

KW - Gut microbiome

KW - Sex

KW - Immune challenge

KW - Lipopolysaccharide

KW - Stress

KW - Gastrointestinal System

KW - Neurochemistry

KW - Stress

KW - Chemical Exposure

KW - Animal Sex Differences

KW - Drugs

KW - Mental Disorders

KW - Mental Health

KW - Microorganisms

KW - Puberty

U1 - Sponsor: Natural Sciences and Engineering Research Council. Grant: 211075-190799-2001. Other Details: Discovery grant. Recipients: Ismail, Nafissa

DO - 10.1016/j.psyneuen.2019.104481

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-81194-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2022-23345-016

AN - 2022-23345-016

AU - Ponvel, Pavapriya

AU - Shahar, Suzana

AU - Singh, Devinder Kaur Ajit

AU - Ludin, Arimi Fitri Mat

AU - Rajikan, Roslee

AU - Rajab, Nor Fadilah

AU - Ai-Vyrn, Chin

AU - Din, Normah Che

AU - Ibrahim, Norhayati

AU - Subramaniam, Ponnusamy

AU - Haron, Hasnah

AU - Ismail, Aniza

AU - Sharif, Razinah

AU - Ramasamy, Kalavathy

AU - Majeed, Abu Bakar Abdul

AU - Ali, Nazlena Mohamad

AU - Mohamad, Mazlyfarina

AU - Noah, Shahrul Azman Mohd

AU - Ibrahim, Azianah Mohd

AU - Safien, Aisyah Mohd

AU - Khalid, Norhayati Mustafa

AU - Md Fadzil, Nurul Hidayah

AU - Mangialasche, Francesca

AU - Kivipelto, Miia

T1 - Multidomain intervention for reversal of cognitive frailty, towards a personalized approach (AGELESS trial): Study design

JF - Journal of Alzheimer's Disease

JO - Journal of Alzheimer's Disease

JA - J Alzheimers Dis

Y1 - 2021///

VL - 82

IS - 2

SP - 673

EP - 687

PB - IOS Press

SN - 1387-2877

SN - 1875-8908

AD - Shahar, Suzana, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300, Kuala Lumpur, Malaysia

N1 - Accession Number: 2022-23345-016. PMID: 34092633 Partial author list: First Author & Affiliation: Ponvel, Pavapriya; Centre for Healthy Ageing and Wellness (HCARE), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia. Release Date: 20220307. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Cognitive Impairment; Health Impairments; Intervention. Classification: Health Psychology & Medicine (3360). Population: Human (10); Male (30); Female (40). Location: Malaysia. Age Group: Adulthood (18 yrs & older) (300); Middle Age (40-64 yrs) (360); Aged (65 yrs & older) (380). Tests & Measures: Beck Depression Inventory-Malay Version; Physical Activity Scale for the Elderly-Malay Version; Mini-Mental State Examination--Malay Version DOI: 10.1037/t57776-000; Clinical Dementia Rating Scale. Methodology: Clinical Trial; Empirical Study; Quantitative Study. References Available: Y. Page Count: 15. Issue Publication Date: 2021. Publication History: Accepted Date: Apr 27, 2021. Copyright Statement: Published by IOS Press. This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (CC BY-NC 4.0). The authors. 2021.

AB - Background: Cognitive frailty (CF) is identified as one of the main precursors of dementia. Multidomain intervention has been found to delay or prevent the onset of CF. Objective: The aim of our present study is to determine the effectiveness of a comprehensive, multidomain intervention on CF; to evaluate its cost effectiveness and the factors influencing adherence toward this intensive intervention. Methods: A total of 1,000 community dwelling older adults, aged 60 years and above will be screened for CF. This randomized controlled trial involves recruitment of 330 older adults with CF from urban, semi-urban, and rural areas in Malaysia. Multidomain intervention comprised of physical, nutritional, cognitive, and psychosocial aspects will be provided to participants in the experimental group (n = 165). The control group (n = 165) will continue their usual care with their physician. Primary outcomes include CF status, physical function, psychosocial and nutritional status as well as cognitive performance. Vascular health and gut microbiome will be assessed using blood and stool samples. A 24-month intensive intervention will be prescribed to the participants and its sustainability will be assessed for the following 12 months. The effective intervention strategies will be integrated as a personalized telerehabilitation package for the reversal of CF for future use. Results: The multidomain intervention developed from this trial is expected to be cost effective compared to usual care as well as able is to reverse CF. Conclusion: This project will be part of theWorld-Wide FINGERS (Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability) Network, of which common identifiable data will be shared and harmonized among the consortia. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

KW - Cognitive frailty

KW - multidomain intervention

KW - older adults

KW - randomized control trial

KW - reversal

KW - Cognitive Impairment

KW - Health Impairments

KW - Intervention

U1 - Sponsor: Ministry of Higher Education of Malaysia, Malaysia. Grant: LRGS/1/2019/UMUKM/1/4. Other Details: Under the Long Term Research Grant Scheme. Recipients: No recipient indicated

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2022-23345-016&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2018-58534-012

AN - 2018-58534-012

AU - Fields, Christopher T.

AU - Sampson, Timothy R.

AU - Bruce-Keller, Annadora J.

AU - Kiraly, Drew D.

AU - Hsiao, Elaine Y.

AU - de Vries, Geert J.

T1 - Defining dysbiosis in disorders of movement and motivation

JF - The Journal of Neuroscience

JO - The Journal of Neuroscience

JA - J Neurosci

Y1 - 2018/10/31/

VL - 38

IS - 44

SP - 9414

EP - 9422

PB - Society for Neuroscience

SN - 0270-6474

SN - 1529-2401

AD - Fields, Christopher T., Neuroscience Institute, Georgia State University, Atlanta, GA, US, 30303

N1 - Accession Number: 2018-58534-012. Partial author list: First Author & Affiliation: Fields, Christopher T.; Neuroscience Institute, Georgia State University, Atlanta, GA, US, cfields18@student.gsu.edu. Release Date: 20181227. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Fields, Christopher T. Major Descriptor: Animal Motivation; Basal Ganglia; Gastrointestinal System; Microorganisms; Movement Disorders. Minor Descriptor: Addiction; Anxiety; Sociability; Animal Cognition. Classification: Neuropsychology & Neurology (2520). Population: Human (10); Animal (20). References Available: Y. Page Count: 9. Issue Publication Date: Oct 31, 2018. Publication History: Accepted Date: Sep 28, 2018; Revised Date: Sep 28, 2018; First Submitted Date: Sep 5, 2018. Copyright Statement: The authors. 2018.

AB - The gut microbiota has emerged as a critical player in shaping and modulating brain function and has been shown to influence numerous behaviors, including anxiety and depression-like behaviors, sociability, and cognition. However, the effects of the gut microbiota on specific disorders associated with thalamo-cortico-basal ganglia circuits, ranging from compulsive behavior and addiction to altered sensation and motor output, are only recently being explored. Wholesale depletion and alteration of gut microbial communities in rodent models of disorders, such as Parkinson’s disease, autism, and addiction, robustly affect movement and motivated behavior. A new frontier therefore lies in identifying specific microbial alterations that affect these behaviors and understanding the underlying mechanisms of action. Comparing alterations in gut microbiota across multiple basal-ganglia associated disease states allows for identification of common mechanistic pathways that may interact with distinct environmental and genetic risk factors to produce disease-specific outcomes. (PsycINFO Database Record (c) 2018 APA, all rights reserved)

KW - gut microbiota

KW - basal ganglia

KW - compulsive behavior

KW - motor function

KW - Parkinson’s

KW - addiction

KW - cognition

KW - sociability

KW - anxiety

KW - Animal Motivation

KW - Basal Ganglia

KW - Gastrointestinal System

KW - Microorganisms

KW - Movement Disorders

KW - Addiction

KW - Anxiety

KW - Sociability

KW - Animal Cognition

U1 - Sponsor: National Institutes of Health, US. Grant: MH112369. Recipients: Fields, Christopher T.

U1 - Sponsor: National Institutes of Health, US. Grant: MH110117. Recipients: Bruce-Keller, Annadora J.

U1 - Sponsor: National Institutes of Health, US. Grant: DA044308. Recipients: Kiraly, Drew D.

U1 - Sponsor: National Institutes of Health, US. Grant: OD017924. Recipients: Hsiao, Elaine Y.

U1 - Sponsor: National Institutes of Health, US. Grant: MH108345. Recipients: de Vries, Geert J.

U1 - Sponsor: Brain & Behavior Research Foundation. Recipients: Kiraly, Drew D.

U1 - Sponsor: Larry L. Hillblom Foundation. Recipients: Sampson, Timothy R.

U1 - Sponsor: Office of Naval Research. Other Details: Multidisciplinary University Research Initiative. Recipients: Hsiao, Elaine Y.

DO - 10.1523/JNEUROSCI.1672-18.2018

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2018-58534-012&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2017-36666-195

AN - 2017-36666-195

AU - Sheets, Gabriela Mandel Maiz

T1 - The developmental ecology of the infant gut microbiome

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2018///

VL - 78

IS - 11-B(E)

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-1369982282

N1 - Accession Number: 2017-36666-195. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Sheets, Gabriela Mandel Maiz; Emory University, Anthropology, US. Release Date: 20171120. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI10628002. ISBN: 978-1369982282. Language: English. Major Descriptor: Caregivers; Ecology; Intestines. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Age Group: Childhood (birth-12 yrs) (100); Infancy (2-23 mo) (140); Adulthood (18 yrs & older) (300). Methodology: Empirical Study; Interview; Qualitative Study.

AB - Introduction: Within the human intestinal tract lives a complex and dynamic community of microorganisms, called the intestinal microbiome. Human behavior and ecology play central roles in shaping this resident community during development. The microbiome assembles anew with each host generation, and given its critical role in human somatic, immune and metabolic development, natural selection likely has conserved mechanisms for the intergenerational transfer such that infants receive an optimal supply of human-adapted microbiota. Research shows that contemporary birthing methods and feeding practices disrupt the successional inheritance during early life, yet little is known about how diverse developmental ecologies influence the infant gut microbiome. This dissertation is a biocultural, multi-disciplinary, and longitudinal exploration of microbial development within a semi-rural Salvadoran population. Assuming a developmental ecology framework, I probe the broader socio-political and economic processes acting upon infant microbial ontogeny via proximal developmental ecologies that mediate exposure. I test two propositions: First, the ontogeny of the microbiome requires an initial vertically selected microbiota, and with the continued protection of breastmilk, it increasingly demands a more diverse, horizontally-transmitted microbial assortment. Second, contemporary behaviors can interrupt the timeline of vertical and horizontal exposures, resulting in altered microbial assembly, growth and health outcomes. Methods: 71 caretaker-infant pairs were recruited and followed for 12 months. Three study phases included collection of interviews, 24-hour dietary recalls, health histories, anthropometrics, participant observation, and fecal samples. Fecal samples were frozen (-20&deg;C) and transported to CU Boulder for 16S rRNA sequencing. Results: Factors influencing the vertical transmission (birth-mode and early feeding), and those influencing horizontal transmission (childcare networks, gendered labor patterns, and household microbial ecologies) significantly affected infant microbial diversity, stability and composition in the first year. Altered colonization patterns were associated with distinct growth phenotypes and health outcomes. Discussion: Through comparative analyses and the development of a tri-fold, microbe-host-ecology integrative model, I explored the timeline of vertical and horizontal exposures, identified ontological microbial variations, and assessed functional relationships with health and growth outcomes. Novel analytic methods were developed to identify intra-population parameters of agedependent 'healthy' microbiome development. Recommendations for microbial interventions and policy-makers were made to support a holistic and life-course view of humans and their microbial partners. (PsycINFO Database Record (c) 2017 APA, all rights reserved)

KW - caretaker-infant pairs

KW - ecology

KW - Caregivers

KW - Ecology

KW - Intestines

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2017-36666-195&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2017-55585-002

AN - 2017-55585-002

AU - Walker, Claire-Dominique

AU - Bath, Kevin G.

AU - Joels, Marian

AU - Korosi, Aniko

AU - Larauche, Muriel

AU - Lucassen, Paul J.

AU - Morris, Margaret J.

AU - Raineki, Charlis

AU - Roth, Tania L.

AU - Sullivan, Regina M.

AU - Taché, Yvette

AU - Baram, Tallie Z.

T1 - Chronic early life stress induced by limited bedding and nesting (BLN) material in rodents: Critical considerations of methodology, outcomes and translational potential

JF - Stress: The International Journal on the Biology of Stress

JO - Stress: The International Journal on the Biology of Stress

JA - Stress

Y1 - 2017/09//

VL - 20

IS - 5

SP - 421

EP - 448

PB - Taylor & Francis

SN - 1025-3890

SN - 1607-8888

AD - Walker, Claire-Dominique, Department of Psychiatry, McGill University, Douglas Mental Health University Institute, 6875 Lasalle Blvd, Montreal, PQ, Canada, H4H 1R3

N1 - Accession Number: 2017-55585-002. PMID: 28617197 Partial author list: First Author & Affiliation: Walker, Claire-Dominique; Department of Psychiatry, McGill University, Douglas Mental Health University Institute, Montreal, PQ, Canada, waldom@douglas.mcgill.ca. Other Publishers: Informa Healthcare. Release Date: 20180322. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Walker, Claire-Dominique. Major Descriptor: Brain; Chronic Stress; Hypothalamic Pituitary Adrenal Axis; Metabolism; Neural Development. Minor Descriptor: Methodology; Rodents. Classification: Neuropsychology & Neurology (2520). Population: Animal (20). Tests & Measures: Novel Object Recognition Test. Methodology: Literature Review. References Available: Y. Page Count: 28. Issue Publication Date: Sep, 2017. Publication History: Accepted Date: Jun 9, 2017; Revised Date: Jun 7, 2017; First Submitted Date: Jan 9, 2017. Copyright Statement: Informa UK Limited, trading as Taylor & Francis Group. 2017.

AB - The immediate and long-term effects of exposure to early life stress (ELS) have been documented in humans and animal models. Even relatively brief periods of stress during the first 10 days of life in rodents can impact later behavioral regulation and the vulnerability to develop adult pathologies, in particular an impairment of cognitive functions and neurogenesis, but also modified social, emotional, and conditioned fear responses. The development of preclinical models of ELS exposure allows the examination of mechanisms and testing of therapeutic approaches that are not possible in humans. Here, we describe limited bedding and nesting (LBN) procedures, with models that produce altered maternal behavior ranging from fragmentation of care to maltreatment of infants. The purpose of this paper is to discuss important issues related to the implementation of this chronic ELS procedure and to describe some of the most prominent endpoints and consequences, focusing on areas of convergence between laboratories. Effects on the hypothalamic-pituitary adrenal (HPA) axis, gut axis and metabolism are presented in addition to changes in cognitive and emotional functions. Interestingly, recent data have suggested a strong sex difference in some of the reported consequences of the LBN paradigm, with females being more resilient in general than males. As both the chronic and intermittent variants of the LBN procedure have profound consequences on the offspring with minimal external intervention from the investigator, this model is advantageous ecologically and has a large translational potential. In addition to the direct effect of ELS on neurodevelopmental outcomes, exposure to adverse early environments can also have intergenerational impacts on mental health and function in subsequent generation offspring. Thus, advancing our understanding of the effect of ELS on brain and behavioral development is of critical concern for the health and wellbeing of both the current population, and for generations to come. (PsycINFO Database Record (c) 2018 APA, all rights reserved)

KW - Developmental programing

KW - early life stress

KW - limited bedding and nesting

KW - maternal behavior

KW - mental health

KW - neonatal stress

KW - vulnerability

KW - Brain

KW - Chronic Stress

KW - Hypothalamic Pituitary Adrenal Axis

KW - Metabolism

KW - Neural Development

KW - Methodology

KW - Rodents

U1 - Sponsor: Canadian Institutes for Health, Canada. Grant: MOP114885. Other Details: Research grant. Recipients: Walker, Claire-Dominique

U1 - Sponsor: Natural Sciences and Engineering Research Council, Canada. Grant: 138199. Recipients: Walker, Claire-Dominique

U1 - Sponsor: NPNI/BIBS. Other Details: New Frontiers award. Recipients: Bath, Kevin G.

