

Harnessing Qatar Biobank to Understand Type 2 Diabetes and Obesity in Adult Qataris from the First Qatar Biobank Project

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Baseline Statistics

Table 1: Baseline characteristics for diabetes study. (Rows are sorted by significance)

Age	50.99 ± 10.03	39.01 ± 12.13	8.60 × 10⁻⁵⁵
Chloride	99.44 ± 2.61	101.18 ± 1.99	4.51 × 10⁻²⁴
Magnesium	0.79 ± 0.08	0.84 ± 0.06	3.50 × 10⁻²³
Triglycerides	1.83 ± 0.96	1.39 ± 1.00	2.03 × 10⁻¹¹
Albumin	44.25 ± 2.85	45.47 ± 2.86	1.07 × 10⁻¹⁰
BMI	31.39 ± 5.87	29.11 ± 6.00	8.00 × 10⁻⁰⁹
Free Triiodothyronine	4.31 ± 0.69	4.57 ± 0.62	1.50 × 10⁻⁰⁸
Vitamin D	21.69 ± 9.65	18.17 ± 9.40	1.93 × 10⁻⁰⁸
Sodium	139.38 ± 2.54	140.30 ± 2.25	2.17 × 10⁻⁰⁸
High Density Lipoprotein (HDL-C)	1.21 ± 0.33	1.34 ± 0.36	5.25 × 10⁻⁰⁸
Alkaline Phosphatase (ALP)	76.55 ± 21.07	69.42 ± 19.74	8.22 × 10⁻⁰⁸
Insulin	26.97 ± 45.70	14.82 ± 19.09	7.17 × 10⁻⁰⁶
GGT	37.04 ± 34.17	26.96 ± 34.05	7.55 × 10⁻⁰⁶
C-Reactive Protein	8.61 ± 7.45	6.72 ± 5.00	3.97 × 10⁻⁰⁵
Uric Acid	283.93 ± 78.53	304.45 ± 81.31	1.13 × 10⁻⁰⁴
Total Bilirubin	6.40 ± 3.03	7.19 ± 4.37	5.17 × 10⁻⁰⁴
Folate Serum	26.56 ± 7.80	24.81 ± 7.94	7.87 × 10⁻⁰⁴
C-Peptide of Insulin	3.29 ± 2.14	2.83 ± 1.80	8.36 × 10⁻⁰⁴
Vitamin B12	350.38 ± 215.53	307.04 ± 162.24	1.26 × 10⁻⁰³
Calcium	2.40 ± 0.09	2.39 ± 0.10	2.46 × 10⁻⁰³
Homocysteine	8.49 ± 2.73	8.98 ± 3.05	8.17 × 10⁻⁰³
ALT (GPT)	26.25 ± 15.40	23.75 ± 21.17	2.60 × 10⁻⁰²
Low Density Lipoprotein (LDL-C)	2.89 ± 0.96	3.01 ± 0.86	5.78 × 10 ⁻⁰²
Serum Creatinine	65.97 ± 16.43	68.33 ± 27.15	6.92 × 10 ⁻⁰²
Thyroid Stimulating Hormone (TSH)	1.71 ± 1.23	2.04 ± 5.07	6.98 × 10 ⁻⁰²
Free Thyroxine	13.66 ± 2.02	13.51 ± 1.85	2.30 × 10 ⁻⁰¹
Creatine Kinase	108.01 ± 111.32	118.72 ± 200.94	2.45 × 10 ⁻⁰¹
Cholesterol	4.92 ± 1.10	4.96 ± 0.93	5.13 × 10 ⁻⁰¹
Potassium	4.39 ± 0.31	4.38 ± 0.35	6.66 × 10 ⁻⁰¹
AST (GOT)	19.81 ± 8.95	20.00 ± 12.51	7.73 × 10 ⁻⁰¹
Hemoglobin	13.63 ± 1.66	13.60 ± 1.68	7.97 × 10 ⁻⁰¹
Gender	m = 160 ± f = 152	m = 454 ± f = 444	8.25 × 10 ⁻⁰¹
Phosphorus	1.15 ± 0.17	1.15 ± 0.17	9.52 × 10 ⁻⁰¹

Table 2: Baseline characteristics for obesity study. (Rows are sorted by significance)

