

**Supplementary Table S1.** Association between RGS (per 0.1kg) and the prevalence of DM in Koreans using logistic regression.

Men			Women (pre-menopause)			Women (post-menopause)		
	OR	<i>p</i> -value		OR	<i>p</i> -value		OR	<i>p</i> -value
Unadjusted	0.41 (0.37 – 0.45)	< 0.001	Unadjusted	0.21 (0.15 – 0.28)	< 0.001	Unadjusted	0.37 (0.31 – 0.43)	< 0.001
Model 1	0.59 (0.53 – 0.66)	< 0.001	Model 1	0.23 (0.17 – 0.32)	< 0.001	Model 1	0.51 (0.43 – 0.61)	< 0.001
Model 2	0.78 (0.70 – 0.88)	0.001	Model 2	0.66 (0.46 – 0.94)	0.022	Model 2	0.81 (0.67 – 0.99)	0.038
Model 3	0.80 (0.71 – 0.90)	0.007	Model 3	0.68 (0.47 – 0.98)	0.036	Model 3	0.84 (0.69 – 1.02)	0.080

Model 1: adjusted for age;

Model 2: adjusted for age, waist circumference, regular exercise, smoking status, and alcohol uptake

Model 3: adjusted for age, waist circumference, regular exercise, smoking status, alcohol uptake, total cholesterol, TG, AST, ALT and systolic blood pressure

**Supplementary Table S2.** Model diagnostics for logistic regression of Table 2.

	Pseudo R <sup>2</sup>		
	Men	Women (pre-menopause)	Women (post-menopause)
Unadjusted	0.077	0.072	0.056
Model 1	0.174	0.134	0.077
Model 2	0.219	0.242	0.131
Model 3	0.257	0.287	0.220

Model 1: adjusted for age

Model 2: adjusted for age, waist circumference, regular exercise, smoking status, and alcohol uptake

Model 3: adjusted for age, waist circumference, regular exercise, smoking status, alcohol uptake, total cholesterol, TG, AST, ALT and systolic blood press

**Supplementary Table S3.** Model diagnostics for logistic regression of Table 3.

	Pseudo R <sup>2</sup>		
	Men	Women (pre-menopause)	Women (post-menopause)
Unadjusted	0.071	0.068	0.053
Model 1	0.173	0.132	0.076
Model 2	0.220	0.248	0.131
Model 3	0.252	0.291	0.220

Model 1: adjusted for age

Model 2: adjusted for age, waist circumference, regular exercise, smoking status, and alcohol uptake

Model 3: adjusted for age, waist circumference, regular exercise, smoking status, alcohol uptake, total cholesterol, TG, AST, ALT and systolic blood press