U1 - Sponsor: Netherlands Organisation for Scientific Research, Netherlands. Grant: 821-02-007. Other Details: ALW grant. Recipients: Joels, Marian

U1 - Sponsor: Dutch Ministry of Education, Culture, and Science, Gravitation Program, Netherlands. Other Details: Consortium on Individual Development (CID). Recipients: Joels, Marian

U1 - Sponsor: Netherlands Organisation for Scientific Research, Netherlands. Grant: 024.001.003. Recipients: Joels, Marian

U1 - Sponsor: ISAO. Recipients: Korosi, Aniko

U1 - Sponsor: Netherlands Organization for Scientific Research Meervoud, Netherlands. Other Details: NWO-FCB and JPI-NutriCog. Recipients: Korosi, Aniko

U1 - Sponsor: National Institutes of Health, US. Grant: P50 DK-64539. Recipients: Taché, Yvette; Larauche, Muriel

U1 - Sponsor: Digestive Diseases Research Center. Grant: P30 DK-41301. Other Details: Animal Core. Recipients: Taché, Yvette

U1 - Sponsor: Digestive Diseases Research Center. Grant: K01 DK-088937. Recipients: Larauche, Muriel

U1 - Sponsor: Veteran Administration. Other Details: Senior Research Career Scientist Award. Recipients: Taché, Yvette

U1 - Sponsor: Alzheimer Nederland, Netherlands. Recipients: Lucassen, Paul J.

U1 - Sponsor: Diabetes Australia Research Trust, Australia. Recipients: Morris, Margaret J.

U1 - Sponsor: National Health and Medical Research Council. Grant: 1023073. Other Details: Project grant. Recipients: Morris, Margaret J.

U1 - Sponsor: Eunice Kennedy Shriver National Institute of Child Health and Human Development, US. Grant: 1R01HD087509-01. Recipients: Roth, Tania L.

U1 - Sponsor: National Institutes of Health, US. Grant: NIHR37HD083217. Recipients: Sullivan, Regina M.

U1 - Sponsor: National Institutes of Health, US. Grant: NS28912; MH73136; MH096889. Recipients: Baram, Tallie Z.

DO - 10.1080/10253890.2017.1343296

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2017-55585-002&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2014-46243-001

AN - 2014-46243-001

AU - Kang, Silvia S

AU - Jeraldo, Patricio R

AU - Kurti, Aishe

AU - Miller, Margret E Berg

AU - Cook, Marc D

AU - Whitlock, Keith

AU - Goldenfeld, Nigel

AU - Woods, Jeffrey A

AU - White, Bryan A

AU - Chia, Nicholas

AU - Fryer, John D

T1 - Diet and exercise orthogonally alter the gut microbiome and reveal independent associations with anxiety and cognition

JF - Molecular Neurodegeneration

JO - Molecular Neurodegeneration

JA - Mol Neurodegener

Y1 - 2014/09/13/

VL - 9

PB - BioMed Central Limited

SN - 1750-1326

AD - Chia, Nicholas, Department of Surgical Research, Mayo Clinic, 200 First St SW, Rochester, MN, US, 55905

N1 - Accession Number: 2014-46243-001. PMID: 25217888 Partial author list: First Author & Affiliation: Kang, Silvia S; Department of Neuroscience, Mayo Clinic, Jacksonville, FL, US. Release Date: 20150105. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Fryer, John D. Major Descriptor: Anxiety; Cognition; Diets; Exercise. Minor Descriptor: Mice. Classification: Neuropsychology & Neurology (2520). Population: Animal (20); Male (30). Tests & Measures: Open Field Test; Light/Dark Exploration Test; Three Chamber Social Interaction Test; Contextual Fear Conditioning Test. Methodology: Empirical Study; Quantitative Study. Supplemental Data: Tables and Figures Internet. References Available: Y. ArtID: 36. Issue Publication Date: Sep 13, 2014. Publication History: First Posted Date: Sep 13, 2014; Accepted Date: Sep 9, 2014; First Submitted Date: Jun 26, 2014. Copyright Statement: This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly credited. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated. Kang et al.; licensee BioMed Central Ltd. 2014.

AB - Background: The ingestion of a high-fat diet (HFD) and the resulting obese state can exert a multitude of stressors on the individual including anxiety and cognitive dysfunction. Though many studies have shown that exercise can alleviate the negative consequences of a HFD using metabolic readouts such as insulin and glucose, a paucity of well-controlled rodent studies have been published on HFD and exercise interactions with regard to behavioral outcomes. This is a critical issue since some individuals assume that HFD-induced behavioral problems such as anxiety and cognitive dysfunction can simply be exercised away. To investigate this, we analyzed mice fed a normal diet (ND), ND with exercise, HFD diet, or HFD with exercise. Results: We found that mice on a HFD had robust anxiety phenotypes but this was not rescued by exercise. Conversely, exercise increased cognitive abilities but this was not impacted by the HFD. Given the importance of the gut microbiome in shaping the host state, we used 16S rRNA hypervariable tag sequencing to profile our cohorts and found that HFD massively reshaped the gut microbial community in agreement with numerous published studies. However, exercise alone also caused massive shifts in the gut microbiome at nearly the same magnitude as diet but these changes were surprisingly orthogonal. Additionally, specific bacterial abundances were directly proportional to measures of anxiety or cognition. Conclusions: Thus, behavioral domains and the gut microbiome are both impacted by diet and exercise but in unrelated ways. These data have important implications for obesity research aimed at modifications of the gut microbiome and suggest that specific gut microbes could be used as a biomarker for anxiety or cognition or perhaps even targeted for therapy. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

KW - neuroscience

KW - gut-brain axis

KW - microbiome

KW - anxiety

KW - cognition

KW - exercise

KW - diet

KW - Animals

KW - Anxiety

KW - Cognition

KW - Diet

KW - Diet, High-Fat

KW - Intestines

KW - Male

KW - Mice

KW - Mice, Inbred C57BL

KW - Microbiota

KW - Obesity

KW - Physical Conditioning, Animal

KW - Anxiety

KW - Cognition

KW - Diets

KW - Exercise

KW - Mice

U1 - Sponsor: Mayo Clinic, Center for Individualized Medicine. Recipients: Fryer, John D; Chia, Nicholas

U1 - Sponsor: Mayo Clinic, University of Illinois. Other Details: Strategic Alliance for Technology-Based Healthcare. Recipients: Jeraldo, Patricio R; White, Bryan A

U1 - Sponsor: Gerstner Family Foundation. Other Details: Career Development Award. Recipients: Fryer, John D

U1 - Sponsor: University of Illinois Urbana-Champaign, Division of Nutritional Science Vision 20/20 Program, US. Grant: ILLU-971-335. Other Details: Hatch project. Recipients: Woods, Jeffrey A

U1 - Sponsor: National Institutes of Health/National Cancer Institute, US. Grant: CA179243. Recipients: Chia, Nicholas

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2014-46243-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2018-12235-006

AN - 2018-12235-006

AU - Allen, A. P.

AU - Naughton, M.

AU - Dowling, J.

AU - Walsh, A.

AU - O'Shea, R.

AU - Shorten, G.

AU - Scott, L.

AU - McLoughlin, D. M.

AU - Cryan, J. F.

AU - Clarke, G.

AU - Dinan, T. G.

T1 - Kynurenine pathway metabolism and the neurobiology of treatment-resistant depression: Comparison of multiple ketamine infusions and electroconvulsive therapy

JF - Journal of Psychiatric Research

JO - Journal of Psychiatric Research

JA - J Psychiatr Res

Y1 - 2018/05//

VL - 100

SP - 24

EP - 32

PB - Elsevier Science

SN - 0022-3956

SN - 1879-1379

AD - Dinan, T. G., Department of Psychiatry & Neurobehavioural Science, University College Cork, Biosciences Building, Cork, Ireland

N1 - Accession Number: 2018-12235-006. Partial author list: First Author & Affiliation: Allen, A. P.; Department of Psychiatry & Neurobehavioural Science, University College Cork, Cork, Ireland. Release Date: 20191021. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Dinan, T. G. Major Descriptor: Electroconvulsive Shock Therapy; Metabolism; Neurobiology; Treatment Resistant Depression. Minor Descriptor: Ketamine; Neural Pathways. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Location: Ireland. Tests & Measures: Hamilton Rating Scale for Depression DOI: 10.1037/t04100-000. Methodology: Empirical Study; Quantitative Study. Supplemental Data: Tables and Figures Internet. Page Count: 9. Issue Publication Date: May, 2018. Publication History: Accepted Date: Feb 9, 2018; Revised Date: Feb 8, 2018; First Submitted Date: Oct 3, 2017. Copyright Statement: All rights reserved. Elsevier Ltd. 2018.

AB - Current first-line antidepressants can take weeks or months to decrease depressive symptoms. Low dose ketamine, an N-methyl-D-aspartate (NMDA) receptor antagonist, shows potential for a more rapid antidepressant effect, with efficacy also evident in previously treatment-resistant populations. However, a greater understanding of the physiological mechanisms underlying such effects is required. We assessed the potential impact of ketamine infusion on neurobiological drivers of kynurenine pathway metabolism in major depression (HPA axis hyperactivity, inflammation) in patients with treatment-resistant depression compared to gender-matched healthy controls. Furthermore, we assessed these biomarkers before and after electroconvulsive therapy (ECT), which is currently the gold standard for management of treatment-resistant depression. As previously demonstrated, treatment with ketamine and ECT was associated with improved depressive symptoms in patients. At baseline, waking cortisol output was greater in the ECT cohort, kynurenine was greater in the ketamine cohort, and kynurenic acid was lower in patients compared to healthy controls, although inflammatory markers (IL-6, IL-8, IL-10 or IFN-γ) were similar in patients and controls. Furthermore, in patients who responded to ECT, the cortisol awakening response was decreased following treatment. Despite a trend towards reduced kynurenine concentrations in those who responded to ketamine, ketamine was not associated with significant alterations in any of the biomarkers assessed. (PsycINFO Database Record (c) 2019 APA, all rights reserved)

KW - Depression

KW - Ketamine

KW - Cortisol

KW - Immune

KW - Cytokine

KW - Kynurenine

KW - Electroconvulsive Shock Therapy

KW - Metabolism

KW - Neurobiology

KW - Treatment Resistant Depression

KW - Ketamine

KW - Neural Pathways

U1 - Sponsor: Science Foundation Ireland, Ireland. Other Details: Through the Irish Government's National Development Plan. Recipients: No recipient indicated

U1 - Sponsor: Science Foundation Ireland, Ireland. Grant: SFI/12/RC/2273. Recipients: No recipient indicated

U1 - Sponsor: Health Research Board of Ireland, Ireland. Grant: HRA\_POR/2011/23. Other Details: Through Health Research Awards. Recipients: Dinan, T. G.; Cryan, J. F.; Clarke, G.

U1 - Sponsor: Health Research Board of Ireland, Ireland. Grant: HRA\_POR/2012/32. Recipients: Cryan, J. F.; Dinan, T. G.

U1 - Sponsor: Health Research Board of Ireland, Ireland. Grant: HRA-POR-2-14-647. Recipients: Clarke, G.; Dinan, T. G.

U1 - Sponsor: European Union, Europe. Grant: 613979. Other Details: MYNEWGUT FP7-KBBE-2013-7. Recipients: No recipient indicated

U1 - Sponsor: European Community, Seventh Framework Programme (FP7), Europe. Grant: 201 714. Date: from 2007 to 2013. Recipients: Cryan, J. F.

U1 - Sponsor: Brain & Behavior Research Foundation. Grant: 20771. Other Details: Young Investigator Grant. Recipients: Clarke, G.

DO - 10.1016/j.jpsychires.2018.02.011

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2018-12235-006&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2018-00726-284

AN - 2018-00726-284

AU - Colgate, Elizabeth Ross

T1 - 21st century approaches to addressing childhood diarrhea in low and middle-income countries: Zinc as a cornerstone of new prevention strategies

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2018///

VL - 79

IS - 2-B(E)

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-0355397994

N1 - Accession Number: 2018-00726-284. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Colgate, Elizabeth Ross; The University of Vermont and State Agricultural College, Clinical and Translational Science, US. Release Date: 20180308. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI10638335. ISBN: 978-0355397994. Language: English. Major Descriptor: Diarrhea; Health Promotion; Prevention; Zinc. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Location: Bangladesh. Age Group: Childhood (birth-12 yrs) (100). Methodology: Empirical Study; Quantitative Study.

AB - During the 20th century, significant strides were made in curtailing the burden of childhood diarrhea, including advances in vaccine research, the advent of antibiotics, improved water and sanitation, and expanded access to health information across the globe. Despite this progress, today diarrhea ranks second only to pneumonia as a leading cause of mortality in children under five years, with a disproportionate burden of 90% of diarrheal deaths in South Asia and Sub-Saharan Africa. Additionally, substantial morbidity due to diarrhea persists in young children, with more than 45 million disability-adjusted life years (DALYs) lost due to diarrhea in 2015. Long-term consequences of childhood diarrhea include undernutrition, impaired gut function, altered gut microbiota, and compromised cognitive development. The 21st century presents an opportunity to eliminate the health disparity affecting millions of children suffering disproportionately from preventable diarrheal diseases. Recent advances in molecular laboratory technology have enabled detailed assessment of diarrheal burden and etiology, illuminating the highest burden pathogens for focused interventions. Among the top diarrheal pathogens, rotavirus (RV) is the leading cause of diarrhea-attributable death in the first year of life. While we have vaccines against RV, these vaccines consistently underperform in low and middle-income countries (LMICs) with efficacy of 18% to 61% compared to > 85% efficacy in high income countries. Reasons for rotavirus vaccine underperformance remain unclear, and no vaccines are available for other high burden diarrheal pathogens. This requires consideration of complementary and alternative interventions for diarrhea prevention. To assess factors related to rotavirus vaccine performance, we enrolled a 700-infant birth cohort in an urban slum of Dhaka, Bangladesh, in the Performance of Rotavirus and Oral Polio Vaccines in Developing Countries (PROVIDE) study: a randomized controlled trial of a 2-dose monovalent oral rotavirus vaccine (RV1). With a primary outcome of any rotavirus diarrhea (RVD) post-vaccination to one year, we conducted biweekly home-based diarrhea surveillance with rotavirus antigen detection in diarrheal stools by ELISA. We found RV1 efficacy of 51% (95% CI 33.8-63.7) in per protocol analysis. Importantly, among 12 explanatory variables tested for association with RVD, serum zinc concentration (SZC) in infants at week 18 associated with risk of RVD up to one year (OR 0.77, 95% CI 0.66-0.91), independent of vaccination status. This finding led to broader investigation of the relationship between zinc status and diarrhea in the PROVIDE cohort. Among 577 PROVIDE infants, 16.5% were zinc deficient at week 18 (SZC < 65mug/dL). By logistic regression, zinc deficient infants had increased odds of diarrhea in the first year of life compared to zinc replete infants (OR 2.76, 95% CI 1.08-7.04), and they were nearly 4 times more likely to have diarrhea of viral etiology (OR 3.94, 95% CI 1.55-10.03). Furthermore, in Kaplan Meier analysis we found a strong correlation between zinc deficiency and time to first episode of viral diarrhea (median survival 27 vs 33 weeks in zinc deficient vs non-deficient infants, p <0.0001), with zinc deficient infants at 55% greater risk of viral diarrhea (HR 1.55, 95% CI 1.21-1.99). Our results indicate further consideration of zinc as a critical and modifiable co-factor in ameliorating the burden of childhood viral diarrhea. Carefully designed trials of zinc supplementation interventions could determine whether zinc may fill the gap in protection against childhood viral diarrhea, and inquiries into the zinc-diarrhea molecular pathway could elucidate mechanisms for focused development of future interventions. (PsycINFO Database Record (c) 2018 APA, all rights reserved)

KW - prevention strategies

KW - childhood diarrhea

KW - health promotion

KW - Zinc

KW - Diarrhea

KW - Health Promotion

KW - Prevention

KW - Zinc

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2018-00726-284&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2015-49800-001

AN - 2015-49800-001

AU - Hammer, Adam M.

