Supplementary Materials: Figure S1. Flow chart of the Health Workers Cohort Study participants. Table S1. Model results of lifestyle factors on the relationship between adiposity and IR.

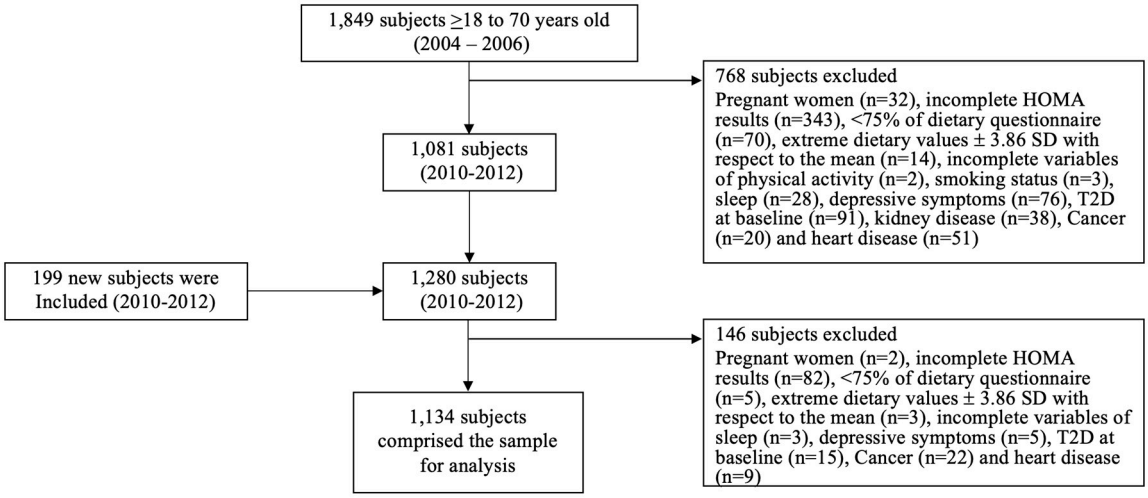

Figure S1. Flow chart of the Health Workers Cohort Study participants.

Table S1. Model results of lifestyle factors on the relationship between adiposity and IR

	Men		**Women**	
	Unstandardized	**STDY standardization**	**Unstandardized**	**STDY standardization**
	Coef. [SE]	Coef. [SE]	Coef. [SE]	Coef. [SE]
$Adiposity_1$ BY				
BMI_1	1	0.890*** [0.017]	1	0.965*** [0.010]
WC_1	2.538*** [0.096]	0.940*** [0.016]	2.184*** [0.068]	0.751*** [0.017]
BFP_1	1.193*** [0.077]	0.524*** [0.034]	1.169*** [0.039]	0.753*** [0.017]
$Adiposity_2$ BY				
BMI_2	1	0.922*** [0.015]	1	0.965*** [0.011]
WC_2	2.538*** [0.096]	0.938*** [0.014]	2.184*** [0.068]	0.815*** [0.014]
BFP_2	1.193*** [0.077]	0.707*** [0.030]	1.169*** [0.039]	0.759*** [0.015]
$Adiposity_2$ ON				
$Adiposity_1$	1.010*** [0.038]	0.922*** [0.025]	0.996*** [0.024]	0.934*** [0.015]
$Adiposity_2$ ON				
$lnHOMA_1$	-0.204 [0.112]	-0.060 [0.033]	-0.246** [0.082]	-0.059** [0.020]
Age_1	-0.623*** [0.102]	-0.172*** [0.028]	-0.675*** [0.085]	-0.158*** [0.020]
DS_1	-0.113 [0.250]	-0.031 [0.069]	0.446** [0.163]	0.104** [0.038]
PA_1	-0.150 [0.198]	-0.041 [0.055]	-0.316 [0.162]	-0.074 [0.038]
ExS_1	0.134 [0.228]	0.037 [0.063]	0.086 [0.187]	0.020 [0.044]
CS_1	0.024 [0.253]	0.007 [0.070]	0.097 [0.209]	0.023 [0.049]
ST_1	-0.023 [0.047]	-0.006 [0.013]	0.005 [0.064]	0.001 [0.015]
N_1	0.160 [0.220]	0.044 [0.061]	-0.059 [0.158]	-0.014 [0.037]
DII_1	-0.091 [0.066]	-0.025 [0.018]	0.006 [0.047]	0.001 [0.011]
$Adiposity_1$ ON				
Age_1	0.331 [0.195]	0.100 [0.059]	1.280*** [0.145]	0.320*** [0.034]
DS_1	-0.500 [0.480]	-0.151 [0.145]	0.316 [0.302]	0.079 [0.075]