	Obese ($n = 508$)	Normal ($n = 224$)	P-value
Albumin	44.07 \pm 2.76	46.58 \pm 2.61	1.95 $\times 10^{-28}$
Age	45.36 \pm 11.77	35.02 \pm 12.68	6.94 $\times 10^{-25}$
C-Peptide of Insulin	3.43 \pm 2.07	2.17 \pm 1.39	1.43 $\times 10^{-20}$
Triglycerides	1.61 \pm 1.10	1.10 \pm 0.62	5.19 $\times 10^{-15}$
HBA1C%	6.53 \pm 1.65	5.71 \pm 1.26	6.87 $\times 10^{-13}$
Insulin	22.77 \pm 38.85	10.59 \pm 10.95	1.54 $\times 10^{-10}$
High Density Lipoprotein (HDL-C)	1.27 \pm 0.33	1.45 \pm 0.36	3.24 $\times 10^{-10}$
Magnesium	0.81 \pm 0.07	0.84 \pm 0.06	3.61 $\times 10^{-08}$
Uric Acid	304.39 \pm 80.52	272.01 \pm 68.71	4.25 $\times 10^{-08}$
Total Bilirubin	6.19 \pm 3.76	8.23 \pm 4.94	7.18 $\times 10^{-08}$
Glucose	6.90 \pm 3.42	5.68 \pm 2.67	2.79 $\times 10^{-07}$
Alkaline Phosphatase (ALP)	74.88 \pm 21.26	66.86 \pm 19.06	1.47 $\times 10^{-06}$
C-Reactive Protein	8.26 \pm 6.12	6.27 \pm 5.10	6.41 $\times 10^{-06}$
GGT	32.80 \pm 41.32	22.93 \pm 24.53	6.67 $\times 10^{-05}$
Gender	m = 203 \pm f = 305	m = 122 \pm f = 102	2.62 $\times 10^{-04}$
Calcium	2.38 \pm 0.10	2.41 \pm 0.09	3.07 $\times 10^{-04}$
Cholesterol	4.99 \pm 0.95	4.73 \pm 0.88	7.41 $\times 10^{-04}$
Hemoglobin	13.25 \pm 1.74	13.73 \pm 1.57	7.42 $\times 10^{-04}$
Free Triiodothyronine	4.44 \pm 0.61	4.56 \pm 0.60	1.06 $\times 10^{-02}$
Low Density Lipoprotein (LDL-C)	2.99 \pm 0.85	2.82 \pm 0.79	1.13 $\times 10^{-02}$
Free Thyroxine	13.50 \pm 1.90	13.78 \pm 1.59	4.00 $\times 10^{-02}$
ALT (GPT)	24.42 \pm 19.03	21.21 \pm 24.84	8.61 $\times 10^{-02}$
Vitamin B12	305.97 \pm 156.28	329.45 \pm 196.98	1.15 $\times 10^{-01}$
Sodium	139.90 \pm 2.40	140.18 \pm 2.31	1.37 $\times 10^{-01}$
Chloride	100.60 \pm 2.32	100.86 \pm 2.20	1.44 $\times 10^{-01}$
Thyroid Stimulating Hormone (TSH)	1.94 \pm 2.31	1.70 \pm 2.13	1.95 $\times 10^{-01}$
Folate Serum	25.34 \pm 7.82	24.54 \pm 7.57	1.99 $\times 10^{-01}$
Phosphorus	1.15 \pm 0.16	1.16 \pm 0.17	2.08 $\times 10^{-01}$
Serum Creatinine	65.69 \pm 15.78	66.95 \pm 14.47	3.05 $\times 10^{-01}$
Homocysteine	8.87 \pm 2.93	9.08 \pm 3.53	4.30 $\times 10^{-01}$
Creatine Kinase	106.70 \pm 90.63	113.89 \pm 164.56	5.39 $\times 10^{-01}$
Potassium	4.37 \pm 0.32	4.39 \pm 0.37	5.59 $\times 10^{-01}$
Vitamin D	18.90 \pm 8.48	18.46 \pm 10.99	5.96 $\times 10^{-01}$
AST (GOT)	19.74 \pm 10.95	19.38 \pm 13.83	7.29 $\times 10^{-01}$