AU - Morris, Niya L.

AU - Cannon, Abigail R.

AU - Shults, Jill A.

AU - Curtis, Brenda

AU - Casey, Carol A.

AU - Sueblinvong, Viranuj

AU - Persidsky, Yuri

AU - Nixon, Kimberly

AU - Brown, Lou Ann

AU - Waldschmidt, Thomas

AU - Mandrekar, Pranoti

AU - Kovacs, Elizabeth J.

AU - Choudhry, Mashkoor A.

T1 - Summary of the 2014 Alcohol and Immunology Research Interest Group (AIRIG) meeting

JF - Alcohol

JO - Alcohol

JA - Alcohol

Y1 - 2015/12//

VL - 49

IS - 8

SP - 767

EP - 772

PB - Elsevier Science

SN - 0741-8329

SN - 1873-6823

AD - Choudhry, Mashkoor A., Burn & Shock Trauma Research Institute, Stritch School of Medicine, Loyola University Chicago, Health Sciences Division, Bldg. 110/EMS, Room 4236, 2160 South First Ave., Maywood, IL, US, 60153

N1 - Accession Number: 2015-49800-001. PMID: 26520175 Partial author list: First Author & Affiliation: Hammer, Adam M.; Alcohol Research Program, Burn and Shock Trauma Research Institute, Department of Surgery, Loyola University Chicago, Maywood, IL, US. Release Date: 20151102. Correction Date: 20200803. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Kovacs, Elizabeth J. Major Descriptor: Alcoholism; Immunology; Cell Signaling; Substance Use Disorder. Minor Descriptor: Inflammation. Classification: Substance Abuse & Addiction (3233). Population: Human (10). Location: US. Tests & Measures: Alcohol Use Disorders Identification Test DOI: 10.1037/t01528-000. References Available: Y. Page Count: 6. Issue Publication Date: Dec, 2015. Publication History: Accepted Date: Sep 21, 2015; Revised Date: Sep 21, 2015; First Submitted Date: Aug 6, 2015. Copyright Statement: All rights reserved. Elsevier Inc. 2015.

AB - On November 21, 2014 the 19th annual Alcohol and Immunology Research Interest Group (AIRIG) meeting was held at Loyola University Chicago Health Sciences Campus in Maywood, Illinois. The meeting focused broadly on inflammatory cell signaling responses in the context of alcohol and alcohol-use disorders, and was divided into four plenary sessions focusing on the gut and liver, lung infections, general systemic effects of alcohol, and neuro-inflammation. One common theme among many talks was the differential roles of macrophages following both chronic and acute alcohol intoxication. Macrophages were shown to play significant roles in regulating inflammation, oxidative stress, and viral infection following alcohol exposure in the liver, lungs, adipose tissue, and brain. Other work examined the role of alcohol on disease progression in a variety of pathologies including psoriasis, advanced stage lung disease, and cancer. (PsycInfo Database Record (c) 2020 APA, all rights reserved)

KW - Ethanol

KW - Liver

KW - Lungs

KW - Intestines

KW - Neuro-inflammation

KW - Adipose Tissue

KW - Alcoholic Intoxication

KW - Alcoholism

KW - Animals

KW - Asthma

KW - Brain

KW - Congresses as Topic

KW - Disease Progression

KW - Gastrointestinal Microbiome

KW - Humans

KW - Inflammation

KW - Liver

KW - Lung

KW - Lung Diseases

KW - Macrophages

KW - Neoplasms

KW - Oxidative Stress

KW - Pneumonia, Viral

KW - Psoriasis

KW - Signal Transduction

KW - Virus Diseases

KW - Alcoholism

KW - Immunology

KW - Cell Signaling

KW - Substance Use Disorder

KW - Inflammation

U1 - Sponsor: National Institutes of Health, US. Grant: R13 AA020768; R01 AA012034; R21 AA023193; GM 115257; T32 AA013527. Recipients: Kovacs, Elizabeth J.

U1 - Sponsor: National Institutes of Health, US. Grant: AA022566. Other Details: JAI. Recipients: No recipient indicated

U1 - Sponsor: National Institutes of Health, US. Grant: R01 AA015731; R21 AA022324. Recipients: Choudhry, Mashkoor A.

DO - 10.1016/j.alcohol.2015.09.002

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2015-49800-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2024-49452-001

AN - 2024-49452-001

AU - Dworsky-Fried, Michaela

AU - Tchida, Jessica A.

AU - Krnel, Rebecca

AU - Ismail, Nafissa

T1 - Enduring sex-dependent implications of pubertal stress on the gut-brain axis and mental health

JF - Frontiers in Behavioral Neuroscience

JO - Frontiers in Behavioral Neuroscience

JA - Front Behav Neurosci

Y1 - 2024/01/11/

VL - 17

PB - Frontiers Media S.A.

SN - 1662-5153

AD - Ismail, Nafissa

N1 - Accession Number: 2024-49452-001. PMID: 38274549 Partial author list: First Author & Affiliation: Dworsky-Fried, Michaela; NISE Laboratory, School of Psychology, University of Ottawa, Ottawa, ON, Canada. Other Publishers: Frontiers Research Foundation. Release Date: 20240201. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Ismail, Nafissa. Major Descriptor: Affective Disorders; Anxiety; Mental Health; Puberty; Stress. Classification: Affective Disorders (3211). Population: Human (10). Methodology: Literature Review. References Available: Y. ArtID: 1285475. Issue Publication Date: Jan 11, 2024. Publication History: First Posted Date: Jan 11, 2024; Accepted Date: Dec 11, 2023; First Submitted Date: Aug 30, 2023. Copyright Statement: This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms. Dworsky-Fried, Tchida, Krnel and Ismail. 2024.

AB - The gut-brain axis (GBA) is a network responsible for the bidirectional communication between the central nervous system and the gastrointestinal tract. This multifaceted system is comprised of a complex microbiota, which may be altered by both intrinsic and extrinsic factors. During critical periods of development, these intrinsic and extrinsic factors can cause long-lasting sex-dependent changes in the GBA, which can affect brain structure and function. However, there is limited understanding of how the GBA is altered by stress and how it may be linked to the onset of mental illness during puberty. This article reviews current literature on the relationships between the GBA, the effects of stress during puberty, and the implications for mental health. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

KW - gut-brain axis

KW - stress

KW - adolescence

KW - puberty

KW - mood disorder

KW - anxiety

KW - brain

KW - behavior hyperlink

KW - Affective Disorders

KW - Anxiety

KW - Mental Health

KW - Puberty

KW - Stress

U1 - Sponsor: Natural Sciences and Engineering Research Council. Grant: 2020–04302. Recipients: No recipient indicated

U1 - Sponsor: Faculty of Social Sciences. Recipients: Ismail, Nafissa

DO - 10.3389/fnbeh.2023.1285475

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2024-49452-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-98026-001

AN - 2023-98026-001

AU - Guest, James D.

AU - Kelly-Hedrick, Margot

AU - Williamson, Theresa

AU - Park, Christine

AU - Ali, Daniyal Mansoor

AU - Sivaganesan, Ahilan

AU - Neal, Chris J.

AU - Tator, Charles H.

AU - Fehlings, Michael G.

T1 - Development of a systems medicine approach to spinal cord injury

JF - Journal of Neurotrauma

JO - Journal of Neurotrauma

JA - J Neurotrauma

Y1 - 2023/09//

VL - 40

IS - 17-18

SP - 1849

EP - 1877

PB - Mary Ann Liebert, Inc.

SN - 0897-7151

SN - 1557-9042

AD - Guest, James D., Neurological Surgery and the Miami Project to Cure Paralysis, Miller School of Medicine, 1095 NW 14th Terrace, Miami, FL, US, 33136

N1 - Accession Number: 2023-98026-001. PMID: 37335060 Partial author list: First Author & Affiliation: Guest, James D.; Neurological Surgery, Miami Project to Cure Paralysis, University of Miami, Miami, FL, US, jguest@med.miami.edu. Release Date: 20230814. Correction Date: 20240215. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Biological Markers; Homeostasis; Spinal Cord Injuries. Classification: Physical & Somatic Disorders (3290). Population: Human (10). Methodology: Empirical Study; Quantitative Study. Supplemental Data: Tables and Figures Internet. References Available: Y. Page Count: 29. Issue Publication Date: Sep, 2023. Publication History: First Posted Date: Aug 2, 2023. Copyright Statement: Published by Mary Ann Liebert, Inc. This Open Access article is distributed under the terms of the Creative Commons License (CC-BY) (http:// creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly credited. James D. Guest et al. 2023.

AB - Traumatic spinal cord injury (SCI) causes a sudden onset multi-system disease, permanently altering homeostasis with multiple complications. Consequences include aberrant neuronal circuits, multiple organ system dysfunctions, and chronic phenotypes such as neuropathic pain and metabolic syndrome. Reductionist approaches are used to classify SCI patients based on residual neurological function. Still, recovery varies due to interacting variables, including individual biology, comorbidities, complications, therapeutic side effects, and socioeconomic influences for which data integration methods are lacking. Infections, pressure sores, and heterotopic ossification are known recovery modifiers. However, the molecular pathobiology of the disease-modifying factors altering the neurological recovery-chronic syndrome trajectory is mainly unknown, with significant data gaps between intensive early treatment and chronic phases. Changes in organ function such as gut dysbiosis, adrenal dysregulation, fatty liver, muscle loss, and autonomic dysregulation disrupt homeostasis, generating progression-driving allostatic load. Interactions between interdependent systems produce emergent effects, such as resilience, that preclude single mechanism interpretations. Due to many interacting variables in individuals, substantiating the effects of treatments to improve neurological outcomes is difficult. Acute injury outcome predictors, including blood and cerebrospinal fluid biomarkers, neuroimaging signal changes, and autonomic system abnormalities, often do not predict chronic SCI syndrome phenotypes. In systems medicine, network analysis of bioinformatics data is used to derive molecular control modules. To better understand the evolution from acute SCI to chronic SCI multi-system states, we propose a topological phenotype framework integrating bioinformatics, physiological data, and allostatic load tested against accepted established recovery metrics. This form of correlational phenotyping may reveal critical nodal points for intervention to improve recovery trajectories. This study examines the limitations of current classifications of SCI and how these can evolve through systems medicine. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

KW - Allostatic

KW - biomarker

KW - homeostasis

KW - prognosis

KW - spinal cord injury

KW - systems biology

KW - Biological Markers

KW - Homeostasis

KW - Spinal Cord Injuries

U1 - Sponsor: U.S. Army. Grant: W81XWH-07-1-0361, W81XWH-10-2-0042, W81XWH-13-2-0040, W81XWH-16-C-0031. Other Details: Medical Research Acquisition Activity. Recipients: No recipient indicated

U1 - Sponsor: Christopher & Dana Reeve Foundation. Recipients: No recipient indicated

DO - 10.1089/neu.2023.0024

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-98026-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-75183-013

AN - 2023-75183-013

AU - Graham, Kim D.

AU - Steel, Amie

AU - Wardle, Jon

T1 - The converging paradigms of holism and complexity: An exploration of naturopathic clinical case management using complexity science principles

JF - Journal of Evaluation in Clinical Practice

JO - Journal of Evaluation in Clinical Practice

JA - J Eval Clin Pract

Y1 - 2023/06//

VL - 29

IS - 4

SP - 662

EP - 681

PB - Wiley-Blackwell Publishing Ltd.

SN - 1356-1294

SN - 1365-2753

AD - Graham, Kim D., Australian Research Centre in Complementary and Integrative Medicine, Faculty of Health, University of Technology Sydney, 15 Broadway St, Sydney, NSW, Australia

N1 - Accession Number: 2023-75183-013. Partial author list: First Author & Affiliation: Graham, Kim D.; Australian Research Centre in Complementary and Integrative Medicine, Faculty of Health, University of Technology Sydney, Sydney, NSW, Australia, kim.d.graham@student.uts.edu.au ORCID: 0000-0003-3952-8972. Other Publishers: Blackwell Publishing. Release Date: 20240307. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Case Management; Primary Health Care; Reasoning; Sciences. Classification: Health & Mental Health Services (3370). Population: Human (10); Male (30); Female (40). Location: Australia. Age Group: Adulthood (18 yrs & older) (300). Methodology: Empirical Study; Qualitative Study. References Available: Y. Page Count: 20. Issue Publication Date: Jun, 2023. Publication History: Accepted Date: May 25, 2022; Revised Date: Apr 12, 2022; First Submitted Date: Jan 24, 2022. Copyright Statement: Journal of Evaluation in Clinical Practice published by John Wiley & Sons Ltd. This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited. The Authors. 2022.

