

Table 1. Subject characteristics by sex, according to gender and BMI

Characteristics	Total			P-value ²	Boys (n=633)		Girls (n=627)		p-value ³	p-value ⁴
	Total (n=1260)	Boys (n=633)	Girls (n=627)		NOR (n=522)	OB ⁶ (n=111)	NOR (n=550)	OB (n=76)		
Anthropometrics										
BMI (kg/m ²)	17.8±0.1 ¹	18.2±0.1	17.4±0.1	*** ⁵	17.2±1.8 ^b	23.2±2.4 ^d	16.7±1.7 ^a	21.7±1.7 ^c	***	***
WC (cm)	59.2±0.1	60.7±0.2	57.6±0.2	***	58.3±5.7 ^b	71.9±7.3 ^d	55.9±5.0 ^a	67.2±4.7 ^c	***	***
Blood pressure										
SBP (mmHg)	109.3±0.3	110.5±0.5	108.1±0.5	***	108.5±15.6 ^a	120.3±19.1 ^c	106.7±15.7 ^a	115.3±18.9 ^b	***	***
DBP(mmHg)	70.1±0.3	70.4±0.4	69.7±0.4	NS	69.1±13.0 ^a	76.9±14.0 ^c	68.7±12.9 ^a	74.6±13.6 ^b	***	***
Lipid profiles										
TC (mg/dL)	175.3±0.6	173.7±0.9	177.0±0.9	**	172±30.9 ^a	178.7±30.4 ^b	175.6±30.8 ^{ab}	187.1±30.6 ^c	***	***
TG (mg/dL)	75.6±0.8	70.1±1.2	81.1±1.2	***	65.8±32.7 ^a	90.5±54.7 ^c	76.6±37.4 ^b	79.3±10.9 ^d	***	***
HDL-c (mg/dL)	56.1±0.2	56.9±0.3	55.3±0.3	***	58.0±10.3 ^d	52.4±9.5 ^b	56.0±10.3 ^c	50.5±8.1 ^a	***	***
LDL-c (mg/dL)	104.0±0.6	102.9±0.8	105.2±0.8	*	101.1±28.3 ^a	108.2±28.0 ^b	104.0±28.6 ^{ab}	115.5±27.6 ^c	***	***
Insulin resistance related factors										
FBS (mg/dL)	77.7±0.2	78.0±0.3	77.3±0.3	NS	77.6±11.3 ^a	80.9±14.7 ^b	76.8±9.9 ^a	79.3±10.9 ^b	***	***
Insulin (nU/mL)	7.3±0.1	7.1±0.2	7.4±0.2	NS	6.7±6.5 ^a	9.4±6.4 ^b	6.7±5.4 ^a	11.2±9.4 ^c	***	***
HOMA-IR	1.4±0.0	1.4±0.0	1.4±0.0	NS	1.3±1.4 ^a	1.9±1.4 ^b	1.3±1.1 ^a	2.2±1.9 ^c	***	***
HDL subfractions n=60										
		n=27	n=33		n=15	n=12	n=22	n=11		
Peak size(nm)	9.7±1.1	9.8±1.0	9.5±1.2	NS	10.4±0.2 ^b	9.1±0.3 ^{a,*}	9.9±0.3 ^b	8.9±0.3 ^{a,*}	***	***
HDL _{2b} (%)	35.2±3.4	35.5±3.2	34.9±3.6	NS	36.5±0.9	34.3±1.0 [*]	35.5±0.8	33.8±1.0 [*]	*	NS
HDL _{2a} (%)	20.7±1.1	21.1±1.2	20.4±1.1	*	21.0±0.3 ^b	21.2±0.4 ^b	20.6±0.2 ^{ab}	20.1±0.3 ^a	NS	*
HDL _{3a} (%)	16.7±1.1	16.9±1.1	16.5±1.0	NS	16.6±0.3	17.1±0.3	16.5±0.2	16.4±0.3	NS	NS
HDL _{3b} (%)	11.8±1.1	11.6±1.2	11.9±1.0	NS	11.4±0.3	11.9±0.4	11.7±0.2	12.2±0.3	NS	NS
HDL _{3c} (%)	15.7±2.5	14.9±2.2	16.3±2.5	*	14.4±0.5 ^a	15.5±0.6 ^{b,*}	15.7±0.5 ^b	17.5±0.7 ^{c,*}	***	**
Energy and Nutrient intake										
Energy (kcal)	1617±380.7	1698.4±387.7	1536.2±355.6	***	1690±391.9 ^b	1733.7±367.5 ^{b,*}	1532.5±360.5 ^a	1558.0±325.2 ^{a,*}	*	***
Carbohydrate (g)	220.8±24.4	230.7±23.2	210.8±21.2	***	231.2±23.2 ^c	228.5±23.5 ^c	211.5±20.7 ^b	207.1±23.7 ^a	NS	***
Protein (g)	33.6±13.9	69.7±8.8	62.8±16.9	***	69.5±8.8 ^c	70.8±8.8 ^{c,*}	62.2±9.2 ^b	65.1±11.7 ^{a,*}	***	***
Fat (g)	54.4±9.7	57.6±9.5	51.2±8.9	***	57.6±9.4 ^b	57.6±9.8 ^b	51.5±8.8 ^a	52.7±9.0 ^{a,*}	*	***
Na (mg)	3573.6±785.0	3714.2±791.5	3431.6±752.3	***	3710.7±776.1 ^b	3729.5±857.2 ^b	3422.2±751.2 ^a	3486.6±759.0 ^a	NS	***
K (mg)	2338.3±484.8	2452.0±500.9	2223.6±439.3	***	2464.1±484.0 ^b	2408.0±568.0 ^b	2217.9±436.9 ^a	2257.1±452.7 ^a	NS	***

