Chaugestaristics	weight change category ^b							
Characteristics	>-5.0%	-1.0 to -5.0%	-0.9 to 0.9%	1.0 to 5.0%	>5.0%			
Number	1,550	3,411	2,835	4,811	2,172			
Age (years) ^c	35.1 (34.8–35.4)	37.3 (37.1–37.5)	37.7 (37.5–37.9)	36.7 (36.5–36.8)	33.9 (33.7–34.2)			
Male (%)	29.6 (27.3–31.8)	55.2 (53.5–56.9)	61.4 (59.6–63.1)	61.3 (59.9–62.6)	43.7 (41.6–45.7)			
Current smoker (%)	16.2 (13.9–18.5)	16.4 (15.2–17.6)	16.2 (15.0–17.5)	16.7 (15.7–17.7)	17.9 (16.2–19.6)			
Alcohol intake (%) ^e	31.1 (28.8–33.5)	32.1 (30.7–33.5)	31.7 (30.2–33.3)	31.9 (30.7–33.1)	32.8 (30.9–34.7)			
HEPA (%)	18.9 (16.8–20.9)	17.3 (16.0–18.5)	18.9 (17.5–20.4)	18.4 (17.3–19.5)	22.2 (20.4–24.0)			
High education level $(\%)^{f}$	87.9 (86.3–89.4)	86.6 (85.5-87.8)	87.2 (85.9–88.5)	86.6 (85.6–87.6)	83.2 (81.6–84.8)			
Body mass index (kg/m ²) ^c	25.0 (24.9–25.0)	24.6 (24.5–24.6)	24.5 (24.5–24.6)	24.5 (24.5–24.5)	24.5 (24.5–24.6)			
Systolic BP (mmHg) ^c	106.8 (106.4–107.2)	107.1 (106.8–107.4)	107.2 (106.9–107.5)	106.9 (106.6–107.1)	106.9 (106.5–107.2)			
Diastolic BP (mmHg) ^c	66.9 (66.6–67.3)	67.2 (66.9–67.4)	67.4 (67.1–67.6)	67.0 (66.8–67.2)	67.1 (66.8–67.4)			
Glucose (mg/dL) ^c	90.0 (89.7–90.3)	90.5 (90.3–90.7)	90.4 (90.2–90.6)	90.2 (90.0–90.3)	89.7 (89.4–89.9)			
Total cholesterol (mg/dL) ^c	194.2 (192.7–195.6)	192.7 (191.8–193.7)	192.1 (191.1–193.2)	191.4 (190.6–192.3)	191.5 (190.2–192.7)			

Table 1. Estimated^a Mean Values (95% CI) and Adjusted^a Proportion (95% CI) of Baseline Characteristics according to Weight

Change Categories among Metabolically Healthy Overweight or Obese Participants (n = 14,779)

LDL-C (mg/dL) ^c	119.8 (118.4–121.1)	118.6 (117.7–119.5)	118.1 (117.1–119.1)	117.5 (116.7–118.2)	116.8 (115.6–117.9)
HDL-C (mg/dL) ^c	63.1 (62.6–63.6)	63.3 (62.9–63.6)	63.4 (63.0–63.7)	63.6 (63.3–63.9)	64.8 (64.3–65.2)
Triglycerides (mg/dl) ^d	81.7 (80.4–83.0)	80.7 (79.8–81.5)	79.3 (78.3–80.2)	77.5 (76.8–78.2)	74.4 (73.3–75.5)
ALT (U/l) ^d	19.3 (18.9–19.7)	18.5 (18.2–18.8)	18.2 (17.9–18.5)	18.2 (17.9–18.4)	17.6 (17.2–17.9)
hsCRP (mg/L) ^d	1.0 (0.8–1.1)	0.9 (0.9–1.0)	0.9 (0.8–1.0)	0.9 (0.9–1.0)	0.9 (0.8–1.0)
HOMA-IR ^d	1.12 (1.10–1.14)	1.14 (1.13–1.16)	1.12 (1.10–1.13)	1.10 (1.08–1.11)	1.05 (1.03–1.07)
Total energy intake (kcal/d) ^{d,g}	1,653 (1613–1693)	1,650 (1623–1677)	1,660 (1631–1690)	1,618 (1596–1641)	1,590 (1557–1624)

CI, confidence intervals; ALT, alanine aminotransferase; BP, blood pressure; HDL-C, high-density lipoprotein cholesterol; HEPA, health-enhancing physically active; hsCRP, high-sensitivity C-reactive protein; HOMA-IR, homeostasis model assessment of insulin resistance; LDL-C, low-density lipoprotein cholesterol.