AB - Rationale: Traditional whole systems of medicine, such as naturopathy, are founded upon holism; a philosophical paradigm consistent with contemporary complexity science. Naturopathic case management is predicated upon the understanding of an intimately interconnected internal physiological and external context of the human organism—potentially indicating a worldview aligned with a complexity perspective. In this study we investigate naturopathic clinical reasoning using a complexity lens with the aim of ascertaining the extent of correspondence between the two. Method: Mind maps depicting case presentations were sought from Australian degree qualified naturopaths. A network mapping was undertaken, which was then analysed in accordance with a complexity science framework using exploratory data analysis and network analysis processes and tools. Results: Naturopathic case schematics, in the form of mind maps (n = 70), were collected, network mapped, and analysed. A total of 739 unique elements and 2724 links were identified across the network. Integral elements across the network were: stress, fatigue, general anxiety, systemic inflammation, gut dysbiosis, and diet. A modularity algorithm detected 11 communities, the primary ones of these representing the nervous system and mood; the gastrointestinal tract, liver, and nutrition; immune function and the immune system; and diet and nutrients. Conclusions: Naturopathic case management is holistic and based on a perspective of an integrated physiology and external context of the human organism. The traditional concept of holism, when subjected to a complexity lens, leads to the emergence of a contemporary holistic paradigm cognisant of the human organism being a complex system. The application of complexity science to investigate naturopathic case management as employed in this study, demonstrates that it is possible to investigate traditional philosophies and principles in a scientific and critical manner. A complexity science research approach may offer a suitable scientific paradigm to develop our understanding of traditional whole systems of medicine. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

KW - case management

KW - clinical reasoning

KW - complexity science

KW - primary health care

KW - Case Management

KW - Primary Health Care

KW - Reasoning

KW - Sciences

U1 - Sponsor: Endeavour College of Natural Medicine. Grant: RGP20190820KG. Recipients: No recipient indicated

DO - 10.1111/jep.13721

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-75183-013&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2023-42466-011

AN - 2023-42466-011

AU - Dissemond, Joachim

T1 - Diagnostik und Therapie lokaler Wundinfektionen = Diagnostics and treatment of local wound infections

JF - Zeitschrift für Gerontologie und Geriatrie

JO - Zeitschrift für Gerontologie und Geriatrie

JA - Z Gerontol Geriatr

Y1 - 2023/02//

VL - 56

IS - 1

SP - 48

EP - 52

PB - Springer

SN - 0948-6704

SN - 1435-1269

AD - Dissemond, Joachim, Klinik und Poliklinik fur Dermatologie, Venerologie und Allergologie, Universitatsklinikum Essen, Hufelandstrasse 55, 45122, Essen, Germany

N1 - Accession Number: 2023-42466-011. PMID: 34686916 Translated Title: Diagnostics and treatment of local wound infections. Other Journal Title: Zeitschrift für Gerontologie. Partial author list: First Author & Affiliation: Dissemond, Joachim; Klinik und Poliklinik fur Dermatologie, Venerologie und Allergologie, Universitatsklinikum Essen, Essen, Germany, joachim.dissemond@uk-essen.de. Release Date: 20230223. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: German. Major Descriptor: Infectious Disorders; Microorganisms; Wounds; Disinfectants. Minor Descriptor: Injuries; Treatment Duration; Sepsis. Classification: Physical & Somatic Disorders (3290); Medical Treatment of Physical Illness (3363). Population: Human (10). References Available: Y. Page Count: 5. Issue Publication Date: Feb, 2023. Publication History: First Posted Date: Oct 22, 2021; Accepted Date: Sep 27, 2021; First Submitted Date: May 18, 2021. Copyright Statement: Dieser Artikelwird unter der Creative Commons Namensnennung 4.0 International Lizenz veröffentlicht, welche die Nutzung, Vervielfältigung, Bearbeitung, Verbreitung und Wiedergabe in jeglichem Medium und Format erlaubt, sofern Sie den/die ursprünglichen Autor(en) und die Quelle ordnungsgemäß nennen, einen Link zur Creative Commons Lizenz beifügen und angeben, ob Änderungen vorgenommen wurden. Die in diesem Artikel enthaltenen Bilder und sonstiges Drittmaterial unterliegen ebenfalls der genannten Creative Commons Lizenz, sofern sich aus der Abbildungslegende nichts anderes ergibt. Sofern das betreffende Material nicht unter der genannten Creative Commons Lizenz steht und die betreffende Handlung nicht nach gesetzlichen Vorschriften erlaubt ist, ist für die oben aufgeführten Weiterverwendungen des Materials die Einwilligung des jeweiligen Rechteinhabers einzuholen. Weitere Details zur Lizenz entnehmen Sie bitte der Lizenzinformation auf http://creativecommons.org/licenses/by/4.0/deed.de. Der/die Autor(en). 2021.

AB - Local wound infections are a multidisciplinary challenge which should be diagnosed as early as possible and adequately treated. In addition to a stagnation of wound healing, it is in particular the threat of development into systemic infections and even sepsis that represent feared, potentially life-threatening complications. This topic has a particularly high and multidisciplinary significance in the treatment of patients with chronic wounds. Until now, there were no generally accepted criteria for the diagnostics. The newly developed and validated TILI score, as a supplement to vital signs and serological values, enables rapid objectification of local wound infections. In addition, the W.A.R. score can be used to identify patients with an increased risk of infections. With these easy to use tools, the indications for antiseptic wound treatment can be assessed individually, quickly and without problems. For many patients with chronic wounds, polihexanide is then the wound antiseptic of first choice. However, the indications for wound antiseptics should be critically reviewed after a treatment duration of 14 days at the latest. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

AB - Lokale Wundinfektionen sind ein multidisziplinär relevantes Problem und sollten möglichst frühzeitig diagnostiziert und adäquat therapiert werden. Neben einer Stagnation der Wundheilung sind es insbesondere die drohende Weiterentwicklung zu systemischen Infektionen bis hin zur Sepsis, die gefürchtete, potenziell lebensbedrohliche Komplikationen darstellen. Einen besonders hohen und multidisziplinären Stellenwert hat diese Thematik bei der Behandlung von Patienten mit chronischen Wunden. Bislang gab es für die Diagnostik keine einheitlich akzeptierten Kriterien. Hier ermöglicht jetzt der neu entwickelte und validierte TILI-Score als Ergänzung zu den Vitalparametern und serologischen Werten die rasche Objektivierung lokaler Wundinfektionen. Ergänzend können mit dem W.A.R.- Score zudem Patienten mit erhöhtem Infektionsrisiko identifiziert werden. Durch diese einfach einzusetzenden Hilfsmittel kann die Indikation einer antiseptischen Wundtherapie individuell, schnell und unproblematisch eingeschätzt werden. Für viele Patienten mit chronischen Wunden ist dann Polihexanid das Wundantiseptikum der ersten Wahl. Die Indikation von Wundantiseptika sollte aber spätestens nach einer Therapiedauer von 14 Tagen kritisch überprüft werden. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - bacteria

KW - chronic wounds

KW - TILI score

KW - wound healing

KW - antiseptics

KW - Humans

KW - Anti-Infective Agents, Local

KW - Wound Infection

KW - Wound Healing

KW - Infectious Disorders

KW - Microorganisms

KW - Wounds

KW - Disinfectants

KW - Injuries

KW - Treatment Duration

KW - Sepsis

U1 - Sponsor: Projekt DEAL. Recipients: No recipient indicated

DO - 10.1007/s00391-021-01984-7

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2023-42466-011&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2021-61329-275

AN - 2021-61329-275

AU - Costeines, Jessica

T1 - A gut feeling: Exploring the relationship between nutrition, mental health and wellbeing in adolescents

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2021///

VL - 82

IS - 11-B

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 979-8728250791

N1 - Accession Number: 2021-61329-275. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Costeines, Jessica; Fordham University, Social Work, US. Release Date: 20210819. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI28495458. ISBN: 979-8728250791. Language: English. Major Descriptor: Diets; Mental Health; Nutrition; Well Being. Minor Descriptor: Depression (Emotion); Mental Disorders; Adolescent Characteristics. Classification: Health Psychology & Medicine (3360). Population: Human (10). Age Group: Adolescence (13-17 yrs) (200). Methodology: Empirical Study; Quantitative Study.

AB - Mental illness in adolescence is associated with a multitude of adverse outcomes throughout an individual's life span. Exploring and improving upon young adult's diets and nutritional habits can be a beneficial compliment and/or an inexpensive alternative to current standards of treatment. While research suggests that diet affects mental health, recent revelations have been able to expound upon the intricate process of communication between the gut-brain axis. These technologically driven advances have been essential to further understanding the role of food and its potential to greatly reduce the prevalence and severity of mental illness over time. The majority of previous literature has focused on the dietary habits and mental health of either young children or adults, while investigation of these same problems in the teenage population is lacking. The following analysis utilized Year 15 of the Fragile Family and Child Wellbeing Study data aimed to investigate the relationship between nutrition, mental health and wellbeing in a nationally representative sample of 15-year-olds in the United States. After controlling for gender, race, body mass index, and social support to exercise and eat well, statistically significant relationships were found between nutrition and mental health, such as depression and anxiety symptomology, and child behavioral outcomes, such as aggression and attention problems. Although effect sizes were small, they indicate that it is important to consider the role that diet can play on improving on mental health and wellbeing outcomes in adolescents. Study findings can be used to explore how the field of social work can educate and intervene at a critical time of gut and brain development within this population. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - Adolescents

KW - Depression

KW - Diet quality

KW - Mental health

KW - Nutrition

KW - Diets

KW - Mental Health

KW - Nutrition

KW - Well Being

KW - Depression (Emotion)

KW - Mental Disorders

KW - Adolescent Characteristics

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2021-61329-275&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2022-83482-001

AN - 2022-83482-001

AU - Leenaerts, Nicolas

AU - Jongen, Daniëlle

AU - Ceccarini, Jenny

AU - Van Oudenhove, Lukas

AU - Vrieze, Elske

T1 - The neurobiological reward system and binge eating: A critical systematic review of neuroimaging studies

JF - International Journal of Eating Disorders

JO - International Journal of Eating Disorders

JA - Int J Eat Disord

Y1 - 2022/11//

VL - 55

IS - 11

SP - 1421

EP - 1458

PB - John Wiley & Sons

SN - 0276-3478

SN - 1098-108X

AD - Leenaerts, Nicolas, Biomedical Sciences Group, KU Leuven, 3000, Leuven, Belgium

N1 - Accession Number: 2022-83482-001. PMID: 35841198 Partial author list: First Author & Affiliation: Leenaerts, Nicolas; Biomedical Sciences Group, KU Leuven, Leuven, Belgium, nicolas.leenaerts@kuleuven.be ORCID: 0000-0003-2421-6845. Release Date: 20220721. Correction Date: 20230130. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Binge Eating; Neurobiology; Neuroimaging; Rewards; Positron Emission Tomography. Minor Descriptor: Bulimia; Eating Disorders; Magnetic Resonance Imaging. Classification: Eating Disorders (3260). Population: Human (10). Methodology: Literature Review; Systematic Review. References Available: Y. Page Count: 38. Issue Publication Date: Nov, 2022. Publication History: Accepted Date: Jun 28, 2022; Revised Date: Jun 28, 2022; First Submitted Date: Jan 5, 2022. Copyright Statement: Wiley Periodicals LLC. 2022.

AB - Objective: Changes in reward processing are hypothesized to play a role in the onset and maintenance of binge eating (BE). However, despite an increasing number of studies investigating the neurobiological reward system in individuals who binge eat, no comprehensive systematic review exists on this topic. Therefore, this review has the following objectives: (1) identify structural and functional changes in the brain reward system, either during rest or while performing a task; and (2) formulate directions for future research. Methods: A search was conducted of articles published until March 31, 2022. Neuroimaging studies were eligible if they wanted to study the reward system and included a group of individuals who binge eat together with a comparator group. Their results were summarized in a narrative synthesis. Results: A total of 58 articles were included. At rest, individuals who binge eat displayed a lower striatal dopamine release, a change in the volume of the striatum, frontal cortex, and insula, as well as a lower frontostriatal connectivity. While performing a task, there was a higher activity of the brain reward system when anticipating or receiving food, more model‐free reinforcement learning, and more habitual behavior. Most studies only included one patient group, used general reward‐related measures, and did not evaluate the impact of comorbidities, illness duration, race, or sex. Discussion: Confirming previous hypotheses, this review finds structural and functional changes in the neurobiological reward system in BE. Future studies should compare disorders, use measures that are specific to BE, and investigate the impact of confounding factors. Public Significance Statement: This systematic review finds that individuals who binge eat display structural and functional changes in the brain reward system. These changes could be related to a higher sensitivity to food, relying more on previous experiences when making decisions, and more habitual behavior. Future studies should use a task that is specific to binge eating, look across different patient groups, and investigate the impact of comorbidities, illness duration, race, and sex. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

AB - Objetivo: Se plantea la hipótesis de que los cambios en el procesamiento de la recompensa desempeñan un papel en el inicio y mantenimiento de los atracones (BE). Sin embargo, a pesar de un número creciente de estudios que investigan el sistema de recompensa neurobiológica en individuos que comen en atracones, no existe una revisión sistemática exhaustiva sobre este tema. Por lo tanto, esta revisión tiene los siguientes objetivos: (1) identificar cambios estructurales y funcionales en el sistema de recompensa cerebral, ya sea en reposo o mientras se realiza una tarea; (2) formular direcciones para futuras investigaciones. Métodos: Se realizó una búsqueda de artículos publicados hasta el 31 de marzo de 2022. Los estudios de neuroimagen eran elegibles si querían estudiar el sistema de recompensa e incluían a un grupo de individuos que comían en atracón junto con un grupo de comparación. Sus resultados se resumieron en una síntesis narrativa. Resultados: Se incluyeron un total de 58 artículos. En reposo, los individuos que comen en atracón mostraron una menor liberación de dopamina estriatal, un cambio en el volumen del cuerpo estriado, la corteza frontal y la ínsula, así como una menor conectividad frontostriatal. Al realizar una tarea, hubo una mayor actividad del sistema de recompensa cerebral al anticipar o recibir alimentos, más aprendizaje de refuerzo sin modelos y un comportamiento más habitual. La mayoría de los estudios sólo incluyeron un grupo de pacientes, utilizaron medidas generales relacionadas con la recompensa y no evaluaron el impacto de las comorbilidades, la duración de la enfermedad, la raza o el sexo. Discusión: Confirmando hipótesis anteriores, esta revisión encuentra cambios estructurales y funcionales del sistema de recompensa neurobiológica en BE. Los estudios futuros deben comparar los trastornos, utilizar medidas que sean específicas para el comer en atracones e investigar el impacto de los factores de confusión. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

KW - anorexia nervosa binge‐eating/purging type

KW - binge eating

KW - binge‐eating disorder

KW - bulimia nervosa

KW - MRI

KW - neuroimaging

KW - PET

KW - RDoC

KW - reward processing

KW - Humans

KW - Binge-Eating Disorder

KW - Reward

KW - Neuroimaging

KW - Bulimia Nervosa

KW - Brain

KW - Binge Eating

KW - Neurobiology

KW - Neuroimaging

KW - Rewards

KW - Positron Emission Tomography

KW - Bulimia

KW - Eating Disorders

KW - Magnetic Resonance Imaging

U1 - Sponsor: Fonds Wetenschappelijk Onderzoek, Belgium. Grant: 12R1619N. Recipients: No recipient indicated

U1 - Sponsor: KU Leuven, Belgium. Grant: ECAD4671-C14/18/09. Recipients: No recipient indicated

DO - 10.1002/eat.23776

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2022-83482-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2021-62465-001

AN - 2021-62465-001

AU - Mindus, Claire

AU - Ellis, Jennifer

AU - van Staaveren, Nienke

AU - Harlander-Matauschek, Alexandra

T1 - Lactobacillus-based probiotics reduce the adverse effects of stress in rodents: A meta-analysis

JF - Frontiers in Behavioral Neuroscience

JO - Frontiers in Behavioral Neuroscience

JA - Front Behav Neurosci

Y1 - 2021/06/16/

VL - 15

PB - Frontiers Media S.A.

SN - 1662-5153

AD - Harlander-Matauschek, Alexandra

N1 - Accession Number: 2021-62465-001. PMID: 34220459 Partial author list: First Author & Affiliation: Mindus, Claire; Department of Animal Biosciences, University of Guelph, Guelph, ON, Canada. Other Publishers: Frontiers Research Foundation. Release Date: 20210729. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Microorganisms; Stress; Stress Reactions. Minor Descriptor: Mental Disorders; Rodents; Gastrointestinal Microbiota. Classification: Psychophysiology (2560). Population: Human (10); Animal (20). Methodology: Meta Analysis. References Available: Y. ArtID: 642757. Issue Publication Date: Jun 16, 2021. Publication History: First Posted Date: Jun 16, 2021; Accepted Date: May 19, 2021; First Submitted Date: Dec 16, 2020. Copyright Statement: This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms. Mindus, Ellis, van Staaveren and Harlander-Matauschek. 2021.

