

Additional file 7 The association between WHR and all-cause mortality in all population and adults of different BMI and sex.

WHR	HR (95%CI)	P value	HR (95%CI)	P value	P for interaction
All BMI					<0.001
BMI(<18.5 kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	0.88(0.81-0.96)	0.006	1.14(1.04-1.25)	0.005	
High WHR	0.67(0.61-0.73)	<0.001	1.19(1.07-1.32)	0.001	
P for trends		<0.001		<0.001	
BMI(≥18.5 and <24 kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	0.86(0.57-1.29)	0.452	1.22(0.81-1.86)	0.342	
High WHR	0.44(0.29-0.66)	<0.001	0.95(0.61-1.46)	0.801	
P for trends		<0.001		0.864	
BMI(≥24 and <28 kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	1.14(1.07-1.22)	<0.001	1.19 (1.11-1.28)	<0.001	
High WHR	0.88(0.81-0.95)	0.002	1.25 (1.14-1.38)	<0.001	
P for trends		0.17		<0.001	
BMI(≥28kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	1.08(0.98-1.18)	0.106	1.07(0.98-1.18)	0.14	
High WHR	0.97(0.88-1.08)	0.599	1.30(1.16-1.47)	<0.001	
P for trends		0.981		<0.001	
female					0.255
Low WHR	ref.		ref.		
Moderate WHR	2.02(1.63-2.50)	<0.001	1.19(0.95-1.47)	0.126	
High WHR	3.05(2.51-3.70)	<0.001	1.43(1.17-1.75)	0.001	
P for trends		<0.001		<0.001	
BMI(<18.5 kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	4.71(1.44-15.44)	0.01	7.93(2.74-22.93)	<0.001	
High WHR	1.67(0.51-5.48)	0.396	2.18(0.75-6.33)	0.151	
P for trends		0.296		0.169	
BMI(≥18.5 and <24 kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	1.98(1.47-2.66)	<0.001	1.12(0.83-1.51)	0.476	
High WHR	2.64(2.02-3.44)	<0.001	1.35(1.02-1.78)	0.034	
P for trends		<0.001		0.026	
BMI(≥24 and <28 kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	1.69(1.13-2.53)	0.01	1.23(0.82-1.84)	0.313	
High WHR	2.82(1.94-4.1)	<0.001	1.56(1.07-2.29)	0.022	
P for trends		<0.001		0.003	
BMI(≥28kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	1.59(0.84-3.01)	0.157	1.31(0.69-2.50)	0.408	
High WHR	2.27(1.24-4.15)	0.008	1.57(0.85-2.89)	0.147	

P for trends		<0.001		0.067	
male					<0.001
Low WHR	ref.		ref.		
Moderate WHR	1.38(1.32-1.45)	<0.001	1.15(1.10-1.21)	<0.001	
High WHR	1.37(1.29-1.47)	<0.001	1.20(1.12-1.28)	<0.001	
P for trends		<0.001		<0.001	
BMI(<18.5 kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	0.95(0.6-01.49)	0.821	1.07(0.68-1.70)	0.772	
High WHR	0.74(0.47-1.17)	0.201	0.98(0.62-1.57)	0.945	
P for trends		0.213		0.877	
BMI(≥18.5 and <24 kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	1.42(1.29-1.56)	<0.001	1.15(1.05-1.27)	0.004	
High WHR	1.16(1.03-1.31)	0.018	1.12(0.99-1.27)	0.062	
P for trends		<0.001		0.003	
BMI(≥24 and <28 kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	1.55(1.44-1.67)	<0.001	1.22 (1.13-1.31)	<0.001	
High WHR	1.47(1.32-1.63)	<0.001	1.19 (1.07-1.32)	0.001	
P for trends		<0.001		<0.001	
BMI(≥28kg/m ²)					
Low WHR	ref.		ref.		
Moderate WHR	1.92(0.91-4.02)	<0.001	1.07(0.97-1.18)	0.165	
High WHR	2.08(1.02-4.23)	<0.001	1.30(1.15-1.48)	<0.001	
P for trends		<0.001		<0.001	

Notes: WHR, waist-to-hip ratio; BMI, body mass index; FBG, fasting blood glucose; hsCRP, high sensitivity C reactive protein.

Adjusted for age, smoking history, drinking status, hs-CRP, FBG, hypertension, diabetes, myocardial infarction, family income, educational background, physical exercise.