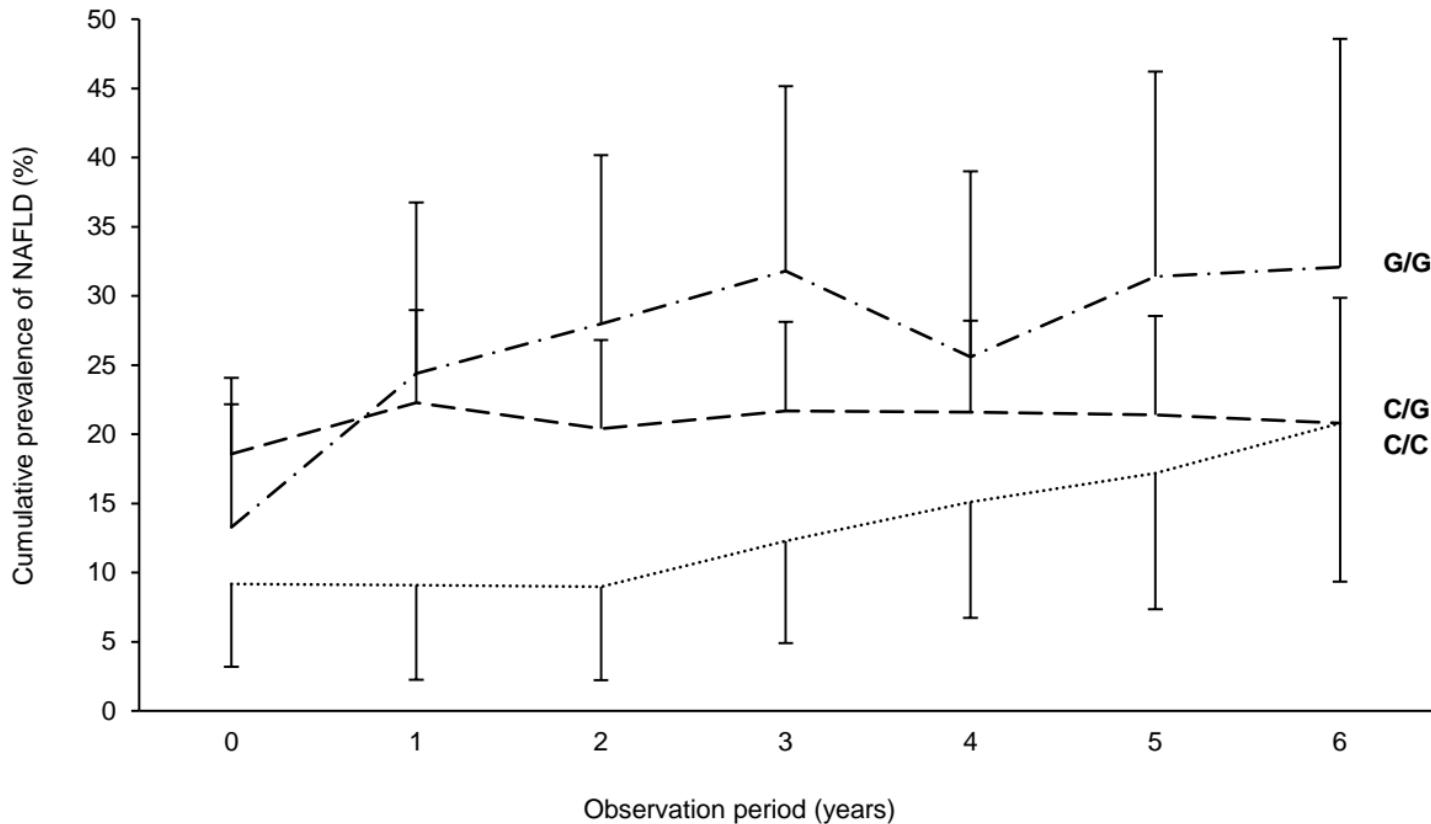


Number of NAFLD subjects	53	51	52	58	53	48	35
Total number of subjects	352	270	280	282	260	219	153

**Supplementary Figure S1 Changes in the cumulative prevalence of NAFLD in all subjects during observation period**  
NAFLD, non-alcoholic fatty liver disease.



**Supplementary Figure S2 Changes in the cumulative prevalence of NAFLD for each *PNPLA3* genotype during observation period**

The bars represent the 95% confidence intervals. NAFLD, non-alcoholic fatty liver disease; PNPLA3, patatin-like phospholipase domain containing 3.