AB - Lactobacillus species play a critical role in the bidirectional communication between the gut and the brain. Consequently, they have the potential to aid in the treatment of psychological disorders. The impact of Lactobacillus supplementation on the stress responses triggering psychological disorders has not been systematically reviewed. Therefore, the aim of this meta-analysis is to summarize the body of research assessing the effects of Lactobacillus-based probiotics in rodents that underwent an experimental stress treatment or not. The duration of immobility in a Forced Swim Test (FST) was the outcome used to measure changes induced by various treatments. Four online databases were systematically searched for relevant studies published in English. Fourteen studies meeting the criteria were included in the meta-analysis. The effects of probiotic supplementation and stress treatment on the duration of immobility in the FST were analyzed using a generalized linear mixed model. Publication bias was evaluated by funnel plots. Our analysis shows that Lactobacillus-based probiotic supplements significantly reduce immobility in the FST (P < 0.001) in stressed rodents. However, probiotics did not affect the rodents that did not undergo the stress treatment (P = 0.168). These findings provide a better understanding of the potential of Lactobacillus-based probiotics for the management of stress-induced behavior. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - meta-analysis

KW - probiotic

KW - Lactobacillus

KW - stress

KW - psychological disorder

KW - gut-brain axis

KW - Microorganisms

KW - Stress

KW - Stress Reactions

KW - Mental Disorders

KW - Rodents

KW - Gastrointestinal Microbiota

U1 - Sponsor: Natural Sciences and Engineering Research Council. Grant: 400983. Recipients: No recipient indicated

DO - 10.3389/fnbeh.2021.642757

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2021-62465-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2017-13141-001

AN - 2017-13141-001

AU - Allen, Jon G.

AU - Fowler, J. Christopher

AU - Madan, Alok

AU - Ellis, Thomas E.

AU - Oldham, John M.

AU - Frueh, B. Christopher

T1 - Discovering the impact of psychotherapeutic hospital treatment for adults with serious mental illness

JF - Bulletin of the Menninger Clinic

JO - Bulletin of the Menninger Clinic

JA - Bull Menninger Clin

Y1 - 2017/03//

VL - 81

IS - 1

SP - 1

EP - 38

PB - Guilford Publications

SN - 0025-9284

SN - 1943-2828

AD - Allen, Jon G., 2915 W. Dallas St, Houston, TX, US, 77019

N1 - Accession Number: 2017-13141-001. PMID: 28271904 Partial author list: First Author & Affiliation: Allen, Jon G.; Menninger Clinic, Houston, TX, US, jongallen1976@gmail.com. Release Date: 20170413. Correction Date: 20210916. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Mental Disorders; Psychiatric Hospitals; Psychotherapeutic Processes; Treatment Outcomes; Serious Mental Illness. Classification: Inpatient & Hospital Services (3379). Population: Human (10); Inpatient (50). Age Group: Adulthood (18 yrs & older) (300). Tests & Measures: Big Five Inventory; Beck Depression Inventory–II DOI: 10.1037/t00742-000; Beck Scale for Suicide Ideation; Difficulties in Emotion Regulation Scale DOI: 10.1037/t01029-000; Columbia-Suicide Severity Rating Scale DOI: 10.1037/t52667-000; Suicide Cognitions Scale DOI: 10.1037/t54628-000; Structured Clinical Interview for DSM-IV Axis II Personality Disorders; Beck Hopelessness Scale; Acceptance and Action Questionnaire DOI: 10.1037/t04346-000; Generalized Anxiety Disorder 7 DOI: 10.1037/t02591-000; Patient Health Questionnaire-9 DOI: 10.1037/t06165-000; Stressful Life Events Screening Questionnaire DOI: 10.1037/t07466-000; 36-Item Short Form Health Survey DOI: 10.1037/t07023-000. Methodology: Empirical Study; Followup Study; Interview; Quantitative Study. References Available: Y. Page Count: 38. Issue Publication Date: Mar, 2017. Copyright Statement: The Menninger Foundation. 2017.

AB - The authors summarize findings from a multiyear research project designed primarily to investigate outcomes of intensive, psychotherapeutic hospital treatment lasting several weeks. Patients are assessed with well-established measures at admission, and their progress is reassessed biweekly up to discharge. A follow-up component was added recently to track outcomes for 1 year after discharge. All inpatient assessments are integrated with clinical care by providing individual results for each time point to the patient and the treatment team. In addition to reporting findings from inpatient treatment, the authors summarize what has been learned about the measures and methodology as well as what the assessments have revealed about psychopathology in these patients. More recently, the outcomes project has included a neuroscience initiative with findings from neuroimaging, genetics, and the microbiome; initial findings are also summarized. The authors conclude with a discussion of their understanding of the basis of the effectiveness of this increasingly rare form of inpatient treatment. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - psychotherapeutic processes

KW - psychotherapeutic hospitals

KW - mental illness

KW - treatment outcomes

KW - Hospitalization

KW - Humans

KW - Inpatients

KW - Mental Disorders

KW - Patient Satisfaction

KW - Psychotherapy

KW - Suicidal Ideation

KW - Treatment Outcome

KW - Mental Disorders

KW - Psychiatric Hospitals

KW - Psychotherapeutic Processes

KW - Treatment Outcomes

KW - Serious Mental Illness

DO - 10.1521/bumc.2017.81.1.1

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2017-13141-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2020-10499-028

AN - 2020-10499-028

AU - Garcia Reeves, Alessandra Bassalobre

T1 - Antimicrobial stewardship programs: Implications for resistance rates & quality of care in hospitals

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2020///

VL - 81

IS - 7-B

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-1392891971

N1 - Accession Number: 2020-10499-028. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Garcia Reeves, Alessandra Bassalobre; The University of North Carolina at Chapel Hill, Health Policy and Management, US. Release Date: 20200402. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI22624781. ISBN: 978-1392891971. Language: English. Major Descriptor: Death and Dying; Infectious Disorders; Microorganisms; Treatment Outcomes; Treatment Resistant Disorders. Minor Descriptor: Compliance; Quality of Care; Clinical Models. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Methodology: Empirical Study; Quantitative Study.

AB - Each year, two million Americans acquire serious infections caused by bacteria that are resistant to antibiotics resulting in significant morbidity, mortality, health care utilization and costs. Despite the recent passage of an antimicrobial stewardship programs (ASP) mandate in California and the Centers for Disease Control and Prevention (CDC) guidelines for a minimum standard ASP in hospitals, literature on the impact of ASPs on antimicrobial resistance (AMR) rates in hospitals is sparse.The long-term goal of this study is to provide reliable evidence to influence policies and practices to reduce AMR and improve quality and clinical outcomes in hospitals. The overall objective of this study was to investigate the impact of ASP adoption, including the effect of a mandate in California and compliance with the CDC's 7 core elements on methicillin-resistant Staphylococcus aureus (MRSA) and Clostridioides difficile (C. diff) in acute care hospitals. Then, we investigated their impact on selected quality and clinical outcomes.In paper 1, we estimated the impact of passing an ASP mandate in California on hospital on MRSA and C. diff rates using 2013–2017 hospital-level data and a difference-in-difference with hospital fixed effects (FE) design. We found that, compared to hospitals in other states, California hospitals had significant (p < 0.05) increases of 23%, 30%, and 20% in their MRSA SIR in 2015, 2016 and 2017, respectively. We also observed a 20% (p < 0.001) decrease in their C. diff SIR in 2017.Paper 2 examined the effect of statewide adoption of the CDC's ASP 7 core components on MRSA and C. diff rates using 2014–2016 data to estimate a state FE model. We found that the percentage of hospitals meeting the CDC's 7 core elements for ASP between 2014 and 2016 increased in all states. A one percentage point increase in ASP compliance was associated with a 0.3% decrease (p < 0.01) in C. diff infections in 2016 relative to 2014. We did not find an effect on MRSA infections.In paper 3, we measured the association between rates of MRSA/C. diff and quality and clinical outcomes in US acute care hospitals using 2013–2017 hospital-level data and a hospital FE model. We found no association of MRSA or C. diff with 30-day readmissions, length of stay, 30-day mortality and intensive care unit days.In summary, this study examined the various effects of an ASP state mandate and adoption of the CDC's 7 core elements, as well as the relationship between AMR and quality and clinical outcomes in hospitals. Our findings help fill important knowledge gaps and can assist policymakers and healthcare administrators make informed decisions on the regulation and implementation of ASPs. Future studies should seek data on hospital-level implementation of specific components of ASP and other resistant bacteria, neither of which is currently available. (PsycInfo Database Record (c) 2020 APA, all rights reserved)

KW - antimicrobial

KW - stewardship programs

KW - hospitals

KW - Death and Dying

KW - Infectious Disorders

KW - Microorganisms

KW - Treatment Outcomes

KW - Treatment Resistant Disorders

KW - Compliance

KW - Quality of Care

KW - Clinical Models

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2020-10499-028&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2019-46355-252

AN - 2019-46355-252

AU - Walker, Elizabeth A.

T1 - Glutathione's role in streptococcus agalactiae for mammalian virulence and vaginal colonization

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2019///

VL - 80

IS - 11-B(E)

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-1392222942

N1 - Accession Number: 2019-46355-252. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Walker, Elizabeth A.; Saint Louis University, Biology, US. Release Date: 20191216. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI13883669. ISBN: 978-1392222942. Language: English. Major Descriptor: Microorganisms; Vagina. Minor Descriptor: Infectious Disorders. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Animal (20). Methodology: Empirical Study; Quantitative Study.

AB - Streptococcus agalactiae (S. agalactiae), commonly referred to as Group B Streptococcus (GBS) is a human commensal organism found in the rectovaginal tract. S. agalactiae does not cause problems for its healthy human host, however, when the bacterium is introduced to an individual with a less-developed or weakened immune system, such as an infant, S. agalactiae can cause serious illness, such as sepsis or meningitis. This is of particular importance since 25% of women in the US are carriers of S. agalactiae, which poses an issue during vaginal delivery of a newborn. That is why S. agalactiae is one of the leading causes of neonatal meningitis, with 3/10,000 newborns becoming infected and developing symptoms within the first week of life. These facts, combined with the rising instance of antibiotic resistance, requires continued research into the mechanisms by which S. agalactiae causes disease. In 2005, it was discovered that S. agalactiae produces abundant amount of the antioxidant glutathione (GSH). GSH is ubiquitous molecule found in all kingdoms of life and is known to protect against toxic substances, such as: reactive oxygen species (ROS), metals, and chlorine compounds in both high order organisms, as well as bacteria. This knowledge led to the hypothesis that S. agalactiae uses its abundant quantities of synthesized GSH to protect itself against the ROS attacks of the human immune system and the harsh environment of the vagina. Upon the production of a GSH-deficient mutant, in vitro assays were utilized to understand the impact of GSH synthesis on growth and response to ROS. In vivo studies of murine models of sepsis and vaginal colonization were then utilized to elucidate the role of GSH synthesis for S. agalactiae in infection and maintaining status as a normal member of the human microbiota. GSH was not found to play a role in S. agalactiae vaginal colonization but does allow for modest protection against ROS and significantly impacts virulence in a septic infection. Therefore, this is the first study that shows the importance of GSH to S. agalactiae, which could be a future therapeutic target due to its unique mechanism of synthesis compared to its host. (PsycINFO Database Record (c) 2019 APA, all rights reserved)

KW - streptococcus agalactiae

KW - mammalian virulence

KW - vaginal colonization

KW - Microorganisms

KW - Vagina

KW - Infectious Disorders

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-46355-252&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2019-24100-001

AN - 2019-24100-001

AU - Christian, Lisa M.

T1 - At the forefront of psychoneuroimmunology in pregnancy: Implications for racial disparities in birth outcomes PART 1: Behavioral risks factors

JF - Neuroscience and Biobehavioral Reviews

JO - Neuroscience and Biobehavioral Reviews

JA - Neurosci Biobehav Rev

Y1 - 2020/10//

VL - 117

SP - 319

EP - 326

PB - Elsevier Science

SN - 0149-7634

SN - 1873-7528

AD - Christian, Lisa M., Ohio State University, Wexner Medical Center, Institute for Behavioral Medicine Research, Room 112, 460 Medical Center Drive, Columbus, OH, US, 43210

N1 - Accession Number: 2019-24100-001. PMID: 31005626 Partial author list: First Author & Affiliation: Christian, Lisa M.; Department of Psychiatry & Behavioral Health, Ohio State University, Wexner Medical Center, Columbus, OH, US, Lisa.Christian@osumc.edu. Release Date: 20190502. Correction Date: 20210118. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Grant Information: Christian, Lisa M. Major Descriptor: Pregnancy; Psychoneuroimmunology; Risk Factors; Sleep; Stress. Minor Descriptor: Birth Rate; Premature Birth; Racial Disparities. Classification: Physiological Psychology & Neuroscience (2500). Population: Human (10). Methodology: Literature Review. References Available: Y. Page Count: 8. Issue Publication Date: Oct, 2020. Publication History: First Posted Date: Apr 18, 2019. Copyright Statement: All rights reserved. Elsevier Ltd. 2019.

AB - Birth prior to full term is a substantial public health issue. In the US, ˜400,000 babies per year are born preterm (<37 weeks), while>1 million are early term (37–386/7 weeks). Birth prior to full term confers risk both immediate and long term, including neonatal intensive care, decrements in school performance, and increased mortality risk from infancy through young adulthood. Risk for low birth weight and preterm birth are 1.5–2 times greater among African Americans versus Whites. Psychosocial stress related to being a member of a discriminated racial minority group contributes substantially to these racial disparities. Providing promising targets for intervention, depressed mood, anxiety, and poor sleep are each linked with exposure to chronic stress, including racial discrimination. A rigorous transdisciplinary approach addressing these gaps holds great promise for clinical impact in addressing racial disparities as well as ameliorating effects of stress on perinatal health more broadly. As will be reviewed in a companion paper, the mechanistic roles of physiological sequelae to stress – including neuroendocrine, inflammatory regulation, biological aging, and the microbiome – also require delineation. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - Psychoneuroimmunology

KW - Stress

KW - Sleep

KW - Depression

KW - Anxiety

KW - Pregnancy

KW - Birth outcomes

KW - Racial disparities

KW - Pregnancy

KW - Psychoneuroimmunology

KW - Risk Factors

KW - Sleep

KW - Stress

KW - Birth Rate

KW - Premature Birth

KW - Racial Disparities

U1 - Sponsor: Eunice Kennedy Shriver National Institute of Child Health and Human Development, US. Grant: R21HD067670; R21HD061644. Recipients: Christian, Lisa M.

U1 - Sponsor: National Institute of Nursing Research, US. Grant: R01NR013661. Recipients: Christian, Lisa M.

U1 - Sponsor: National Center for Research Resources, US. Grant: UL1R001070. Recipients: Christian, Lisa M.