PA_1	-0.460 [0.379]	-0.139 [0.114]	-0.296 [0.300]	-0.074 [0.075]
ExS_1	0.757 [0.439]	0.229 [0.132]	0.517 [0.346]	0.129 [0.086]
CS_1	1.078* [0.484]	0.326* [0.144]	0.292 [0.387]	0.073 [0.096]
ST_1	-0.232** [0.089]	-0.070** [0.027]	-0.016 [0.118]	-0.004 [0.030]
N_1	0.633 [0.422]	0.191 [0.127]	0.446 [0.293]	0.111 [0.073]
DII_1	-0.005 [0.128]	-0.002 [0.039]	0.109 [0.087]	0.027 [0.022]
$lnHOMA_2$				
$Adiposity_1$	0.052** [0.017]	0.179** [0.059]	0.058*** [0.009]	0.250*** [0.036]
$lnHOMA_2$				
$lnHOMA_1$	0.405*** [0.050]	0.450*** [0.053]	0.318*** [0.031]	0.349*** [0.032]
Age_1	-0.034 [0.045]	-0.035 [0.047]	-0.035 [0.031]	-0.038 [0.033]
DS_1	-0.032 [0.112]	-0.033 [0.116]	0.009 [0.062]	0.010 [0.066]
PA_1	-0.201* [0.089]	-0.210* [0.092]	-0.026 [0.061]	-0.028 [0.066]
ExS_1	-0.041 [0.102]	-0.043 [0.106]	0.043 [0.071]	0.046 [0.076]
CS_1	-0.131 [0.113]	-0.137 [0.118]	-0.006 [0.079]	-0.007 [0.085]
ST_1	-0.005 [0.021]	-0.006 [0.022]	0.045 [0.024]	0.049 [0.026]
N_1	0.052 [0.099]	0.054 [0.103]	-0.038 [0.060]	-0.042 [0.064]
DII_1	0.042 [0.030]	0.044 [0.031]	0.018 [0.018]	0.020 [0.019]
$lnHOMA_1$				
Age_1	0.003 [0.060]	0.003 [0.056]	0.053 [0.037]	0.052 [0.036]
DS_1	-0.189 [0.150]	-0.177 [0.140]	0.021 [0.078]	0.020 [0.076]
PA_1	-0.262* [0.119]	-0.245* [0.110]	-0.146 [0.077]	-0.143 [0.076]
ExS_1	0.285* [0.136]	0.267* [0.127]	0.084 [0.089]	0.082 [0.088]
CS_1	0.233 [0.151]	0.218 [0.141]	0.165 [0.100]	0.163 [0.098]
ST_1	-0.019 [0.028]	-0.018 [0.026]	-0.009 [0.030]	-0.008 [0.030]
N_1	0.252 [0.132]	0.236 [0.123]	-0.029 [0.075]	-0.029 [0.074]
DII_1	-0.021 [0.040]	-0.020 [0.037]	0.032 [0.023]	0.031 [0.022]
Covariances				
$Adiposity_2$ WITH				
$lnHOMA_2$	0.445*** [0.079]	0.353*** [0.052]	0.518*** [0.063]	0.322*** [0.033]
$Adiposity_1$ WITH				
$lnHOMA_1$	1.797*** [0.224]	0.539*** [0.042]	1.615*** [0.152]	0.421*** [0.030]
BMI_1 WITH				
BMI_2	2.397*** [0.354]	0.928*** [0.029]	1.052** [0.309]	0.832*** [0.069]
WC_1 WITH				
WC_2	4.452* [2.030]	0.429*** [0.114]	23.23*** [2.633]	0.455*** [0.035]
BFP_1 WITH				
BFP_2	13.92*** [1.977]	0.502*** [0.048]	11.17*** [0.858]	0.639*** [0.024]
Intercepts				
BMI_1	0	0	0	0
WC_1	26.23*** [2.564]	2.94*** [0.325]	31.29*** [1.783]	2.69*** [0.187]
BFP_1	-0.662 [2.091]	-0.088 [0.277]	11.72*** [1.008]	1.887*** [0.187]
BMI_2	0	0	0	0
WC_2	27.85*** [2.625]	2.84*** [0.308]	32.37*** [1.832]	2.83*** [0.200]
BFP_2	-0.133 [2.118]	-0.022 [0.346]	13.09*** [1.041]	1.99*** [0.188]
$lnHOMA_1$	0.415** [0.148]	0.389** [0.141]	0.278*** [0.077]	0.274*** [0.075]
$lnHOMA_2$	-0.788 [0.446]	-0.820 [0.460]	-0.933*** [0.222]	-1.008*** [0.234]
$Adiposity_1$	25.81*** [0.480]	7.80*** [0.422]	25.36*** [0.298]	6.33*** [0.196]
$Adiposity_2$	0.399 [0.994]	0.110 [0.277]	0.978 [0.629]	0.229 [0.151]