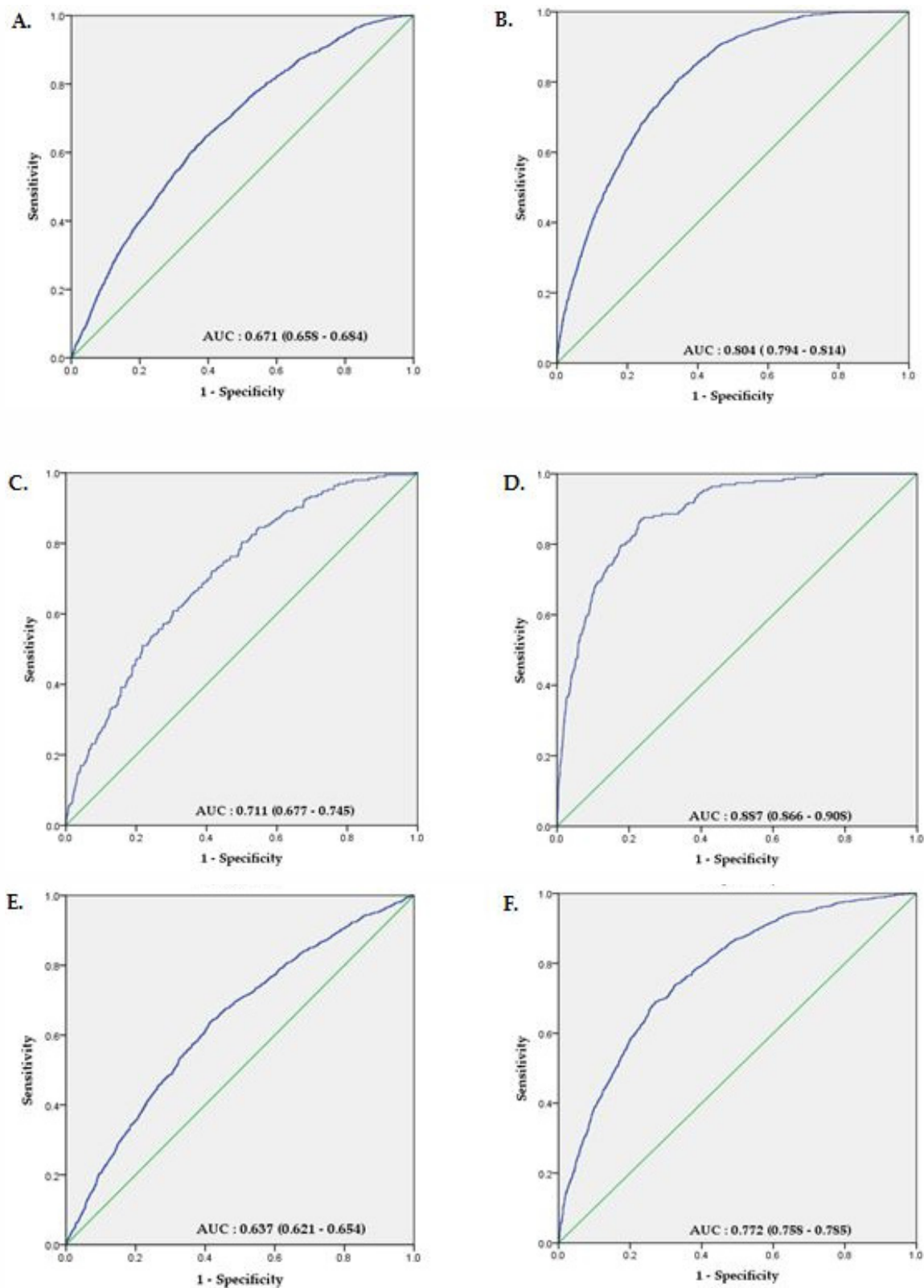
**Supplementary Table S4.** Odds ratio and 95% confidence intervals for the prevalence of DM according to RGS quartile.