DO - 10.1016/j.neubiorev.2019.04.009

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-24100-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2019-35208-007

AN - 2019-35208-007

AU - Peng, Hsuan-Hui

AU - Tsai, Tsung-Chih

AU - Huang, Wan-Yu

AU - Wu, Hung-Ming

AU - Hsu, Kuei-Sen

T1 - Probiotic treatment restores normal developmental trajectories of fear memory retention in maternally separated infant rats

JF - Neuropharmacology

JO - Neuropharmacology

JA - Neuropharmacology

Y1 - 2019/07/15/

VL - 153

SP - 53

EP - 62

PB - Elsevier Science

SN - 0028-3908

SN - 1873-7064

AD - Hsu, Kuei-Sen, Department of Pharmacology, College of Medicine, National Cheng Kung University, No. 1, University Rd., Tainan, Taiwan, 70101

N1 - Accession Number: 2019-35208-007. PMID: 31034844 Other Journal Title: International Journal of Neuropharmacology. Partial author list: First Author & Affiliation: Peng, Hsuan-Hui; Department of Pharmacology, College of Medicine, National Cheng Kung University, Tainan, Taiwan. Release Date: 20190708. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Infants (Animal); Memory; Microorganisms; Rats; Retention. Minor Descriptor: Amygdala; Early Memories; Stress. Classification: Neuropsychology & Neurology (2520). Population: Animal (20); Female (40). Methodology: Empirical Study; Quantitative Study. Page Count: 10. Issue Publication Date: Jul 15, 2019. Publication History: First Posted Date: Apr 26, 2019; Accepted Date: Apr 25, 2019; Revised Date: Apr 23, 2019; First Submitted Date: Dec 22, 2018. Copyright Statement: All rights reserved. Elsevier Ltd. 2019.

AB - Early life stress (ELS) can affect brain development and increase lifetime prevalence of psychiatric illnesses. However, the effective therapeutic interventions to ameliorate the deleterious effects of ELS have not yet been well established. Here, we confirmed that maternal separation (MS) for 3 h daily between postnatal days 2–14, a frequently used experimental model of ELS, resulted in early expression of adult-like fear memory retention in male infant rats. Administration of a probiotic formulation, Lacidofil® (95% Lactobacillus rhamnosus R0011 and 5% Lactobacillus helveticus R0052), during the separation period, prevented the precocious transition to adult-like fear memory retention in MS infant rats. Consonant with this effect, probiotic treatment also ameliorated the MS-induced increases in anxiety-like behavior as measured by the elevated plus maze and the light-dark box tests. In addition, probiotic treatment reduced MS-induced increases in neuronal activation and brain-derived neurotrophic factor protein levels in the basolateral nucleus of amygdala (BLA) after auditory fear conditioning. Furthermore, we found that probiotic treatment significantly rescued the heightened hypothalamic-pituitary-adrenal (HPA) axis response to restraint stress in MS infant rats. Taken together, these findings suggest that probiotics can restore normal developmental trajectories of fear memory retention in MS infant rats, at least in part by normalizing HPA axis abnormalities, and that the BLA serves as a critical node to mediate these interventions. Thus, we offer a potential therapeutic intervention to protect children against the harmful effects of ELS. (PsycINFO Database Record (c) 2019 APA, all rights reserved)

KW - Early life stress

KW - Probiotic

KW - Hypothalamic-pituitary-adrenal (HPA) axis

KW - Fear memory

KW - Basolateral nucleus of amygdala

KW - Rat

KW - Infants (Animal)

KW - Memory

KW - Microorganisms

KW - Rats

KW - Retention

KW - Amygdala

KW - Early Memories

KW - Stress

U1 - Sponsor: National Health Research Institute, Taiwan. Grant: NHRI-EX107-10613NI. Recipients: No recipient indicated

U1 - Sponsor: Ministry of Science and Technology, Taiwan. Grant: 106-2320-B-006-026-MY3; 107-2320-B-006-037-MY3. Recipients: No recipient indicated

DO - 10.1016/j.neuropharm.2019.04.026

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-35208-007&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2019-00352-096

AN - 2019-00352-096

AU - Rudnick, Wallis Elizabeth Johanna

T1 - Nosocomial methicillin-resistant Staphylococcus Aureus: Acquisition, infection and decolonization

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2019///

VL - 80

IS - 4-B(E)

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-0438683372

N1 - Accession Number: 2019-00352-096. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Rudnick, Wallis Elizabeth Johanna; University of Toronto (Canada), Public Health, Canada. Release Date: 20190304. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI10932107. ISBN: 978-0438683372. Language: English. Major Descriptor: Antibiotics; Liver; Microorganisms; Resistance; Risk Factors. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Location: Canada. Methodology: Empirical Study; Longitudinal Study; Retrospective Study; Quantitative Study.

AB - Methicillin-resistant Staphylococcus aureus (MRSA), an antibiotic-resistant bacteria, is often carried asymptomatically, but can cause severe disease. In this thesis, I present three retrospective cohort studies conducted in Toronto, Canada, which examine risk factors for infection or acquisition. In a study of 1,125 adult MRSA carriers at a tertiary hospital, risk factors for subsequent MRSA-positive clinically-indicated specimens were recent identification of carriage, older age, male gender, nosocomial acquisition, carriage detection in ICU, and underlying liver conditions. In a study of pairs of patients at two hospitals who shared a room for &ge;48 hours, each pair included a MRSA-index case and a patient at risk of acquisition. Fluoroquinolone receipt by either patient increased the probability of MRSA transmission. Nearly half of identified acquisitions in the year following shared occupancy were unrelated to the MRSA-index case. In a study of 62,552 patient admissions, receipt of fluoroquinolone(s) and exposure to high MRSA colonization pressure in the prior week were significant risk factors for MRSA acquisition. The results of the cohort studies suggest that MRSA control should involve consideration of antibiotic exposures among those colonized and those at risk of acquisition. Antimicrobial stewardship and interventions that identify carriers could reduce disease burden. (PsycINFO Database Record (c) 2019 APA, all rights reserved)

KW - Methicillin-resistant Staphylococcus aureus

KW - antibiotic-resistant bacteria

KW - risk factors

KW - liver conditions

KW - Antibiotics

KW - Liver

KW - Microorganisms

KW - Resistance

KW - Risk Factors

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2019-00352-096&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2016-37041-012

AN - 2016-37041-012

AU - Lefrak, Linda

T1 - Infection risk reduction in the intensive care nursery: A review of patient care practices that impact the infection risk in global care of the hospitalized neonates

JF - The Journal of Perinatal & Neonatal Nursing

JO - The Journal of Perinatal & Neonatal Nursing

JA - J Perinat Neonatal Nurs

Y1 - 2016/04//Apr-Jun, 2016

VL - 30

IS - 2

SP - 139

EP - 147

PB - Lippincott Williams & Wilkins

SN - 0893-2190

SN - 1550-5073

AD - Lefrak, Linda, 701 Caldwell Road, Oakland, CA, US, 94611

N1 - Accession Number: 2016-37041-012. Partial author list: First Author & Affiliation: Lefrak, Linda; School of Family Health Nursing, University of California, San Francisco, San Francisco, CA, US, llefrak@comcast.net. Release Date: 20170511. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Hospitalization; Infectious Disorders; Intensive Care. Classification: Nursing Homes & Residential Care (3377). Population: Human (10). Methodology: Literature Review. References Available: Y. Page Count: 9. Issue Publication Date: Apr-Jun, 2016. Publication History: Accepted Date: Feb 20, 2016; First Submitted Date: Dec 29, 2015. Copyright Statement: All rights reserved. Wolters Kluwer Health, Inc. 2016.

AB - Neonates are at high risk for developing an infection during their hospital stay in the neonatal intensive care unit. Increased risk occurs because of immaturity of the neonate's immune system, lower gestational age, severity of illness, surgical procedures, and instrumentation with life support devices such as vascular catheters. Neonates become colonized with bacteria prior to or at delivery and also during their hospital stay. They can then become infected with those bacteria if there is a breakdown in the primary defenses such as tissue injury due to skin breakdown, nasal erosion, or trauma to the respiratory tract. Neonates are also at high risk for bacterial translocation due to the altered permeability of the intestinal mucosa, loss of commensal flora, and bacterial overgrowth. The unit-based neonatal care team must implement global care delivery and safety practices, utilize published care guidelines, know and apply evidence-based practices from collaborative quality improvement efforts and other sources, and use auditing and monitoring practices that can identify risks and lead to better practice options to prevent infections. This article presents several aspects of global neonatal care delivery, including vascular access, which may reduce the risk of systemic infection during the hospitalization. (PsycINFO Database Record (c) 2017 APA, all rights reserved)

KW - care practices

KW - infection

KW - neonatal care

KW - risk reduction

KW - Hospitalization

KW - Infectious Disorders

KW - Intensive Care

DO - 10.1097/JPN.0000000000000172

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2016-37041-012&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2018-40527-069

AN - 2018-40527-069

AU - Klein, Savannah Leigh

T1 - Ecology and virulence capabilities of vibrios isolated from the pristine North Inlet Estuary

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2018///

VL - 79

IS - 11-B(E)

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-0438112148

N1 - Accession Number: 2018-40527-069. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Klein, Savannah Leigh; University of South Carolina, Biological Sciences, US. Release Date: 20180924. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI10749727. ISBN: 978-0438112148. Language: English. Major Descriptor: Ecology; Microorganisms. Minor Descriptor: Genes. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Location: US. Methodology: Empirical Study; Quantitative Study.

AB - Vibrio bacteria are Gram negative, motile organisms that occur naturally in most coastal and estuarine ecosystems. Some vibrios are important human pathogens, including Vibrio parahaemolyticus and Vibrio vulnificus. The CDC estimates that these two species cause 80,000 cases of disease (vibriosis) each year in the United States alone. Most cases are caused by V. parahaemolyticus, which infects humans after the consumption of contaminated raw or undercooked seafood, primarily oysters. V. parahaemolyticus causes mild gastroenteritis that is self-limiting unless the patient is immunocompromised. V. vulnificus has a much lower incidence of disease (100 cases in the USA yr-1); however, this organism causes much more severe infections, including necrotizing fasciitis (flesh eating disease) and sepsis when introduced into an open wound. With global climate change, Vibrio outbreaks are expanding in size, frequency, and latitude. This investigation examined the reliability of using 'species specific' marker genes to identify a Vibrio strain, the distribution of pathogenicity islands (PAIs) within Vibrio genomes, and the distributions of potential pathogenic V. parahaemolyticus within oysters and oyster tissues. We determined that some oysters, designated as 'hot' oysters, can harbor significantly more vibrios than surrounding oysters. These 'hot' oysters, which occur at low frequency, may explain the sporadic (and difficult to predict) nature of V. parahaemolyticus infections. The cytotoxic effects of environmental Vibrio strains and the interactions of vibrios with various marine microalgae were also studied. (PsycINFO Database Record (c) 2018 APA, all rights reserved)

KW - ecology

KW - vibrios

KW - Ecology

KW - Microorganisms

KW - Genes

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2018-40527-069&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2017-54457-065

AN - 2017-54457-065

AU - Agarwal, Mansi

T1 - Risk of hospital-acquired infections and drug resistance caused by gram-negative bacteria in patients with multiple hospitalization

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2018///

VL - 79

IS - 1-B(E)

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-0355233278

N1 - Accession Number: 2017-54457-065. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Agarwal, Mansi; Columbia University, Epidemiology, US. Release Date: 20180212. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI10623398. ISBN: 978-0355233278. Language: English. Major Descriptor: Antibiotics; Hospitalization; Microorganisms; Resistance; Risk Factors. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10); Inpatient (50). Age Group: Adulthood (18 yrs & older) (300). Methodology: Empirical Study; Longitudinal Study; Retrospective Study; Quantitative Study.

AB - Patients who experience multiple hospitalizations over short periods of time may be at greater risk of hospital-acquired infections (HAIs). While it is known that prior hospitalizations are associated with HAIs, there is a gap in knowledge regarding which factors of prior hospitalizations have an impact on the risk of HAIs in subsequent hospitalizations. HAIs caused by gram-negative bacteria (GNB) are of particular concern due to their propensity to develop drug resistance and the limited antibiotics available to treat them. The aims of this dissertation are to: 1) examine clinical and patient risk factors associated with acquiring at least one gram-negative hospital-acquired infection in adult patients with multiple hospitalizations; 2) systematically review the literature assessing the association between repeat gram-negative bacterial infections and changes in antibiotic susceptibility patterns; and 3) assess the association between repeat infections with three common gram-negative pathogens and risk of subsequent drug resistant infections with the same species among patients with multiple hospitalizations. A retrospective cohort study was conducted to identify risk factors from prior hospitalizations associated with incident HAIs caused by three common GNB. Of the 129,372 patients with multiple hospitalizations, 1,672 (1.3%) acquired K. pneumoniae, 1,127 (0.9%) acquired P. aeruginosa, and 262 (0.2%) acquired A. baumannii infections. In survival analyses, older age, mechanical ventilation, history of chronic diseases, and increasing days of use of antibiotics decreased the time to infection for all 3 pathogens. This study highlights potential modifiable risk factors for infection control. Patients with multiple hospitalizations are also inherently at greater risk for repeat HAIs which may result in decreased antibiotic susceptibility, making them more difficult to treat. A systematic review was conducted to evaluate if there is an association between repeat GNB HAIs and drug resistance. From 2000 to 2015, only seven studies explicitly examined repeat GNB HAIs and change in antibiotic susceptibility, five of which reported decreased susceptibility in later infections. The association between repeat GNB HAIs and risk of drug resistance among patients with multiple hospitalizations was then investigated with available electronic medical record data. The risk of a drug-resistant K. pneumoniae HAI increased by 1.14 times (95%CI: 1.04-1.24) with each prior K. pneumoniae HAI, after adjusting for potential confounders and antibiotic use. Similarly, patients with repeat P. aeruginosa infections had a 1.23 times increased risk of a subsequent drug-resistant infection (95%CI: 1.12-1.36) with each prior P. aeruginosa HAI as compared to patients with only one infection. Repeat A. baumannii infections were not analyzed due to limited sample size. The studies in this dissertation demonstrate that patients with multiple hospitalizations are a high-risk population for GNB HAIs. Prevention of GNB HAIs in this group is critical in order to reduce complications to medical care and limit transmission of infections to others in healthcare facilities and the community. Patient medical history can be used for infection risk assessment and to guide future medical care to reduce risk of infection in patients with multiple hospitalizations. (PsycINFO Database Record (c) 2018 APA, all rights reserved)

KW - risk factors

KW - hospital acquired infections

KW - drug resistance

KW - gram-negative bacteria

KW - hospitalization

KW - antibiotics

KW - Antibiotics

KW - Hospitalization

KW - Microorganisms

KW - Resistance

KW - Risk Factors

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2017-54457-065&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2016-17134-090

AN - 2016-17134-090

AU - Haughney, Shannon Lee

T1 - Polyanhydride nanovaccine platform against bacterial pathogens

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2016///

VL - 76

IS - 11-B(E)

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-1321879247

N1 - Accession Number: 2016-17134-090. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Haughney, Shannon Lee; Iowa State University, Chemical and Biological Engineering, US. Release Date: 20160623. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI3711611. ISBN: 978-1321879247. Language: English. Major Descriptor: Etiology; Immunization; Microorganisms; Prevention; Treatment. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Methodology: Empirical Study; Quantitative Study.