^aAdjusted for age and sex.

^bThe negative numbers in each weight change category, expressed with a "-" sign before each number, refer to weight loss during follow-up.

Data are expressed as ^cage- and sex-adjusted mean (95% CI), and age- and sex-adjusted proportion (95% CI).

 $^{\circ} \ge 10 \text{ g/d}; ^{f} \ge \text{College graduate}; ^{g}\text{Among 10,556 participants with plausible estimated energy intake levels (within three standard deviations from the log-transformed mean energy intake).}$

Table 2. Development of Hepatic Steatosis by Weight Change Category among Metabolically Healthy Overweight or Obese

Individuals

Weight change category ^a	Person-years (PY)	Incident cases	Incidence rate (/1,000 PY)	Age sex adjusted HR (95% CI)	Multivariable-adjusted HR ^b (95% CI)	HR (95% CI) ^c in model using time-dependent variables
>-5.0%	8452.9	198	23.4	0.57 (0.48–0.67)	0.52 (0.44–0.60)	0.18 (0.13–0.24)
- 1.0% to -5.0%	18114.7	706	39.0	0.84 (0.75–0.93)	0.83 (0.75–0.92)	0.49 (0.42–0.58)
-0.9% to 0.9%	14549.3	675	46.4	1.00 (reference)	1.00 (reference)	1.00 (reference)
1.0% to 5.0%	24608.5	1316	53.5	1.21 (1.10–1.33)	1.21 (1.10–1.33)	1.56 (1.38–1.76)
>5.0%	11069.3	644	58.2	1.52 (1.36–1.70)	1.51 (1.36–1.69)	3.16 (2.81–3.55)
<i>P</i> for trend				< 0.001	< 0.001	< 0.001

HR, hazard ratio; CI, confidence interval.

^aThe negative numbers in each weight change category, expressed with a "-" sign before each number, refer to weight loss during follow-up.

^bEstimated from parametric proportional hazard models. The multivariable model was adjusted for age, sex, centre, year of screening exam,

educational level, smoking status, alcohol intake, physical activity, body mass index, and total energy intake.

^cEstimated from parametric proportional hazard models with weight change category, alcohol intake, smoking status, physical activity, and total energy intake as time-dependent categorical variables and baseline age, sex, centre, year of screening exam, BMI, and education level as time-fixed variables.

Table 3. Development of Hepatic Steatosis Plus Intermediate or High Probability of Advanced Fibrosis by Weight Change Category

		Based on FIB-4				Based on NFS			
Weight change category ^a	Person-years (PY)	Incident cases	Incidence rate (/1,000 PY)	Multivariable- adjusted HR ^b (95% CI)	Person-years (PY)	Incident cases	Incidence rate (/1,000 PY)	Multivariable- adjusted HR ^b (95% CI)	
>-5.0%	8,718.3	4	0.5	0.29 (0.10-0.80)	8,715.3	9	1.0	0.38 (0.19–0.77)	
-1.0% to -5.0%	19,371.4	49	2.5	0.96 (0.63–1.46)	19,352.5	67	3.5	0.83 (0.59–1.18)	
-0.9% to 0.9%	15,789.4	41	2.6	1.00 (reference)	15,735.1	64	4.1	1.00 (reference)	
1.0% to 5.0%	26,842.1	61	2.3	1.02 (0.68–1.51)	26,715.8	115	4.3	1.17 (0.86–1.59)	
>5.0%	11,987.0	16	1.3	1.02 (0.57–1.85)	11,963.9	44	3.7	1.51 (1.02–2.24)	
P for trend				0.095				<0.001	

among Metabolically Healthy Overweight or Obese Individuals

HR, hazard ratio; CI, confidence interval; FIB-4, Fibrosis-4; NFS, Non-alcoholic fatty liver disease Fibrosis Score.

^aThe negative numbers in each weight change category, expressed with a "-" sign before each number, refer to weight loss during follow-up.

^bEstimated from parametric proportional hazard models. The multivariable model was adjusted for age, sex, centre, year of screening exam, educational level, smoking status, alcohol intake, physical activity, body mass index (not for NFS), and total energy intake.