		Men				Women (pre-menopause)				Women (post-menopause)			
		Q <sub>1</sub>	Q <sub>2</sub>	Q <sub>3</sub>	Q <sub>4</sub>	Q <sub>1</sub>	Q <sub>2</sub>	Q <sub>3</sub>	Q <sub>4</sub>	Q <sub>1</sub>	Q <sub>2</sub>	Q <sub>3</sub>	Q <sub>4</sub>
		≤ 2.84	2.85–3.30	3.31–3.75	> 3.75	≤ 1.90	1.91–2.22	2.22–2.53	> 2.53	≤ 1.48	1.48–1.81	1.81–2.13	> 2.13
<i>&lt; 40 years</i>													
Unadjusted	1.00	0.24 (0.13-0.44)	0.23 (0.11-0.52)	0.06 (0.02-0.15)	1.00	0.33 (0.16-0.66)	0.20 (0.08-0.48)	0.10 (0.03-0.31)	N/A	N/A	N/A	N/A	
Model 1	1.00	0.22 (0.12-0.40)	0.20 (0.09-0.45)	0.05 (0.02-0.13)	1.00	0.29 (0.14-0.62)	0.17 (0.07-0.42)	0.08 (0.03-0.25)	N/A	N/A	N/A	N/A	
Model 2	1.00	0.44 (0.22-0.86)	0.61 (0.27-1.36)	0.22 (0.07-0.67)	1.00	0.69 (0.29-1.63)	0.58 (0.21-1.59)	0.45 (0.13-1.55)	N/A	N/A	N/A	N/A	
Model 3	1.00	0.38 (0.19-0.75)	0.61 (0.25-1.47)	0.21 (0.07-0.66)	1.00	0.84 (0.33-2.14)	0.70 (0.23-2.10)	0.54 (0.12-2.34)	N/A	N/A	N/A	N/A	
<i>40-59 years</i>													
Unadjusted	1.00	0.67 (0.52-0.86)	0.58 (0.45-0.76)	0.28 (0.20-0.38)	1.00	0.50 (0.31-0.81)	0.48 (0.28-0.81)	0.06 (0.02-0.15)	1.00	0.71 (0.47-1.09)	0.57 (0.36-0.90)	0.39 (0.25-0.61)	
Model 1	1.00	0.67 (0.52-0.86)	0.59 (0.46-0.77)	0.30 (0.22-0.42)	1.00	0.52 (0.32-0.83)	0.49 (0.29-0.85)	0.06 (0.02-0.17)	1.00	0.71 (0.47-1.08)	0.57 (0.36-0.90)	0.39 (0.25-0.61)	
Model 2	1.00	0.82 (0.63-1.07)	0.85 (0.64-1.13)	0.49 (0.34-0.70)	1.00	0.81 (0.48-1.37)	1.23 (0.67-2.23)	0.19 (0.07-0.52)	1.00	0.82 (0.51-1.30)	0.87 (0.53-1.43)	0.87 (0.53-1.43)	
Model 3	1.00	0.79 (0.60-1.04)	0.83 (0.62-1.12)	0.49 (0.33-0.71)	1.00	0.85 (0.50-1.44)	1.26 (0.68-2.33)	0.20 (0.07-0.55)	1.00	0.90 (0.55-1.46)	0.94 (0.56-1.56)	0.89 (0.53-1.49)	
<i>≥ 60 years</i>													
Unadjusted	1.00	0.74 (0.61-0.90)	0.46 (0.36-0.59)	0.52 (0.36-0.75)	N/A	N/A	N/A	N/A	1.00	0.76 (0.62-0.92)	0.43 (0.34-0.54)	0.38 (0.30-0.50)	
Model 1	1.00	0.70 (0.58-0.86)	0.43 (0.33-0.55)	0.47 (0.33-0.69)	N/A	N/A	N/A	N/A	1.00	0.84 (0.69-1.02)	0.51 (0.40-0.64)	0.49 (0.37-0.65)	
Model 2	1.00	0.80 (0.65-0.98)	0.51 (0.38-0.68)	0.65 (0.43-0.97)	N/A	N/A	N/A	N/A	1.00	0.94 (0.76-1.17)	0.68 (0.53-0.87)	0.81 (0.60-1.10)	
Model 3	1.00	0.83 (0.67-1.03)	0.55 (0.42-0.74)	0.74 (0.49-1.12)	N/A	N/A	N/A	N/A	1.00	0.92 (0.74-1.15)	0.69 (0.53-0.89)	0.84 (0.61-1.15)	

Model 1: adjusted for age

Model 2: adjusted for age, waist circumference, regular exercise, smoking status, and alcohol uptake

Model 3: adjusted for age, waist circumference, regular exercise, smoking status, alcohol uptake, total cholesterol, TG, AST, ALT and systolic blood pressure



**Supplementary Figure S1.** ROC curve predicting prevalence of DM according to RGS (per 0.1kg) in men in unadjusted model (A), and model 3 (B), in premenopausal women in unadjusted model (C), and model 3 (D), in postmenopausal women in unadjusted model (E), and model 3 (F).