AB - This thesis focuses on the design of novel strategies for the prevention and treatment of bacterial infections using polyanhydride nanoparticles as a vaccine delivery platform. The overall goal of this research is to design efficacious vaccines against the respiratory bacterial pathogens Streptococcus pneumoniae and Yersinia pestis using polyanhydride nanoparticles to elicit a protective immune response to the pneumococcal surface protein, PspA, and the Yersinia fusion protein, F1-V, respectively. Polymers and copolymers based on the various anhydride chemistries (i.e., CPTEG, CPH, and SA) were investigated as nanovaccine formulations for antigen delivery. The mechanism of action of polyanhydride nanoparticles as vaccine adjuvants was investigated to better understand how these nanovaccines interact with immune cells at early time points (48 hours) and through the evaluation of the immune response at extended time points (&sim;several months). Fluorescently-labeled antigen was delivered in 50:50 CPTEG:CPH nanoparticles and compared to soluble protein and protein adjuvanted with MPLA initially. Polyanhydride nanoparticle-encapsulated protein demonstrated enhanced persistence, cellular uptake and immune cell interactions at early time points compared to soluble protein, or MPLA-adjuvated protein. To investigate how prolonged antigen presence affected vaccine efficacy, several polyanhydride chemistries were tested and compared to MPLA at 14, 36, and 63 days after administration. The 50:50 CPTEG:CPH nanovaccine formulation elicited a robust humoral immune response, which significantly increased in titer and avidity at each of the time points investigated, suggesting the presence of long-lived plasma cells as a result of immunization with this polyanhydride nanovaccine. Once a better understanding of the mechanism of action of polyanhydride nanoparticles was obtained, these findings were used to design efficacious nanovaccines against two respiratory pathogens, S. pneumoniae and Y. pestis. The encapsulation and release of PspA from polyanhydride nanoparticles was examined and it was demonstrated that PspA retaining its stability, antigenicity, and biological functionality upon release from both 50:50 CPTEG:CPH and 20:80 CPH:SA nanoparticles. Based on these results, the in vivo immune response to vaccination with PspA nanovaccine formulations was evaluated and a protective vaccine against lethal challenge with S. pneumoniae based on polyanhydride nanoparticles was designed. Additionally, the in vivo immune response to vaccination with F1-V nanovaccine formulations was examined to design a protective vaccine against lethal challenge with Y. pestis including novel small molecule adjuvants in nanovaccine formulations with the goal of inducing protective immunity against Y. pestis challenge at both early time points (~several weeks) as well as after extended periods of time (&sim;several months). Overall, the work described in this thesis lays a platform for the use of polyanhydride nanoparticles for a combination vaccine against both influenza and pneumonia as well as for the delivery of antimicrobial drugs. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

KW - polyanhydride nanovaccine

KW - bacteria

KW - pathogens

KW - prevention

KW - treatment

KW - Etiology

KW - Immunization

KW - Microorganisms

KW - Prevention

KW - Treatment

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2016-17134-090&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2016-41705-001

AN - 2016-41705-001

AU - Hughes, Frances

AU - Smoyak, Shirley A.

T1 - Antimicrobial resistance (AMR): Why psychiatric/mental health nurses need to have AMR in their alphabet

JF - Journal of Psychosocial Nursing and Mental Health Services

JO - Journal of Psychosocial Nursing and Mental Health Services

JA - J Psychosoc Nurs Ment Health Serv

Y1 - 2016/07//

VL - 54

IS - 7

SP - 13

EP - 14

PB - SLACK

SN - 0279-3695

SN - 1938-2413

N1 - Accession Number: 2016-41705-001. Partial author list: First Author & Affiliation: Hughes, Frances. Release Date: 20170406. Correction Date: 20210712. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Editorial. Language: English. Major Descriptor: Disease Management; Microorganisms; Nurses; Drug Resistance. Minor Descriptor: Health Literacy. Classification: Health & Mental Health Services (3370). Population: Human (10). References Available: Y. Page Count: 2. Issue Publication Date: Jul, 2016. Copyright Statement: SLACK Incorporated

AB - Nurses can have the greatest effect on public and patient education with the ability to significantly improve health literacy. Nurses can perform this role because they are patient advocates, helping patients understand their diagnoses and make the best decisions about their health. In collaboration with other health care professionals, nurses’ local knowledge can inform decisions in relation to antimicrobial therapy and enhance the multidisciplinary approach to antimicrobial management. Nurses also have a role in infection prevention and control, ensuring responsible use of antimicrobial treatment, and monitoring and evaluating treatment and the reporting of antimicrobial resistance (AMR) events. Continuing education on this topic is critical. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

KW - nurses

KW - antimicrobial therapy

KW - antimicrobial management

KW - antimicrobial resistance

KW - health literacy

KW - Disease Management

KW - Microorganisms

KW - Nurses

KW - Drug Resistance

KW - Health Literacy

DO - 10.3928/02793695-20160616-01

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2016-41705-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2013-99181-023

AN - 2013-99181-023

AU - Tsou, Pei-Hsiang

T1 - Porous membrane-based sensor devices for biomolecules and bacteria detection

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2013///

VL - 74

IS - 3-B(E)

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-1-267-74932-1

N1 - Accession Number: 2013-99181-023. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Tsou, Pei-Hsiang; Texas A&M U., US. Release Date: 20131021. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI3532239. ISBN: 978-1-267-74932-1. Language: English. Major Descriptor: Biochemistry; Microorganisms; Public Health; Spectroscopy. Minor Descriptor: Chemicals. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Methodology: Empirical Study; Quantitative Study.

AB - Biological/biochemistry analyses traditionally require bulky instruments and a great amount of volume of biological/chemical agents, and many procedures have to be performed in certain locations such as medical centers or research institutions. These limitations usually include time delay in testing. The delays may be critical for some aspects such as disease prevention or patient treatment. One solution to this issue is the realization of point-of-care (POC) testings for patients, a domain in public health, meaning that health cares are provided near the sites of patients using well-designed and portable medical devices. Transportation of samples between local and central institutions can therefore be reduced, facilitating early and fast diagnosis. A closely related topic in engineering, lab-on-a-chip (LOC), has been discussed and practiced in recent years. LOC emphasizes integrating several functions of laboratory processes in a small portable device and performing analysis using only a very small amount of sample volume, to achieve low-cost and rapid analysis. From an engineer's point of view, LOC is the strategy to practice the idea of POC testing. This dissertation aimed at exploring the POC potentials of porous membranebase LOC devices, which can be used to simplify traditional and standard laboratory procedures. In this study, three LOC prototypes are shown and discussed. First the protein sensor incorporating with silica nanofiber membrane, which has shown 32 times more improvement of sensitivity than a conventional technique and a much shorter detection time; secondly the bacteria filter chip that uses a sandwiched aluminum oxide membrane to stabilize the bacteria and monitor the efficacy of antibiotics, which has reduced the test time from 1 day of the traditional methods to 1 hour; the third is the sensor combining microfluidics and silica nanofiber membrane to realize Surface Enhanced Raman Spectroscopy on bio-molecules, which has enhancement factor 109 and detection limit down to nanomolar, but simple manufacturing procedures and reduced fabrication cost. These results show the porous-base membrane LOC devices may have potentials in improving and replacing traditional detection methods and eventually be used in POC applications. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

KW - membrane-based sensor devices

KW - biomolecules

KW - bacteria detection

KW - public health

KW - biochemistry

KW - Biochemistry

KW - Microorganisms

KW - Public Health

KW - Spectroscopy

KW - Chemicals

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2013-99181-023&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2014-99160-371

AN - 2014-99160-371

AU - Hu, Jia

T1 - The c-di-GMPsignaling and its potential receptor pnpase in the pathogenesis of escherichia coli O157:H7

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2014///

VL - 75

IS - 2-B(E)

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-1-303-45596-4

N1 - Accession Number: 2014-99160-371. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Hu, Jia; U Wyoming, US. Release Date: 20141006. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI3597491. ISBN: 978-1-303-45596-4. Language: English. Major Descriptor: Cytokines; Genes; Phosphodiesterase. Minor Descriptor: Etiology; Side Effects (Drug); Lipopolysaccharide. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). Methodology: Empirical Study; Quantitative Study.

AB - Escherichia coli O157:H7 is an important foodborne pathogen that causes serious illness in humans at low infective doses. The main source of infections is beef or greens contaminated with E. coli O157:H7 shed by cattle. Two key virulence strategies used by E. coli O157: H7 once passed through the stomach are Shiga toxin production and colonization of the intestine (Karmali et al., 2010). Colonization of large intestine is a key step in E. coli O157: H7 pathogenesis (Yin et al., 2011b). c-di-GMP signaling plays important roles in biofilm formation, motility, and pathogenesis of bacteria. Here we investigated the role of cdi- GMP-dependent signal transduction in cattle gut colonization of E. coli O157:H7. To manipulate intracellular c-di-GMP levels, we introduced into E. coli O157:H7 a c-di-GMP specific phosphodiesterase (PDE). Liquid chromatography tandem mass spectrometry analysis confirmed that in E. coli O157:H7, over-expression of PDE decreased c-di-GMP level. Consistent with the altered c-di-GMP level, PDE overexpression resulted in decreased biofilm formation in E. coli O157:H7. Furthermore, this diminished c-di-GMP level decreased E. coli O157:H7 adhesion to both cultured HT-29 cells and cattle colon explants. Consistently, mRNA levels of genes involved in adhesion were down-regulated including genes encoding E. coli common pili, lpf1A, and hcp, as well as intimin and tir. We further observed decreased curli fimbriae synthesis in the strain with low c-di-GMP concentration, which were supported by the reduction in the transcription of curli large subunit gene csgA and the curli expression regulator gene csgD. The genes for positive regulator of the locus of enterocyte effacement and type III secretion system, ler, and its effectors espA and espB, were also down-regulated. Collectively, data indicated that c-di-GMP signaling positively 2 regulates E. coli O157:H7 colonization on intestinal epithelial cells and tissue, and the expression of associated adhesion factors. Polynucleotide phosphorylase (PNPase) is one of potential c-di-GMP receptors in E. coli O157:H7. Previous studies indicate that PNPase regulates virulence in several examined pathogens. Our data demonstrated that PNPase are essential for Shiga toxin production, Stx2 prophage activation, and colonization of E. coli O157:H7. PNPase represses T3SS by controlling the master regulator ler. The T3SS regulation system is conserved among strains EDL933, 86-24 and MIO335, but the regulation of Shiga toxin production is strain specific. The growth of E. coli O157:H7 in contaminated dairy and other refrigerated food products due to temperature fluctuation poses a major food safety threat. Effective control or inhibition of E. coli O157:H7 growth depends on our understanding of mechanisms that regulate its growth at low temperature. PNPase was previously reported to be involved in cold adaption in generic E. coli, thus we hypothesized that polynucleotide phosphorylase (PNPase) plays a critical role in E. coli O157:H7 low temperature growth. Comparing the growth of E. coli O157:H7 wild type strain and pnp, we further investigated the role of pnp in E. coli O157:H7 growth and survival at different temperatures in LB media as well as milk. Results indicated that PNPase is required for the growth of E. coli O157:H7 at low temperature. The deletion of pnp impaired its growth in LB at 10 °C and 22°C. During 14 days of 10°C storage in both LB and milk, WT grew and reached >8 Log10CFU/ml after 4 days of 10°C storage, while Δpnp gradually died off with effects more pronounced in milk, which were again mitigated by pnp overexpression. In addition, pnp deletion impaired the motility of E. coli O157:H7 but did not affect its resistance to H2O2. In summary, these studies explored the role of c-di-GMP signaling in E. coli O157:H7 gut colonization, indicating that c-di-GMP signaling positively regulates E. coli 3 O157:H7… (PsycINFO Database Record (c) 2016 APA, all rights reserved)

KW - toxin production

KW - gut colonization

KW - biofilm formation

KW - escherichia coli

KW - polynucleotide phosphorylase

KW - foodborne pathogen

KW - receptor pnpase

KW - infective doses

KW - c-di-gmp signaling

KW - expression regulator gene

KW - curli expression regulator

KW - regulation system

KW - associated adhesion factors

KW - master regulator ler

KW - cattle gut colonization

KW - temperature fluctuation

KW - key virulence strategies

KW - refrigerated food products

KW - cattle colon explants

KW - secretion system

KW - prophage activation

KW - temperature growth

KW - food safety threat

KW - mass spectrometry analysis

KW - genes encoding

KW - type strain

KW - fimbriae synthesis

KW - subunit gene

KW - positive regulator

KW - pnp overexpression

KW - cold adaption

KW - pnp deletion

KW - Liquid chromatography

KW - enterocyte effacement

KW - intestinal epithelial cells

KW - key step

KW - Cytokines

KW - Genes

KW - Phosphodiesterase

KW - Etiology

KW - Side Effects (Drug)

KW - Lipopolysaccharide

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2014-99160-371&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2005-14958-001

AN - 2005-14958-001

AU - Nordberg, Per

AU - Stålsby-Lundborg, Cecilia

AU - Tomson, Göran

T1 - Consumers and providers - Could they make better use of antibiotics?

JF - International Journal of Risk & Safety in Medicine

JO - International Journal of Risk & Safety in Medicine

JA - Int J Risk Saf Med

Y1 - 2005///

VL - 17

IS - 3-4

SP - 117

EP - 125

PB - IOS Press

SN - 0924-6479

AD - Tomson, Göran, Division of International Health (IHCAR), Department of Public Health Sciences, Karolinska Institutet, S-17I 76, Stockholm, Sweden

N1 - Accession Number: 2005-14958-001. Partial author list: First Author & Affiliation: Nordberg, Per; Swedish Strategic Programme, Rational Use of Antimicrobial Agents and Surveillance of Resistance (STRAMA), Swedish Institute for Infectious Disease Control, Solna, Sweden. Release Date: 20060327. Correction Date: 20200910. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Electronic. Document Type: Journal Article. Language: English. Major Descriptor: Antibiotics; Consumer Psychology; Drug Dosages; Mental Health Services; Microorganisms. Minor Descriptor: Physical Disorders; Treatment Barriers. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10). References Available: Y. Page Count: 9. Issue Publication Date: 2005.

AB - Antibiotic use is seen as a critical factor in the emergence of resistant bacteria. The impact of irrational use, including inadequate dosing and poor adherence to therapy, is potentially just as important as high consumption. At the same time, limited access to antibiotics in many parts of the world is contributing to high mortality from bacterial infections. Containment of antibiotic resistance has been established as a 'Global Public Good for Health' and the rationalising of consumer and provider behaviour is an essential component in achieving this goal. In this article, the aim has been to examine the interplay between prescribers, dispensers and consumers, to visualise incentives for individuals to use antibiotics and to determine how health system factors influence human behaviour. The complex issue of antibiotic resistance necessitates a systems view, including functions and objectives, where policy makers have the overall role of regulating and prioritising among services. Over 50% of the antibiotics globally is estimated to be bought directly from pharmacies or informal sale outlets without prescriptions underlining the increasingly important function of pharmacies or other drug outlets as the first and possibly only contact with health services. Promotion of rational use of antibiotics is still poorly integrated into health systems. (PsycInfo Database Record (c) 2020 APA, all rights reserved)

KW - antibiotics

KW - bacteria

KW - dosages

KW - consumers

KW - health services

KW - physical illnesses

KW - treatment

KW - medication

KW - Antibiotics

KW - Consumer Psychology

KW - Drug Dosages

KW - Mental Health Services

KW - Microorganisms

KW - Physical Disorders

KW - Treatment Barriers

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2005-14958-001&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2012-99200-177

AN - 2012-99200-177

AU - Ajao, Adebola Oluwakemi

T1 - The role of persistent environmental contamination and universal glove and gown use in the acquisition of extended spectrum beta-lactamase-producing enterobacteriaceae in intensive care unit patients

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2012///

VL - 73

IS - 4-B

SP - 2082

EP - 2082

PB - ProQuest Information & Learning

SN - 0419-4217

SN - 978-1-267-10670-4

N1 - Accession Number: 2012-99200-177. Other Journal Title: Dissertation Abstracts International. Partial author list: First Author & Affiliation: Ajao, Adebola Oluwakemi; U Maryland, Baltimore, US. Release Date: 20121231. Publication Type: Dissertation Abstract (0400). Format Covered: Electronic. Document Type: Dissertation. Dissertation Number: AAI3490237. ISBN: 978-1-267-10670-4. Language: English. Major Descriptor: Enzymes; Hazardous Materials; Intensive Care; Microorganisms; Treatment Effectiveness Evaluation. Minor Descriptor: Hospitalized Patients. Classification: Health & Mental Health Treatment & Prevention (3300). Population: Human (10); Inpatient (50). Location: US. Age Group: Adulthood (18 yrs & older) (300). Methodology: Empirical Study; Longitudinal Study; Retrospective Study; Quantitative Study. Page Count: 1.

