1 **Supplement**

N = 4,261
Overall S4 Sample

↓

N = 4,232
Excluded 29 observations
with PA missings at S4

N = 2,058
Active Strata
Active participants at S4

N = 2,174
Inactive Strata
Inactive participants at S4

N = 2,003
Active Diabetes Model
Excluded 55 observations with
prevalent diabetes at S4

N = 1,628
Active Hypertension Model
Excluded 423 observations with
prevalent hypertension and 7
hypertension missings at S4

N = 2,063
Inactive Diabetes Model
Excluded 111 observations with
prevalent diabetes at S4

N = 1,511
Inactive Hypertension Model
Excluded 656 observations with
prevalent hypertension and 7
hypertension missings at S4

N = 1,519
Observations with follow-up
measurement of PA at F4

N = 1,259
Observations with follow-up
measurement of PA at F4

N = 1,451
Observations with follow-up
measurement of PA at F4

N = 1,064
Observations with follow-up
measurement of PA at F4

	PA-level changed	PA-level unchanged
incident diabetes	13	26
no incident diabetes	348	1132

	PA-level changed	PA-level unchanged
incident hypertension	43	158
no incident hypertension	244	814

	PA-level changed	PA-level unchanged
incident diabetes	24	60
no incident diabetes	460	907

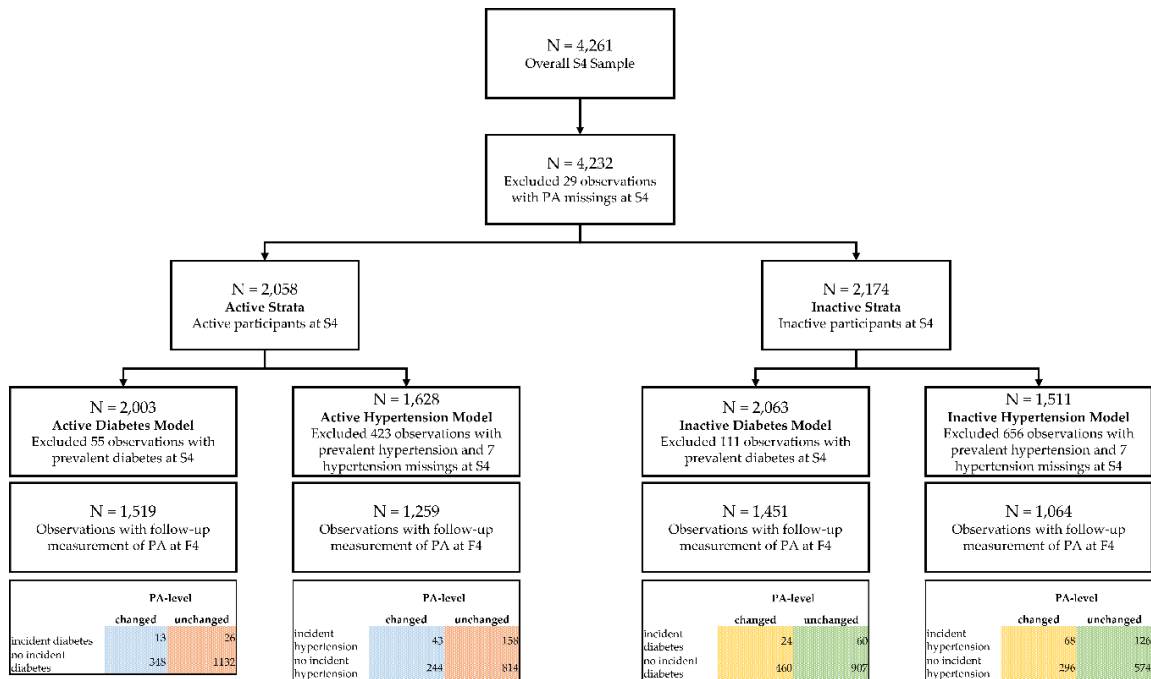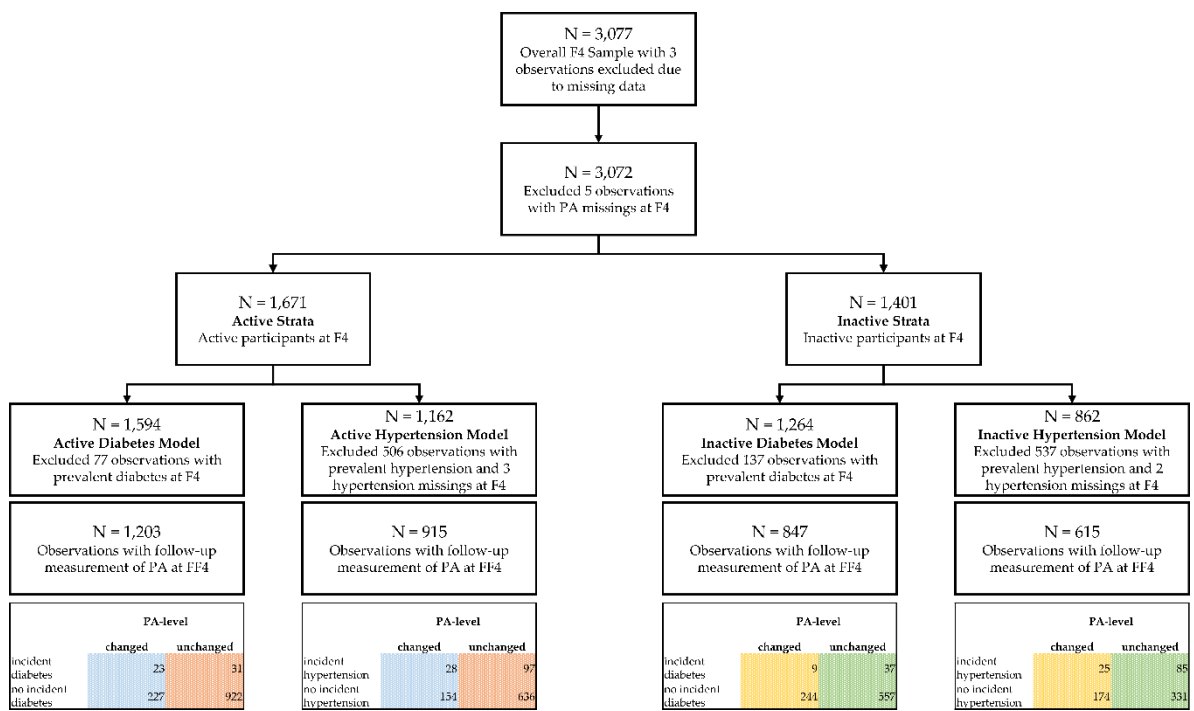|	PA-level changed	PA-level unchanged
incident hypertension	68	126
no incident hypertension	296	574