¹. Data are expressed as the mean ± SD; adjusted by energy²; p-value: t-test between boys and girls

³. p-value: t-test between NOR and OB, expressed by an asterisk

⁴. p-value: ANOVA p-value, expressed by a lowercase letter

⁵.*: P<0.05, **: P<0.01, ***: P<0.001, NS: no significance

Table 2. Differences in anthropometrics, blood pressure, lipid profiles and nutrients intake by sex and GNB3 alleles

GNB3	Total (n=2452)		Boys (n=1236)		Girls (n=1216)		p-value ³
	C (n=1219)	T (n=1233)	C (n=604)	T (n=632)	C (n=615)	T (n=601)	
Anthropometric measurement							
BMI (kg/m ²)	17.8±0.1 ¹	17.9±0.1	18.1±0.1 ^c	18.4±0.1 ^{d*,2}	17.6±0.1 ^b	17.2±0.1 ^{a,*}	*** ⁴
WC (cm)	59.1±0.2	59.2±0.2	60.3±0.3 ^c	61.2±0.3 ^{d,*}	57.9±0.3 ^b	57.0±0.3 ^{a,*}	***
Blood pressure							
SBP (mmHg)	109.0±0.5	109.7±0.5	110.1±0.7 ^c	111.4±0.7 ^d	107.9±0.7 ^a	108.0±0.7 ^b	**
DBP (mmHg)	69.7±0.4	70.4±0.4	70.1±0.6	71.2±0.5	69.4±0.5	69.6±0.5	NS
Lipid profile							
TC (mg/dL)	174.8±0.9	175.6±0.9	173.2±1.3	174.2±1.2	176.4±1.2	177.2±1.3	NS
TG (mg/dL)	74.8±1.2	76.3±1.2	69.6±1.6 ^a	71.0±1.5 ^{a,*}	79.4±1.7 ^b	81.7±1.7 ^b	***
HDL-c (mg/dL)	56.1±0.3	56.2±0.3	57.3±0.4 ^b	56.9±0.4 ^{b,*}	54.0±0.4 ^a	55.5±0.4 ^a	***
LDL-c(mg/dL)	103.7±0.8	104.2±0.8	102.0±1.2	103.2±1.1	105.3±1.2	105.5±0.4	NS
Insulin resistance related profiles							
FBS (mg/dL)	77.4±0.3	77.7±0.3	77.6±0.5	78.5±0.5	77.1±0.4	77.0±0.4	NS
Insulin (nU/mL)	7.4±0.2	7.1±0.2	7.1±0.3	7.2±0.3	7.6±0.3	7.1±0.3	NS
HOMA-IR	1.4±0.0	1.4±0.0	1.4±0.1	1.4±0.1	1.5±0.1	1.4±0.1	NS
Energy and Nutrient intake							
Energy (kcal)	1614.0±394.3	1620.1±367.6	1713.2±406.1 ^c	1677.9±369.8 ^c	1516.7±356.8 ^a	1559.5±355.6 ^{b,*}	***
Carbohydrate (g)	221.1±24.2	220.6±24.4	231.3±22.7 ^b	230.2±23.1 ^b	211.2±21.3 ^a	210.6±21.4 ^a	***
Protein (g)	65.8±14.2	66.8±13.6	69.4±9.0 ^b	69.9±8.7 ^b	62.8±9.9 ^a	62.4±9.5 ^a	***
Fat (g)	54.2±9.5	54.5±9.9	57.4±8.9 ^b	57.7±9.7 ^b	51.6±9.0 ^a	51.7±8.8 ^a	***
Na (mg)	3576.9±794.7	3566.9±782.7	3707.4±805.4 ^b	3715.9±786.7 ^b	3448.8±763.1 ^a	3410.1±747.7 ^a	***
Ca (mg)	565.8±162.0	578.3±168.8	588.5±168.6 ^c	612.5±165.0 ^{d,*}	544.6±151.6 ^a	543.5±164.9 ^a	***
P (mg)	958.4±158.0	972.9±160.3 ^{*,2}	1005.1±164.7 ^c	1025.5±155.6 ^{d,*}	912.5±136.3 ^a	917.5±145.9 ^a	***
Vitamin A (µg R.E)	828.9±329.3	833.7±320.9	855.4±330.7 ^b	863.4±315.1 ^b	802.8±326.0 ^a	802.4±324.2 ^a	***
Vitamin B ₁ (mg)	1.6±0.4	1.6±0.4	1.7±0.3 ^b	1.7±0.3 ^b	1.6±0.4 ^a	1.6±0.4 ^a	***
Vitamin B ₂ (mg)	1.8±0.3	1.8±0.3	1.8±0.3 ^b	1.8±0.3 ^b	1.7±0.3 ^a	1.7±0.3 ^a	***

¹. Data are represented as the mean ± SD; adjusted by energy

². * :P-value<0.05, t-test between C allele and T allele, expressed by an asterisk.

³. p-value: ANOVA among 4 groups in boys and girls, expressed by a lowercase letter.

⁴. * : P<0.05, ** : P<0.01, *** : P<0.001, NS: no significance