AB - Background: Extended-spectrum β-lactamase (ESBL)-producing Gram-negative rods (GNR) are emerging pathogens that are associated with considerable morbidity, mortality and costs among hospitalized patients. The association between persistent environmental contamination and acquisition of ESBL-GNR and the effectiveness of universal glove and gown in reducing the transmission of ESBL-GNR among Intensive care unit (ICU) patients has not been well established. Objectives: The objectives of this dissertation are to evaluate the role of persistent environmental contamination using prior room occupant as a proxy in the acquisition of ESBL-GNR and to evaluate the effectiveness of universal glove and gown use in reducing the incidence of ESBL-GNR in ICU patients. Methods: A retrospective cohort study and a quasi-experimental study were conducted using patient data obtained from the central data repository and by laboratory analysis. Peri-anal surveillance cultures were collected from all patients on ICU admission, weekly and at ICU discharge and clinical cultures were collected as medically indicated. Inclusion criteria were ICU length of stay >48 hours and a peri-anal surveillance culture negative for ESBL-GNR on ICU admission. Multivariable logistic regression and segmented linear regression were used to analyze the data. Results: The first study of 18,175 admissions to the University of Maryland Medical Center (UMMC) medical ICU (MICU) and surgical ICU (SICU) between September 1, 2001 and June 30, 2009 showed that prior room occupants' ESBL- Klebsiella and E. coli positive status is not associated with acquiring ESBL-Klebsiella and E. coli after adjusting for potential confounders (Adjusted Odds Ratio (AOR) = 1.39, 95% Confidence Interval (CI) = 0.94 - 2.08). The second study of 6,089 admissions to the MICU between July 1, 2005 and June 30, 2009 showed that universal glove and gown did not reduce acquisition of ESBL-GNR immediately (p =0.48) or long term (p =0.34). Conclusions: Our study results suggest that environmental contamination may not play a significant role in the acquisition of ESBL-GNR at UMMC. Universal glove and gown was not effective at reducing the acquisition of ESBL-GNR immediately and long term at UMMC. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

KW - persistent environmental contamination

KW - universal glove

KW - gown use

KW - extended spectrum beta lactamase producing enterobacteriaceae

KW - intensive care units

KW - patients

KW - Enzymes

KW - Hazardous Materials

KW - Intensive Care

KW - Microorganisms

KW - Treatment Effectiveness Evaluation

KW - Hospitalized Patients

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2012-99200-177&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - JOUR

ID - 2001-00881-005

AN - 2001-00881-005

AU - Abe, Shu

AU - Ishihara, Kazuyuki

AU - Okuda, Katsuji

T1 - Prevalence of potential respiratory pathogens in the mouths of elderly patients and effects of professional oral care

JF - Archives of Gerontology and Geriatrics

JO - Archives of Gerontology and Geriatrics

JA - Arch Gerontol Geriatr

Y1 - 2001/01//Jan-Feb, 2001

VL - 32

IS - 1

SP - 45

EP - 55

PB - Elsevier Science

SN - 0167-4943

SN - 1872-6976

N1 - Accession Number: 2001-00881-005. PMID: 11251238 Partial author list: First Author & Affiliation: Abe, Shu; Tokyo Dental Coll, Dept of Microbiology, Chiba, Japan. Release Date: 20010502. Correction Date: 20221128. Publication Type: Journal (0100), Peer Reviewed Journal (0110). Format Covered: Print. Document Type: Journal Article. Language: English. Major Descriptor: Adult Day Care; Dental Treatment; Microorganisms; Mouth (Anatomy); Respiratory Tract Disorders. Minor Descriptor: Aging; At Risk Populations; Health Care Services; Mental Disorders; Nursing; Physical Disorders; Risk Factors. Classification: Physical & Somatic Disorders (3290). Population: Human (10); Male (30); Female (40). Age Group: Adulthood (18 yrs & older) (300); Aged (65 yrs & older) (380). Methodology: Empirical Study. References Available: Y. Page Count: 11. Issue Publication Date: Jan-Feb, 2001.

AB - To evaluate the effectiveness of professional oral health care in reducing the risk of aspiration pneumonia, the authors examined the prevalence of potential respiratory pathogens in gargled samples from elderly Ss. Samples were obtained from 54 elderly Ss over 65 yrs of age who required daily nursing care, from 21 healthy elderly Ss over 65 yrs old, and from 22 healthy young Ss under 30 yrs. The Ss requiring daily nursing care included patients with Alzheimer's disease, parkinsonism, hypertension, and other disorders. The percentages detected in samples of Streptococcus pneumoniae, Candida albicans, and other respiratory pathogens from elderly patients requiring daily nursing care ranged from 5.6 to 66.7. The numbers of C. albicans cells recovered in samples from elderly Ss were significantly higher than those recovered from the healthy young group. Elderly patients needing daily care and receiving professional oral health care had lower prevalences and cell numbers of C. albicans than did the elderly patients without such oral care. This study showed that professional oral health care in elderly requiring daily nursing care reduced the cell numbers of potential respiratory pathogens. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

KW - professional oral health care

KW - level of respiratory pathogens in mouth & risk of aspiration pneumonia

KW - elderly patients with Alzheimer's disease & other disorders requiring daily nursing care

KW - Adult Day Care

KW - Dental Treatment

KW - Microorganisms

KW - Mouth (Anatomy)

KW - Respiratory Tract Disorders

KW - Aging

KW - At Risk Populations

KW - Health Care Services

KW - Mental Disorders

KW - Nursing

KW - Physical Disorders

KW - Risk Factors

DO - 10.1016/S0167-4943(00)00091-1

UR - https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2001-00881-005&site=ehost-live

DP - EBSCOhost

DB - psyh

ER -

TY - THES

ID - 2011-99120-312

AN - 2011-99120-312

AU - Freshwater, Julie Lynn

T1 - Impact of antimicrobial use on the resistance of pseudomonas aeruginosa in the intensive care unit setting in a large academic medical center

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

JO - Dissertation Abstracts International: Section B: The Sciences and Engineering

Y1 - 2011///

VL - 71

IS - 12-B

SP - 7386

EP - 7386

PB - ProQuest Information & Learning

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AB - It has been previously demonstrated that areas within the hospital that have the highest rates of antimicrobial resistance also have the highest rates of antimicrobial use (AU). Measures of hospital and unit specific AU are assuming increasing importance for understanding the dynamics of antimicrobial resistance at the population level. Since changes in AU are paralleled by changes in the prevalence of resistance, application of these methods enable hospitals to clearly monitor antibiotic stewardship program interventions with corresponding changes in the rate of resistance after implementation. AU was expressed as antibiotic days per 1,000 patient days. Incidence rates were calculated as the number of new positive PA cultures resistant to a targeted antimicrobial drug per 1,000 patient days during a specified period of time. Percent resistance was calculated as the proportion of positive PA cultures resistant to a specific targeted drug during a specified period of time multiplied by 100. Data obtained from electronic order entry paired with antibiograms yielded a practical approach to analyze relationships between antibiotic usage and corresponding resistance. By analyzing the data in 1, 3 and 6 month intervals, and utilizing Pearson's correlation coefficient, we found significant correlations with ciprofloxacin (r = 0.81 at 6 month intervals) and tobramycin use (r = -0.63 at 3 month intervals) and imipenem resistance. There was a nonstatistical correlation between imipenem use and imipenem resistance (r = 0.29 at 1 month intervals), but it did indicate a positive correlation. There were also correlations in the pairings of drug and corresponding resistances, ciprofloxacin (r = -0.88 at 6 month intervals) and tobramycin (r = 0.82 at 6 month intervals). It has also been demonstrated that increased utilization of antimicrobials is linked to the increase in resistance. The intensive care unit setting is one of the areas within the hospital that has the highest rate of antimicrobial use, the most seriously ill patients and holds the increased risk of acquiring a hospital-acquired infection. Building upon the results from the ecological approach, we sought to explore the relationship of antimicrobial use, resistance patterns and risk factors pertinent to specific intensive care units. A case- control study was conducted utilizing patients isolates positive for P. aeruginosa July 1, 2004 through June 30, 2007. Cases were patients with positive imipenem-resistant isolates (n = 78) from blood and respiratory cultures. Controls (n = 125) were patients with positive susceptible P. aeruginosa isolates from the same type of cultures. Risk factors analyzed included prior antimicrobial use, comorbid conditions and demographic variables. Time at risk greater than 29 days (odds ration [OR], 3.1), ventilator (OR 6.5), prior hospitalization at another facility (OR 2.5), diabetes (OR 2.8), hospitalized due to an accident (OR 0.3), and prior linezolid use (OR 0.1) were associated with isolation of imipenem-resistant P. aeruginosa. Our final study analyzed the relationship of prior antimicrobial exposure and other risk factors for acquiring a multidrug-resistant strain of P. aeruginosa (MDRPA). Reporting of multidrug resistance or even pandrug resistance is very difficult to the lack of a standard definition; this complicates the comparison between institutions. We conducted a literature search to look at the spectrum of definitions, which range from a very loose 'resistant to 3 or more antimicrobials' to a very strict lack of susceptibility to a dozen antimicrobials. We chose the definition of multidrug resistance as the organism showing resistance to at least one drug per class of 3 of the 6 anti-pseudomonal drug classes. We chose a case-case-control design comparing patients with MDRPA isolates (n = 90) to temprospatially matched controls without a PA… (PsycINFO Database Record (c) 2016 APA, all rights reserved)

KW - antibacterial uses

KW - resistance impacts

KW - Pseudomonas aeruginosa

KW - academic medical centers

KW - Academic Environment

KW - Medical Residency

KW - Microorganisms

KW - Resistance

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TY - THES

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T1 - Mechanisms of escherichia coli sepsis-induced myocardial dysfunction and protection from ischemia and reperfusion injury in rats

JF - Dissertation Abstracts International: Section B: The Sciences and Engineering

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AB - Bacteremia and endotoxemia result in the elaboration of as tumor necrosis factor-alpha (TNF-alpha) and interleukin-1beta, prostaglandins (PGS), and nitric oxide (NO), all of which can contribute to myocardial dysfunction. Paradoxically, 24h after administration of Escherichia coli bacteria into the dorsal subcutaneous space, septic rat hearts completely recover pre-ischemic left ventricular developed pressure (LVDP) after 35 min of global ischemia and 25 min of reperfusion. Conversely, in endotoxin models, post-ischemic recovery of cardiac function is improved relative to controls but incomplete. Neither the time course of the progression of dysfunction nor the development of cardioprotection have been investigated in our model of bacteremia. However, at 24h we have observed enhanced coronary flow (CF) during reperfusion which could promote the recovery of LVDP in septic rat hearts. The mediators of this event are unknown. Acute (within minutes) or delayed (several hours) protection from ischemia/reperfusion (I/R) injury can be elicited by prior exposure to a stressful stimulus. The phenomenon of acute preconditioning by brief episode(s) of ischemia preceding sustained ischemia can be, at least partially, mimicked by administering adenosine, potassium channel agonists, prostaglandins, and NO. These agents modulate CF and have been shown to effect protection by reducing metabolism and attenuating ion disturbances. Delayed protection can be elicited by norepinephrine (NE), endotoxin, and live E. coli administration. Protection in this instance is manifested by de novo synthesis of proteins such as antioxidant enzymes (catalase) which scavenge deleterious reactive oxygen species, and heat shock proteins (HSP70) which protect nascent proteins from degradation, preserve the integrity of membrane channels and contractile proteins, and up- or downregulate some enzymes. Our goals were to compare and contrast our model of bacteremia with existing models of endotoxemia and investigate possible parallels between sepsis-induced protection from ischemia/reperfusion injury and the mechanisms of both delayed and acute preconditioning. The results of the time course study indicated that E. coli administration causes excessive and detrimental production of NO and increases the expression of iNOS and COX-2. Heat shock protein 70 expression and enhanced catalase activity were associated with sepsis-induced cardioprotection; however, these alterations were insufficient to prevent cardiac depression at 24hr and 48hr. In contrast to endotoxin studies, all of these changes in our model of E. coli bacteremia occurred independently of changes in plasma or tissue TNF-alpha levels. From our in vitro studies, we conclude that, in septic rat hearts, adenosine affected both vascular tone and myocardial performance in septic rat hearts. K+ATP channels appeared to be involved in the regulation of CF, while prostaglandins were implicated in modulating myocardial function. In view of the many factors contributing to sepsis-induced dysfunction and protection from ischemia/reperfusion injury, multiple pathways seem to intersect to elicit cardioprotection. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

KW - mechanisms of escherichia coli sepsis-induced myocardial dysfunction & protection from ischemia & reperfusion injury

KW - rats

KW - Infectious Disorders

KW - Ischemia

KW - Microorganisms

KW - Myocardium

KW - Rats

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AU - Li, Fenfang

T1 - Surveillance of emerging methicillin-resistant Staphylococcus aureus in Hawaii

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AB - This study aims to solve some key issues in population-based surveillance of emerging methicillin-resistant Staphylococcus aureus (MRSA). The impact of duplicate isolate removal (DIR) strategies on Staphylococcal aureus (S. aureus) susceptibility to oxacillin were compared using antimicrobial test results for 14,595 isolates from statewide surveillance in Hawaii in 2002. No removal was compared to most resistant and most susceptible methods at 365 days, and to the National Committee for Clinical Laboratory Standards (NCCLS) and Cernerreg; algorithms at 3, 10, 30, 90, and 365-day analysis periods. Overall, no removal produced the lowest estimates of susceptibility. Estimates using either NCCLS or Cerner differed by <2% when the analysis period was the same; with either method, the difference observed between a 90- and a 365-day period was <1%. The impact of DIR was greater for inpatient settings vs. outpatients. Considering the ease of implementation and comparability of results, this study recommends using the first isolate of a given species per patient for calculating susceptibility frequencies for S. aureus to oxacillin. Adopting the proposed national standard for the calculation of MRSA rates in population-base surveillance, this study gave the first comprehensive, statewide examination of MRSA epidemiology. From 2000 to 2005, a total of 79,943 S. aureus isolates identified from six study settings, including outpatients, intensive-care units (ICUs), non-ICUs, long-term care facilities, dialysis centers and correctional institutions were investigated. Major findings from this study included: (1) a steady increase of MRSA proportion from all six study settings. Of most concern is the increased proportion of MRSA among outpatients, which increased from 24% in 2000 to 39% in 2005 among pediatric outpatients, and from 19% to 43% among adult outpatients; (2) MRSA proportion varied significantly among various healthcare settings and geographical areas. The highest MRSA proportion was found among prisoners (69%), and (3) Susceptibility patterns of MRSA to most non-beta;-lactams varied among target patient population at individual study settings. MRSA isolates from adult patients among inpatient settings, long-term care facilities, dialysis centers showed high resistance to most second-line antimicrobial agents. In contrast, a majority of MRSA isolates from pediatric outpatients and prisoners remained susceptible to most non-beta;-lactams. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

KW - surveillance

KW - methicillin-resistant Staphylococcus aureus

KW - Antibiotics

KW - Microorganisms

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