Figure S1. Add-on for Figure 2. Description of sample size for the first follow-up period from S4 to F4. Annotations: N = number of participants, PA = physical activity, S4 = baseline study (2000); F4 = first follow-up (2007); FF4 = second follow-up (2014).

N = 3,077
Overall F4 Sample with 3
observations excluded due
to missing data

↓

N = 3,072
Excluded 5 observations
with PA missings at F4

N = 1,671
Active Strata
Active participants at F4

N = 1,401
Inactive Strata
Inactive participants at F4

N = 1,594
Active Diabetes Model
Excluded 77 observations with
prevalent diabetes at F4

N = 1,162
Active Hypertension Model
Excluded 506 observations with
prevalent hypertension and 3
hypertension missings at F4

N = 1,264
Inactive Diabetes Model
Excluded 137 observations with
prevalent diabetes at F4

N = 862
Inactive Hypertension Model
Excluded 537 observations with
prevalent hypertension and 2
hypertension missings at F4

N = 1,203
Observations with follow-up
measurement of PA at FF4

N = 915
Observations with follow-up
measurement of PA at FF4

N = 847
Observations with follow-up
measurement of PA at FF4

N = 615
Observations with follow-up
measurement of PA at FF4

	PA-level changed	PA-level unchanged
incident diabetes	23	31
no incident diabetes	227	922

	PA-level changed	PA-level unchanged
incident hypertension	28	97
no incident hypertension	154	636

	PA-level changed	PA-level unchanged
incident diabetes	9	37
no incident diabetes	241	357

	PA-level changed	PA-level unchanged
incident hypertension	25	85
no incident hypertension	174	331

Figure S2. Add-on for Figure 2. Description of sample size for the second follow-up period from F4 to FF4. Annotations: N = number of participants, PA = physical activity, S4 = baseline study (2000); F4 = first follow-up (2007); FF4 = second follow-up (2014).

12
13

Table S1. In addition to Figure 3. Complete summary of the four logistic regression models with all covariates.