Residual Variances				
BMI_1	2.873 [0.401]	0.208 [0.030]	1.190 [0.340]	0.069 [0.020]
WC_1	9.305 [2.362]	0.117 [0.031]	59.165 [3.567]	0.436 [0.025]
BFP_1	41.074 [3.450]	0.725 [0.035]	16.694 [0.996]	0.433 [0.026]
BMI_2	2.324 [0.400]	0.150 [0.028]	1.346 [0.393]	0.069 [0.021]
WC_2	11.571 [2.448]	0.120 [0.026]	44.070 [2.923]	0.337 [0.023]
BFP_2	18.690 [1.688]	0.500 [0.042]	18.290 [1.054]	0.424 [0.023]
$lnHOMA_1$	1.088 [0.086]	0.955 [0.023]	1.021 [0.051]	0.987 [0.008]
$lnHOMA_2$	0.596 [0.047]	0.647 [0.043]	0.635 [0.032]	0.741 [0.027]
$Adiposity_1$	10.209 [1.000]	0.933 [0.028]	14.390 [0.836]	0.897 [0.021]
$Adiposity_2$	2.664 [0.264]	0.203 [0.023]	4.084 [0.285]	0.224 [0.017]
R squared				
$Adiposity_1$	0.067 [0.028]		0.103 [0.021]	
BMI_1	0.792 [0.030]		0.931 [0.020]	
WC_1	0.883 [0.031]		0.564 [0.025]	
BFP_1	0.275 [0.035]		0.567 [0.026]	
$Adiposity_2$	0.797 [0.023]		0.776 [0.017]	
BMI_2	0.850 [0.028]		0.931 [0.021]	
WC_2	0.880 [0.026]		0.663 [0.023]	
BFP_2	0.500 [0.042]		0.576 [0.023]	
$lnHOMA_1$	0.045 [0.023]		0.013 [0.008]	
$lnHOMA_2$	0.353 [0.043]		0.259 [0.027]	
Model Fit				
CFI	0.981		0.975	
TLI	0.963		0.950	
RMSEA (90% CI)	0.053 (0.035, 0.069)		0.058 (0.049, 0.067)	
SRMR	0.040		0.042	
Sample size	320		814	

*p<0.05, **p<0.01, ***p<0.001 (not shown for residual variances and R squared)

BMI: body mass index (kg/m^2); WC: waist circumference (cm); BFP: total body fat mass proportion; DS: depressive symptoms (≥ 16 points); PA: physical activity (≥ 30 min/day); ExS: Ex-smoker; CS: current smoker; ST: sleep time (hours/day) centered at its mean; N: nap (yes); DII: dietary inflammatory index. Age was standardized.

CFI: Comparative Fit Index; TLI: Tuker-Lewis Index; RMSEA: Root Mean Square Error of Approximation; SRMR: Standardized Root Mean Square Residual