

Supplementary Online Content

**Supplement Table S1 Association between vitamin B and VFA-defined obesity in older adults (≥60 years)**

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**Supplement Table S1 Association between vitamin B and VFA-defined obesity in older adults (≥60 years)**

	OR (95% CI) <sup>a</sup>
<b>VB<sub>1</sub></b>	
Quartile 1 (<2.60 ng/mL)	0 (ref)
Quartile 2 (~3.16 ng/mL)	<b>0.54 (0.31, 0.94)</b>
Quartile 3 (~4.38 ng/mL)	<b>0.47 (0.27, 0.81)</b>
Quartile 4 (>4.38 ng/mL)	<b>0.47 (0.27, 0.84)</b>
<b>VB<sub>2</sub></b>	
Quartile 1 (<2.98 ng/mL)	0 (ref)
Quartile 2 (~4.58 ng/mL)	0.71 (0.41, 1.23)
Quartile 3 (~7.18 ng/mL)	0.98 (0.56, 1.70)
Quartile 4 (>7.18 ng/mL)	0.58 (0.33, 1.00)
<b>VB<sub>6</sub></b>	
Quartile 1 (<8.99 ng/mL)	0 (ref)
Quartile 2 (~12.33 ng/mL)	0.80 (0.46, 1.39)
Quartile 3 (~17.45 ng/mL)	0.64 (0.36, 1.13)
Quartile 4 (>17.45 ng/mL)	<b>0.56 (0.32, 0.98)</b>
<b>VB<sub>9</sub></b>	
Quartile 1 (<2.59 ng/mL)	0 (ref)
Quartile 2 (~4.27 ng/mL)	0.63 (0.36, 1.10)
Quartile 3 (~6.59 ng/mL)	0.65 (0.37, 1.14)
Quartile 4 (>6.59 ng/mL)	<b>0.52 (0.30, 0.91)</b>

<sup>a</sup> adjusted for sex, marital status, education, smoking status, drinking status, employment status, physical activity, family income, daily energy intake (tertiles), nutritional supplement and chronic diseases.

**Supplement Table S2 Association between vitamin B and WC-defined obesity in older adults (≥60 years)**

	OR (95% CI) <sup>a</sup>
VB <sub>1</sub>	
Quartile 1 (<2.60 ng/mL)	0 (ref)
Quartile 2 (~3.16 ng/mL)	0.96 (0.57, 1.63)
Quartile 3 (~4.38 ng/mL)	0.74 (0.44, 1.27)
Quartile 4 (>4.38 ng/mL)	<b>0.48 (0.27, 0.85)</b>
VB <sub>2</sub>	
Quartile 1 (<2.98 ng/mL)	0 (ref)
Quartile 2 (~4.58 ng/mL)	0.85 (0.50, 1.46)
Quartile 3 (~7.18 ng/mL)	0.73 (0.42, 1.27)
Quartile 4 (>7.18 ng/mL)	<b>0.41 (0.23, 0.72)</b>
VB <sub>6</sub>	
Quartile 1 (<8.99 ng/mL)	0 (ref)
Quartile 2 (~12.33 ng/mL)	1.03 (0.59, 1.77)
Quartile 3 (~17.45 ng/mL)	0.94 (0.53, 1.64)
Quartile 4 (>17.45 ng/mL)	0.66 (0.38, 1.15)
VB <sub>9</sub>	
Quartile 1 (<2.59 ng/mL)	0 (ref)
Quartile 2 (~4.27 ng/mL)	0.99 (0.58, 1.71)
Quartile 3 (~6.59 ng/mL)	0.82 (0.47, 1.42)
Quartile 4 (>6.59 ng/mL)	0.65 (0.38, 1.14)

<sup>a</sup> adjusted for sex, marital status, education, smoking status, drinking status, employment status, physical activity, family income, daily energy intake (tertiles), nutritional supplement and chronic diseases.

**Supplement Table S3 Association between vitamin B and BF%-defined obesity in older adults (≥60 years)**

	OR (95% CI) <sup>a</sup>
VB <sub>1</sub>	
Quartile 1 (<2.60 ng/mL)	0 (ref)
Quartile 2 (~3.16 ng/mL)	<b>0.52 (0.31, 0.91)</b>
Quartile 3 (~4.38 ng/mL)	<b>0.46 (0.27, 0.79)</b>
Quartile 4 (>4.38 ng/mL)	<b>0.41 (0.23, 0.72)</b>
VB <sub>2</sub>	
Quartile 1 (<2.98 ng/mL)	0 (ref)
Quartile 2 (~4.58 ng/mL)	0.61 (0.36, 1.05)
Quartile 3 (~7.18 ng/mL)	1.02 (0.59, 1.76)
Quartile 4 (>7.18 ng/mL)	<b>0.56 (0.32, 0.96)</b>
VB <sub>6</sub>	
Quartile 1 (<8.99 ng/mL)	0 (ref)
Quartile 2 (~12.33 ng/mL)	1.02 (0.59, 1.76)
Quartile 3 (~17.45 ng/mL)	0.66 (0.38, 1.16)
Quartile 4 (>17.45 ng/mL)	<b>0.57 (0.33, 0.99)</b>
VB <sub>9</sub>	
Quartile 1 (<2.59 ng/mL)	0 (ref)
Quartile 2 (~4.27 ng/mL)	0.68 (0.40, 1.17)
Quartile 3 (~6.59 ng/mL)	0.61 (0.35, 1.06)
Quartile 4 (>6.59 ng/mL)	0.59 (0.34, 1.02)

<sup>a</sup> adjusted for sex, marital status, education, smoking status, drinking status, employment status, physical activity, family income, daily energy intake (tertiles), nutritional supplement and chronic diseases.