	OR	95%CI LL	UL
Model: active, diabetes			
(Intercept)	0.309	0.222	0.429
hs.diab	2.161	1.202	3.888
sexF	1.086	0.858	1.374
scale(age)	0.903	0.793	1.030
fam.together	0.723	0.551	0.950
schulintermediate	0.837	0.629	1.114
schulhigher	0.699	0.517	0.944
scale(bmi)	1.325	1.168	1.504
scale(bmi.diff)	1.218	1.090	1.361
scale(pqol.diff)	0.940	0.840	1.051
scale(mqol.diff)	0.916	0.818	1.024
Model: active, hypertension			
(Intercept)	0.272	0.185	0.401
hs.hyp	0.929	0.639	1.350
sexF	1.074	0.822	1.402
scale(age)	0.830	0.714	0.965
fam.together	0.729	0.536	0.991
schulintermediate	1.014	0.733	1.402
schulhigher	0.779	0.558	1.089
scale(bmi)	1.306	1.131	1.508
scale(bmi.diff)	1.215	1.073	1.377
scale(pqol.diff)	0.944	0.830	1.074
scale(mqol.diff)	0.922	0.811	1.048
Model: inactive, diabetes			
(Intercept)	0.278	0.211	0.366
hs.diab	0.738	0.460	1.184
sexF	1.279	1.045	1.564
scale(age)	0.933	0.832	1.046
fam.together	1.494	1.169	1.910
schulintermediate	1.255	0.978	1.610
schulhigher	1.202	0.932	1.552
scale(bmi)	0.887	0.795	0.989
scale(bmi.diff)	0.870	0.784	0.965
scale(pqol.diff)	1.069	0.965	1.184
scale(mqol.diff)	1.130	1.021	1.250
Model: inactive, diabetes			
(Intercept)	0.267	0.193	0.370
hs.hyp	1.023	0.747	1.400
sexF	1.428	1.130	1.803
scale(age)	0.984	0.859	1.126
fam.together	1.457	1.100	1.930
schulintermediate	1.449	1.089	1.927
schulhigher	1.213	0.906	1.623

scale(bmi)	0.916	0.810	1.036
scale(bmi.diff)	0.883	0.786	0.992
scale(pqol.diff)	1.072	0.952	1.207
scale(mqol.diff)	1.187	1.054	1.336

14   Annotations: OR = odds ratio, 95%CI = 95% confidence interval, LL = lower limit, UL = upper limit

15   Note that all scaled variables have been standardized with mean equal to zero and standard deviation equal to
16   one.

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Sensitivity analysis: new cutoffs for PA dichotomization
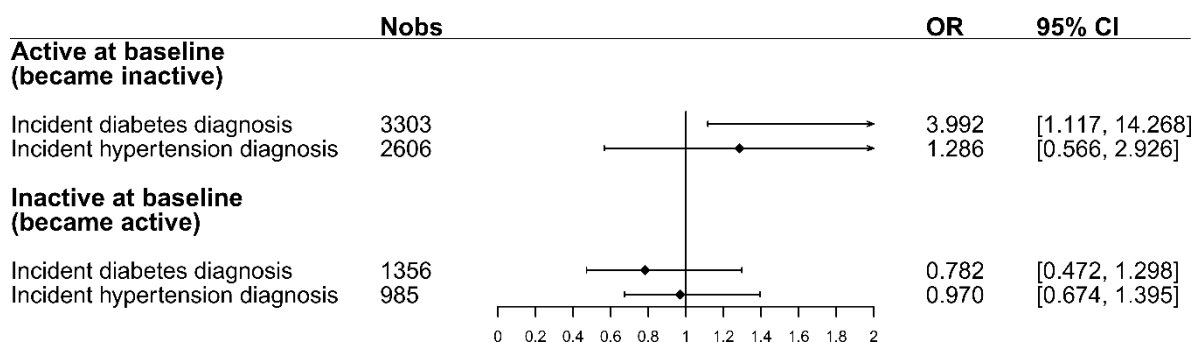
18

19   Figure S3. Sensitivity analysis. This figure is based on new defined cutoff points for the PA
20   dichotomization. The odds for changing PA after a diabetes/hypertension diagnosis for both baseline
21   PA strata. OR's for the active stratum display the odds of changing to inactive. OR's for the inactive
22   stratum display the odds of changing to active.

23

24   Table S2. Sensitivity Analysis: Results of the models only including the first follow-up period from S4
25   to F4.

		95%CI	
	OR	**LL**	**UL**
Model: active, diabetes			
(Intercept)	0.216	0.083	0.557
hs.hyp	1.497	0.700	3.043
sexF	1.136	0.886	1.458
scale(age)	0.987	0.976	0.997
fam.together	0.774	0.583	1.032
schulintermediate	0.894	0.658	1.209
schulhigher	0.742	0.536	1.023
scale(bmi)	1.045	1.013	1.077
scale(bmi.diff)	1.095	1.023	1.172
scale(pqol.diff)	0.993	0.978	1.007
scale(mqol.diff)	0.985	0.973	0.997
Model: active, hypertension			
(Intercept)	0.266	0.088	0.804
hs.hyp	0.938	0.616	1.406
sexF	1.157	0.876	1.532
scale(age)	0.980	0.967	0.992
fam.together	0.776	0.568	1.068
schulintermediate	1.091	0.777	1.528

