Supplementary Table S1. Study design summary.

Objective	Exposure variables	Outcomes	Measurement method	Time period	Statistical analysis
To examine the temporal association between AWS defined by WC and healthy aging	AWS Age, race/ethnicity, education, annual income, homebound status	HAS HAS status (good vs. poor)	Secondary data - NHATS HAS was created utilizing ten health indicators HAS status was based on respondents' HAS score distribution	8 years	The associations between baseline AWS and the annual change rate in HAS were estimated from multiple mixed effect regression models via interaction terms The relationships between AWS and HAS over 8 years were examined using mixed models

Note: AWS = Abdominal weight status; WC= Waist Circumference; HAS = Healthy aging score; NHATS= National Health and Aging Trends Study.

Supplementary Table S2. Healthy aging score trends by baseline AWS, NHATS 2011-2018.

	N	HAS total[@]	Good HAS[&, #]	Poor HAS[&, #]
Males				
Total		**Mean (95% CI)**	**Prevalence (95% CI)**	**Prevalence (95% CI)**
2011	2295	6.46 (6.37 - 6.55)	55.7 (55.1 - 56.2)	44.3 (43.8 - 44.9)
2012	1660	6.49 (6.41 - 6.57)	50.0 (49.5 - 50.4)	50.0 (49.5 - 50.6)
2013	1294	6.55 (6.47 - 6.64)	46.9 (46.4 - 47.4)	53.1 (52.6 - 53.6)
2014	1044	6.49 (6.38 - 6.60)	45.4 (44.8 - 46.0)	54.6 (54.1 - 55.1)
2015	1027	6.40 (6.30 - 6.50)	44.8 (44.6 - 45.0)	55.2 (55.0 - 55.4)
2016	892	6.40 (6.28 - 6.51)	44.5 (44.3 - 44.8)	55.5 (55.2 - 55.7)
2017	815	6.31 (6.18 - 6.44)	43.3 (43.0 - 43.5)	56.7 (56.5 - 57.0)
2018	732	6.25 (6.11 - 6.39)	42.7 (42.4 - 43.0)	57.3 (57.0 - 57.6)
P for trend		<0.001*	<0.001*	<0.001*
Normal				
2011	352	6.73 (6.58 - 6.87)	62.5 (61.6 - 63.4)	37.5 (36.6 - 38.4)
2012	255	6.78 (6.59 - 6.98)	57.1 (55.9 - 58.3)	42.9 (41.5 - 44.3)
2013	198	6.87 (6.68 - 7.06)	53.9 (52.7 - 55.1)	46.1 (44.8 - 47.4)
2014	153	6.82 (6.56 - 7.07)	50.8 (49.2 - 52.5)	49.2 (47.5 - 50.8)
2015	148	6.78 (6.59 - 6.97)	51.4 (50.8 - 52.0)	48.6 (48.1 - 49.2)
2016	126	6.78 (6.52 - 7.03)	51.3 (50.7 - 52.0)	48.7 (48.1 - 49.2)
2017	121	6.76 (6.52 - 7.00)	53.7 (53.2 - 54.2)	46.3 (45.7 - 46.9)
2018	115	6.58 (6.31 - 6.84)	57.9 (57.4 - 58.5)	42.1 (41.5 - 42.6)
P for trend		<0.001*	<0.001*	<0.001*
Overweight				
2011	531	6.73 (6.56 - 6.91)	59.6 (58.5 - 60.7)	40.4 (39.3 - 41.5)
2012	388	6.70 (6.52 - 6.88)	53.7 (52.8 - 54.6)	46.3 (45.1 - 47.4)
2013	299	6.79 (6.61 - 6.97)	53.9 (52.8 - 55.0)	46.1 (44.9 - 47.2)
2014	245	6.90 (6.71 - 7.08)	53.9 (52.8 - 55.0)	46.1 (45.0 - 47.1)
2015	233	6.69 (6.51 - 6.87)	51.4 (51.0 - 51.8)	48.6 (48.2 - 49.0)
2016	205	6.63 (6.36 - 6.90)	50.8 (50.2 - 51.3)	49.2 (48.7 - 49.7)
2017	189	6.53 (6.28 - 6.78)	47.3 (46.7 - 47.8)	52.7 (52.2 - 53.3)
2018	167	6.48 (6.20 - 6.75)	47.9 (47.3 - 48.5)	52.1 (51.6 - 52.6)
P for trend		<0.001*	<0.001*	<0.001*
Obese				
2011	1412	6.31 (6.19 - 6.43)	52.8 (52.1 - 53.4)	47.2 (46.6 - 47.9)
2012	1017	6.35 (6.25 - 6.46)	47.0 (46.3 - 47.7)	53.0 (52.3 - 53.7)
2013	797	6.40 (6.27 - 6.52)	42.8 (42.2 - 43.4)	57.2 (56.5 - 57.9)

