**A diagnosis of knee osteoarthritis does not predict physical activity two years later in older adults: findings from the Hertfordshire Cohort Study**

**Michael A Clynes\* 1 , Camille Parsons\* 1 , Mark H Edwards 1, 3 , Jonathan H Tobias 2 , Kevin Deere2, Cyrus Cooper 1, 4, 5 , Elaine M Dennison 1**

*1 MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton General Hospital, Southampton, UK*

*2 Musculoskeletal Research Unit, Translational Health Sciences, Bristol Medical School, University of Bristol, Bristol, UK*

*3 Portsmouth Hospitals NHS Trust, Portsmouth, UK*

*4 National Institute for Health Research Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton, UK*

*5 National Institute for Health Research Musculoskeletal Biomedical Research Unit, University of Oxford, Oxford, UK*

*\*Joint 1st authors*

**Corresponding author:** Michael Clynes: mc@mrc.soton.ac.uk, ORCID iD: 0000-0001-7597-7658

Tel: 023 8077 7624

Camille Parsons: cp@mrc.soton.ac.uk, ORCID iD: 0000-0003-3486-8353

Mark Edwards: Mark.Edwards2@porthosp.nhs.uk, ORCID iD: 0000-0002-8616-3753

Jonathan Tobias: Jon.Tobias@bristol.ac.uk, ORCID iD: 0000-0002-7475-3932

Kevin Deere: Kevin.Deere@bristol.ac.uk, ORCID iD: 0000-0002-9467-0798

Cyrus Cooper: cc@mrc.soton.ac.uk, ORCID iD: 000-003-3510-0709

Elaine Dennison: emd@mrc.soton.ac.uk, ORCID iD: 0000-0002-3048-4961

**Suggested running head:** Physical activity and knee osteoarthritis

**Funding:** This study was funded by the Porticus foundation.

**Conflict of Interest:** Author Michael Clynes has received support for attending conferences from UCB, Pfizer and Eli Lilly. Author Mark Edwards has received support for attending conferences from Eli Lilly, Pfizer and UCB and support for attending educational courses from Chugai and Abbvie. Author Elaine Dennison has received fees from Pfizer and UCB. Author Professor Cyrus Cooper has received lecture fees and honoraria from Amgen, Danone, Eli Lilly, GSK, Medtronic, Merck, Nestlé, Novartis, Pfizer, Roche, Servier, Shire, Takeda and UCB outside of the submitted work. Authors Camille Parsons, Kevin Deere and Jonathan Tobias have nothing to disclose.