**Supplement Table S4 Association between vitamin B and VFA-defined obesity in female**

	OR (95% CI) <sup>a</sup>
<b>VB<sub>1</sub></b>	
Quartile 1 (<2.60 ng/mL)	0 (ref)
Quartile 2 (~3.16 ng/mL)	0.68 (0.45, 1.01)
Quartile 3 (~4.38 ng/mL)	<b>0.55 (0.37, 0.83)</b>
Quartile 4 (>4.38 ng/mL)	<b>0.52 (0.34, 0.79)</b>
<b>VB<sub>2</sub></b>	
Quartile 1 (<2.98 ng/mL)	0 (ref)
Quartile 2 (~4.58 ng/mL)	0.88 (0.59, 1.32)
Quartile 3 (~7.18 ng/mL)	1.03 (0.68, 1.54)
Quartile 4 (>7.18 ng/mL)	0.73 (0.48, 1.10)
<b>VB<sub>6</sub></b>	
Quartile 1 (<8.99 ng/mL)	0 (ref)
Quartile 2 (~12.33 ng/mL)	0.85 (0.57, 1.27)
Quartile 3 (~17.45 ng/mL)	0.97 (0.65, 1.45)
Quartile 4 (>17.45 ng/mL)	<b>0.62 (0.41, 0.94)</b>
<b>VB<sub>9</sub></b>	
Quartile 1 (<2.59 ng/mL)	0 (ref)
Quartile 2 (~4.27 ng/mL)	0.66 (0.44, 0.98)
Quartile 3 (~6.59 ng/mL)	0.68 (0.46, 1.03)
Quartile 4 (>6.59 ng/mL)	<b>0.61 (0.40, 0.91)</b>

<sup>a</sup> adjusted for sex, marital status, education, smoking status, drinking status, employment status, physical activity, family income, daily energy intake (tertiles), nutritional supplement and chronic diseases.

**Supplement Table S5 Association between vitamin B and BF%-defined obesity in female**

	OR (95% CI) <sup>a</sup>
<b>VB<sub>1</sub></b>	
Quartile 1 (<2.60 ng/mL)	0 (ref)
Quartile 2 (~3.16 ng/mL)	0.67 (0.45, 1.01)
Quartile 3 (~4.38 ng/mL)	<b>0.55 (0.37, 0.83)</b>
Quartile 4 (>4.38 ng/mL)	<b>0.49 (0.32, 0.75)</b>
<b>VB<sub>2</sub></b>	
Quartile 1 (<2.98 ng/mL)	0 (ref)
Quartile 2 (~4.58 ng/mL)	0.67 (0.45, 1.00)
Quartile 3 (~7.18 ng/mL)	0.93 (0.62, 1.40)
Quartile 4 (>7.18 ng/mL)	<b>0.64 (0.42, 0.97)</b>
<b>VB<sub>6</sub></b>	
Quartile 1 (<8.99 ng/mL)	0 (ref)
Quartile 2 (~12.33 ng/mL)	1.01 (0.70, 1.51)
Quartile 3 (~17.45 ng/mL)	0.95 (0.67, 1.43)
Quartile 4 (>17.45 ng/mL)	0.70 (0.46, 1.06)
<b>VB<sub>9</sub></b>	
Quartile 1 (<2.59 ng/mL)	0 (ref)
Quartile 2 (~4.27 ng/mL)	0.81 (0.54, 1.20)
Quartile 3 (~6.59 ng/mL)	0.82 (0.55, 1.23)
Quartile 4 (>6.59 ng/mL)	0.69 (0.46, 1.03)

<sup>a</sup> adjusted for sex, marital status, education, smoking status, drinking status, employment status, physical activity, family income, daily energy intake (tertiles), nutritional supplement and chronic diseases.

**Supplement Table S6 Association between vitamin B and WC-defined obesity in female**

	OR (95% CI) <sup>a</sup>
<b>VB<sub>1</sub></b>	
Quartile 1 (<2.60 ng/mL)	0 (ref)
Quartile 2 (~3.16 ng/mL)	0.91 (0.60, 1.39)
Quartile 3 (~4.38 ng/mL)	0.74 (0.48, 1.13)
Quartile 4 (>4.38 ng/mL)	<b>0.51 (0.32, 0.80)</b>
<b>VB<sub>2</sub></b>	
Quartile 1 (<2.98 ng/mL)	0 (ref)
Quartile 2 (~4.58 ng/mL)	0.89 (0.58, 1.37)
Quartile 3 (~7.18 ng/mL)	0.79 (0.51, 1.2)
Quartile 4 (>7.18 ng/mL)	0.65 (0.42, 1.01)
<b>VB<sub>6</sub></b>	
Quartile 1 (<8.99 ng/mL)	0 (ref)
Quartile 2 (~12.33 ng/mL)	0.95 (0.62, 1.47)
Quartile 3 (~17.45 ng/mL)	0.97 (0.81, 1.92)
Quartile 4 (>17.45 ng/mL)	0.83 (0.53, 1.30)
<b>VB<sub>9</sub></b>	
Quartile 1 (<2.59 ng/mL)	0 (ref)
Quartile 2 (~4.27 ng/mL)	0.81 (0.53, 1.24)
Quartile 3 (~6.59 ng/mL)	0.84 (0.54, 1.29)
Quartile 4 (>6.59 ng/mL)	0.83 (0.54, 1.27)

<sup>a</sup> adjusted for sex, marital status, education, smoking status, drinking status, employment status, physical activity, family income, daily energy intake (tertiles), nutritional supplement and chronic diseases.