2014	646	6.27 (6.12 - 6.43)	41.2 (40.6 - 41.9)	58.8 (58.1 - 59.5)
2015	646	6.22 (6.07 - 6.37)	41.1 (40.8 - 41.4)	58.9 (58.6 - 59.2)
2016	561	6.23 (6.08 - 6.38)	40.9 (40.6 - 41.2)	59.1 (58.8 - 59.5)
2017	505	6.13 (5.95 - 6.30)	39.7 (39.4 - 40.0)	60.3 (60.0 - 60.7)
2018	450	6.09 (5.92 - 6.25)	37.7 (37.3 - 38.0)	62.3 (62.0 - 62.7)
P for trend		<0.001*	<0.001*	<0.001*
P for stratified variable AWS*round		0.743	0.741	0.741
Females				
Total				
2011	2916	6.06 (5.97 - 6.15)	46.0 (45.6 - 46.5)	54.0 (53.5 - 54.4)
2012	2087	6.16 (6.07 - 6.25)	40.7 (40.2 - 41.1)	59.3 (58.8 - 59.9)
2013	1670	6.09 (5.99 - 6.19)	38.0 (37.5 - 38.5)	62.0 (61.5 - 62.4)
2014	1368	6.12 (6.02 - 6.23)	37.9 (37.4 - 38.4)	62.1 (61.6 - 62.6)
2015	1374	5.90 (5.79 - 6.01)	36.5 (36.4 - 36.7)	63.5 (63.3 - 63.7)
2016	1222	5.92 (5.78 - 6.07)	35.0 (34.7 - 35.2)	65.0 (64.8 - 65.3)
2017	1087	5.88 (5.76 - 6.01)	35.2 (35.0 - 35.4)	64.8 (64.5 - 65.1)
2018	957	5.89 (5.76 - 6.02)	34.7 (34.4 - 34.9)	65.3 (65.1 - 65.6)
P for trend		<0.001*	<0.001*	<0.001*
Normal				
2011	248	6.63 (6.39 - 6.87)	62.7 (61.2 - 64.3)	37.3 (36.1 - 38.5)
2012	174	6.61 (6.37 - 6.84)	50.4 (49.1 - 51.7)	49.6 (48.0 - 51.1)
2013	138	6.74 (6.48 - 6.99)	50.8 (49.6 - 52.1)	49.2 (48.0 - 50.4)
2014	113	6.96 (6.66 - 7.25)	58.4 (57.0 - 59.9)	41.6 (40.2 - 43.0)
2015	111	6.86 (6.61 - 7.11)	57.7 (57.2 - 58.2)	42.3 (41.7 - 42.9)
2016	96	6.68 (6.40 - 6.97)	53.4 (52.9 - 53.9)	46.6 (46.0 - 47.2)
2017	86	6.72 (6.40 - 7.03)	54.7 (54.0 - 55.3)	45.3 (44.5 - 46.1)
2018	81	6.69 (6.31 - 7.07)	61.1 (60.3 - 61.8)	38.9 (38.2 - 39.6)
P for trend		<0.001*	<0.001*	<0.001*
Overweight				
2011	472	6.59 (6.40 - 6.78)	59.6 (58.6 - 60.6)	40.4 (39.4 - 41.4)
2012	338	6.74 (6.59 - 6.89)	52.1 (51.3 - 53.0)	47.9 (46.9 - 48.9)
2013	298	6.67 (6.48 - 6.86)	54.5 (53.5 - 55.4)	45.5 (44.4 - 46.6)
2014	241	6.72 (6.52 - 6.91)	53.8 (52.8 - 54.8)	46.2 (45.1 - 47.4)
2015	244	6.47 (6.30 - 6.65)	52.2 (51.8 - 52.7)	47.8 (47.3 - 48.3)
2016	219	6.59 (6.39 - 6.80)	53.4 (52.9 - 53.9)	46.6 (46.1 - 47.1)
2017	199	6.40 (6.11 - 6.68)	48.1 (47.6 - 48.5)	51.9 (51.3 - 52.5)
2018	169	6.54 (6.31 - 6.76)	45.6 (45.1 - 46.1)	54.4 (53.8 - 55.0)
P for trend		<0.001*	<0.001*	<0.001*

Obese				
2011	2196	5.87 (5.75 - 5.98)	40.8 (40.2 - 41.3)	59.2 (58.6 - 59.8)
2012	1575	5.98 (5.87 - 6.08)	36.8 (36.3 - 37.3)	63.2 (62.6 - 63.7)
2013	1234	5.86 (5.75 - 5.98)	32.6 (32.1 - 33.1)	67.4 (66.9 - 67.9)
2014	1014	5.87 (5.76 - 5.98)	31.8 (31.3 - 32.2)	68.2 (67.8 - 68.6)
2015	1019	5.64 (5.51 - 5.78)	30.4 (30.2 - 30.6)	69.6 (69.3 - 69.8)
2016	907	5.67 (5.52 - 5.81)	28.4 (28.2 - 28.6)	71.6 (71.4 - 71.9)
2017	802	5.65 (5.51 - 5.79)	29.8 (29.6 - 30.0)	70.2 (69.9 - 70.5)
2018	707	5.63 (5.49 - 5.77)	28.9 (28.6 - 29.1)	71.1 (70.8 - 71.4)
P for trend		<0.001*	<0.001*	<0.001*
P for stratified variable AWS*round		0.099	0.497	0.497

Note: [@]p for trend were estimated from univariate mixed model, and [&]p for trend were estimated from generalized estimating equation model accounting for the correlation with repeated measures, utilizing weighted data with the follow-up round analytic weight which adjusts for loss to follow-up and round was treated as continuous variable (1-8). AWS = abdominal weight status; NHATS = National Health and Aging Trends Study; HAS = healthy aging score. [#]Good HAS defined as above the median whereas poor HAS defined as below the median; *p<0.05.