schulhigher	0.854	0.597	1.216
scale(bmi)	1.043	1.005	1.082
scale(bmi.diff)	1.102	1.022	1.189
scale(pqol.diff)	0.993	0.976	1.010
scale(mqol.diff)	0.986	0.972	1.000
Model: inactive, diabetes			
(Intercept)	0.511	0.213	1.222
hs.hyp	0.781	0.443	1.327
sexF	1.264	1.001	1.598
scale(age)	0.997	0.988	1.006
fam.together	1.545	1.165	2.064
schulintermediate	1.269	0.951	1.690
schulhigher	1.018	0.746	1.382
scale(bmi)	0.987	0.962	1.013
scale(bmi.diff)	0.956	0.904	1.011
scale(pqol.diff)	1.011	0.998	1.025
scale(mqol.diff)	1.011	1.000	1.023
Model: inactive, hypertension			
(Intercept)	0.391	0.139	1.096
hs.hyp	1.266	0.876	1.820
sexF	1.339	1.018	1.762
scale(age)	0.999	0.988	1.011
fam.together	1.462	1.052	2.050
schulintermediate	1.392	0.997	1.940
schulhigher	1.037	0.722	1.481
scale(bmi)	0.990	0.959	1.022
scale(bmi.diff)	0.967	0.906	1.033
scale(pqol.diff)	1.018	1.002	1.034
scale(mqol.diff)	1.018	1.005	1.032

Annotations: OR = odds ratio, 95%CI = 95% confidence interval, LL = lower limit, UL = upper limit

Note that all scaled variables have been standardized with mean equal to zero and standard deviation equal to one.

Table S3. Sensitivity Analysis: Results of the models only including the second follow-up period from F4 to FF4.

		95%CI	
	OR	**LL**	**UL**
Model: active, diabetes			
(Intercept)	0.030	0.008	0.104
hs.hyp	2.168	1.133	4.098
sexF	0.968	0.710	1.318
scale(age)	1.011	0.998	1.026
fam.together	0.795	0.554	1.152
schulintermediate	0.802	0.551	1.159
schulhigher	0.707	0.476	1.041
scale(bmi)	1.068	1.031	1.106

	OR	LL	UL
scale(bmi.diff)	1.140	1.043	1.248
scale(pqol.diff)	0.992	0.973	1.011
scale(mqol.diff)	1.003	0.986	1.019
Model: active, hypertension			
(Intercept)	0.030	0.006	0.135
hs.hyp	0.978	0.581	1.600
sexF	0.913	0.637	1.309
scale(age)	1.009	0.992	1.027
fam.together	0.798	0.524	1.237
schulintermediate	0.914	0.587	1.412
schulhigher	0.731	0.465	1.138
scale(bmi)	1.073	1.026	1.123
scale(bmi.diff)	1.129	1.019	1.251
scale(pqol.diff)	0.991	0.969	1.014
scale(mqol.diff)	1.005	0.985	1.025
Model: inactive, diabetes			
(Intercept)	1.395	0.392	4.985
hs.hyp	0.676	0.278	1.477
sexF	1.219	0.884	1.683
scale(age)	0.992	0.979	1.005
fam.together	1.302	0.884	1.941
schulintermediate	1.241	0.825	1.859
schulhigher	1.539	1.041	2.272
scale(bmi)	0.961	0.927	0.995
scale(bmi.diff)	0.904	0.828	0.984
scale(pqol.diff)	1.000	0.981	1.020
scale(mqol.diff)	1.013	0.995	1.031
Model: inactive, hypertension			
(Intercept)	0.711	0.153	3.289
hs.hyp	0.684	0.386	1.181
sexF	1.507	1.038	2.195
scale(age)	0.996	0.978	1.013
fam.together	1.433	0.916	2.278
schulintermediate	1.484	0.930	2.363
schulhigher	1.496	0.952	2.348
scale(bmi)	0.973	0.931	1.016
scale(bmi.diff)	0.878	0.785	0.978
scale(pqol.diff)	0.988	0.965	1.011
scale(mqol.diff)	1.014	0.994	1.035

32   Annotations: OR = odds ratio, 95%CI = 95% confidence interval, LL = lower limit, UL = upper limit

33   Note that all scaled variables have been standardized with mean equal to zero and standard deviation equal to
34   one.

35

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