**Supplementary Table S1. The logistic models regarding the physical activity level on the longitudinal prevalence of NAFLD stratified by the *PNPLA3* genotypes using the 10,000 randomly sampled subjects from the original data set**

<i>PNPLA3</i> genotype	METS*T	Model 1 <sup>a</sup>			Model 2 <sup>b</sup>		
		OR	95% CI	P	OR	95% CI	P
C/C	Sedentary	1			1		
	Low	2.76	1.88–4.05	<0.001	2.76	1.88–4.06	<0.001
	High	0.37	0.25–0.53	<0.001	0.37	0.25–0.53	<0.001
C/G	Sedentary	1			1		
	Low	0.44	0.33–0.59	<0.001	0.44	0.33–0.59	<0.001
	High	0.62	0.47–0.82	<0.001	0.62	0.47–0.82	<0.001
G/G	Sedentary	1			1		
	Low	0.15	0.09–0.23	<0.001	0.14	0.09–0.23	<0.001
	High	0.21	0.14–0.33	<0.001	0.21	0.14–0.33	<0.001

<sup>a</sup> ORs were adjusted by age, gender, smoking status, type 2 diabetes, dyslipidemia, hypertension.

<sup>b</sup> ORs were adjusted by age, waist circumstance, gender, smoking status, type 2 diabetes, dyslipidemia, hypertension.

NAFLD, non-alcoholic fatty liver disease; PNPLA3, patatin-like phospholipase domain containing protein 3; METS\*T,

metabolic equivalent × time (hour/week); OR, odds ratio; CI, confidence interval.

**Supplementary Table S2. The effects of the tertile of METS\*T levels on the longitudinal values of the BMI and waist circumstance and longitudinal prevalence of NAFLD stratified by the *PNPLA3* genotypes**

<i>PNPLA3</i> genotype	METS*T	N	BMI			Waist circumstance			NAFLD		
			B	SE	P	B	SE	P	OR	95% CI	P
C/C	Lowest	26	0			0			1		
	Middle	33	-2.36	0.74	<0.01	-5.96	1.89	<0.01	0.17	0.04–0.70	<0.05
	Highest	39	-1.63	0.66	<0.05	-6.01	1.59	<0.01	0.16	0.04–0.65	<0.05
C/G	Lowest	69	0			0			1		
	Middle	71	-0.36	0.48	0.45	-1.47	1.40	0.29	1.11	0.50–2.46	0.80
	Highest	54	-0.30	0.47	0.53	-2.03	1.39	0.14	1.28	0.51–3.20	0.60
G/G	Lowest	22	0			0			1		
	Middle	13	-1.73	1.19	0.15	-4.65	2.75	0.09	4.30	0.94–19.77	0.06
	Highest	25	-2.32	0.84	<0.01	-6.78	2.12	<0.01	0.42	0.10–1.76	0.23

B and ORs were adjusted by age, gender, smoking status, type 2 diabetes, dyslipidemia, hypertension.

NAFLD, non-alcoholic fatty liver disease; PNPLA3, patatin-like phospholipase domain containing protein 3; METS\*T, metabolic equivalent × time (hour/week); B, unstandardized partial regression coefficient; SE, standard error; OR, odds ratio; CI, confidence interval.

**Supplementary Table S3. The effects of the METS\*T values on the longitudinal values of the BMI and waist circumstance and longitudinal prevalence of NAFLD stratified by the *PNPLA3* genotypes**

<i>PNPLA3</i> genotype	N	BMI			Waist circumstance			NAFLD		
		B	SE	P	B	SE	P	OR	95% CI	P
C/C	98	0.003	0.009	0.73	-0.023	0.026	0.39	1.00	0.97-1.03	0.99
C/G	194	-0.001	0.003	0.80	-0.012	0.011	0.25	1.00	0.99-1.01	0.62
G/G	60	-0.020	0.008	<0.05	-0.071	0.022	<0.01	0.99	0.96-1.01	0.30

B and ORs were adjusted by age, gender, smoking status, type 2 diabetes, dyslipidemia, hypertension.

METS\*T, metabolic equivalent × time (hour/week); NAFLD, non-alcoholic fatty liver disease; PNPLA3, patatin-like phospholipase domain containing protein 3; B, unstandardized partial regression coefficient; SE, standard error; OR, odds ratio; CI, confidence interval.

**Supplementary Table S4. The association of the METS\*T level with the dietary habits**

Frequency of consumption of the foods		N	METS*T level			P
			Sedentary	Low	High	
Rice, bread and/or noodles (%)	≥600 g/day	221	5 (55.6)	49 (73.1)	82 (56.6)	0.065
Meat dishes (%)	≥1 time/day	221	6 (66.7)	54 (80.6)	114 (78.6)	0.630
Fish dishes (%)	≥1 time/day	332	15 (68.2)	60 (56.1)	113 (55.7)	0.526
Egg dishes (%)	≥1 time/day	221	6 (66.7)	42 (62.7)	96 (66.2)	0.878
Vegetables (%)	≥2 times/day	332	14 (63.6)	70 (65.4)	127 (62.6)	0.884
Fruits (%)	≥1 time/day	221	5 (55.6)	45 (67.2)	94 (64.8)	0.782
Confectionery (%)	≥2 times/week	332	21 (95.5)	89 (83.2)	167 (82.3)	0.286
Salted foods (%)	≥1 time/day	332	11 (50.0)	55 (48.6)	117 (42.4)	0.509
Daily products (%)	≥1 time/day	332	17 (77.3)	92 (86.0)	170 (83.7)	0.587

METS\*T, metabolic equivalent × time (hour/week)