

## Supplementary Material

1. Results of the logistic regression investigating the effect of sex on obesity controlling for age.

a) Overweight ( $BMI \geq 25$ ) as the outcome

	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
SEX	<b>2.126481</b>	<b>.2375463</b>	<b>6.75</b>	<b>0.000</b>	<b>1.708343</b>	<b>2.646965</b>
AGE	<b>1.051604</b>	<b>.0046837</b>	<b>11.30</b>	<b>0.000</b>	<b>1.042464</b>	<b>1.060824</b>
primary	<b>1.290914</b>	<b>.1552188</b>	<b>2.12</b>	<b>0.034</b>	<b>1.019881</b>	<b>1.633975</b>

b) Obesity ( $BMI \geq 30$ ) as the outcome

	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
SEX	<b>1.134768</b>	<b>.1386433</b>	<b>1.03</b>	<b>0.301</b>	<b>.8931184</b>	<b>1.441799</b>
AGE	<b>1.029163</b>	<b>.0052125</b>	<b>5.68</b>	<b>0.000</b>	<b>1.018998</b>	<b>1.03943</b>
primary	<b>1.286749</b>	<b>.1762828</b>	<b>1.84</b>	<b>0.066</b>	<b>.9837405</b>	<b>1.68309</b>

c) Morbid Obesity ( $BMI \geq 35$ ) as the outcome

	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
SEX	<b>.4298365</b>	<b>.0975354</b>	<b>-3.72</b>	<b>0.000</b>	<b>.275521</b>	<b>.6705817</b>
AGE	<b>1.024686</b>	<b>.0086829</b>	<b>2.88</b>	<b>0.004</b>	<b>1.007808</b>	<b>1.041846</b>
primary	<b>1.310992</b>	<b>.3081415</b>	<b>1.15</b>	<b>0.249</b>	<b>.8270458</b>	<b>2.078118</b>

2. Results of the linear regression investigation the relationship between waist circumference and BMI controlling for age stratified by sex

a) Men

WAIST	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
bmi_calc	<b>2.386184</b>	<b>.0535065</b>	<b>44.60</b>	<b>0.000</b>	<b>2.281128</b>	<b>2.49124</b>
AGE	<b>.1912513</b>	<b>.0177086</b>	<b>10.80</b>	<b>0.000</b>	<b>.1564817</b>	<b>.2260209</b>
_cons	<b>23.64618</b>	<b>1.489273</b>	<b>15.88</b>	<b>0.000</b>	<b>20.7221</b>	<b>26.57026</b>

b) Women

WAIST	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
bmi_calc	<b>2.016123</b>	<b>.0408305</b>	<b>49.38</b>	<b>0.000</b>	<b>1.935986</b>	<b>2.09626</b>
AGE	<b>.1084439</b>	<b>.0180605</b>	<b>6.00</b>	<b>0.000</b>	<b>.0729971</b>	<b>.1438907</b>
_cons	<b>28.88527</b>	<b>1.211957</b>	<b>23.83</b>	<b>0.000</b>	<b>26.5066</b>	<b>31.26394</b>

c) Regression diagnostic for the linear regression model

