



Targeting the Risk of Depression Through Unhealthy Lifestyle

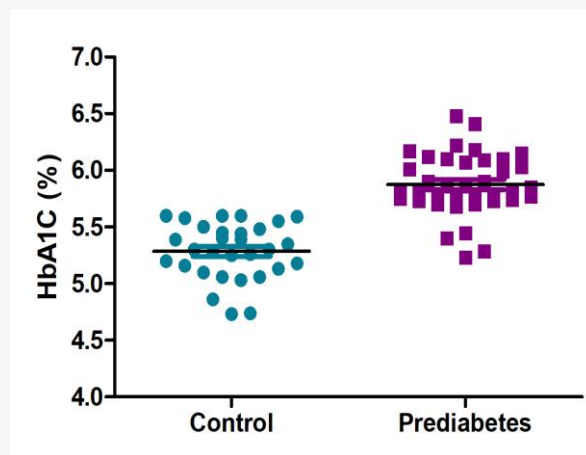
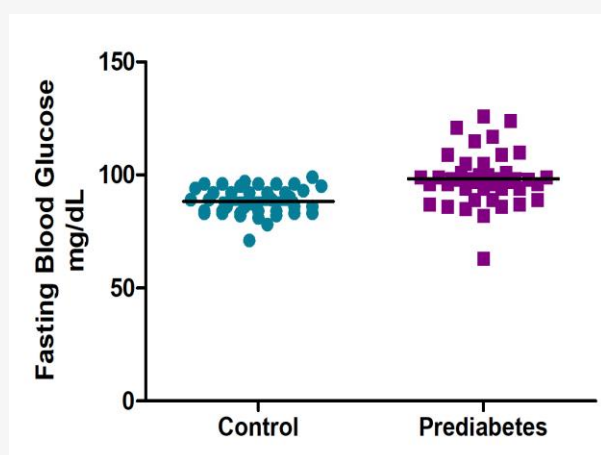
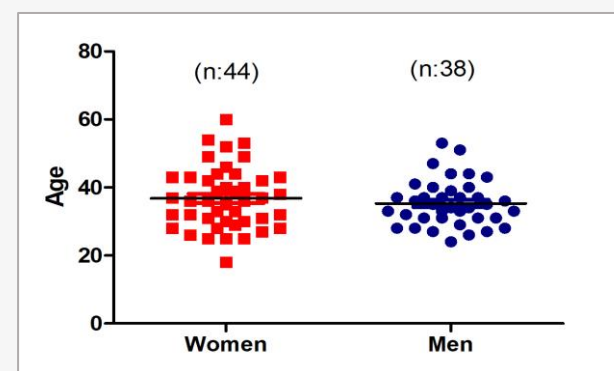
The Relationship Between Insulin Resistance, Physical and Social Activities, Sleep Quality and Depressive Symptoms in the PREDIABETIC PERIOD

Faize Elif Bahadır¹, Melike Yavuz², Özlem Unay Demirel³, Yavuz Gövdeli⁴, Irem Yoğurtcu⁴, Özüm Fırat⁵, Yavuz Furuncuoğlu⁶

1, Department of Physiology, Bahçeşehir University, İstanbul, Turkey; 2, Department of Public Health; 3, Department of Biochemistry; 4, Bahçeşehir University, School of Medicine, 4th year students; 5, Freelance Psychologist; 6, Bahçeşehir Medical Park Hospital, Internal Disease, İstanbul Turkey

The study aims to investigate the potential link between mild hyperglycemia and the development of depression. We tried to see if there is an early sign to predict the potential onset of depression according to the changes in the hormonal status and individual's lifestyle. The clinical observational studies were not sufficient to foresee the coming depression.

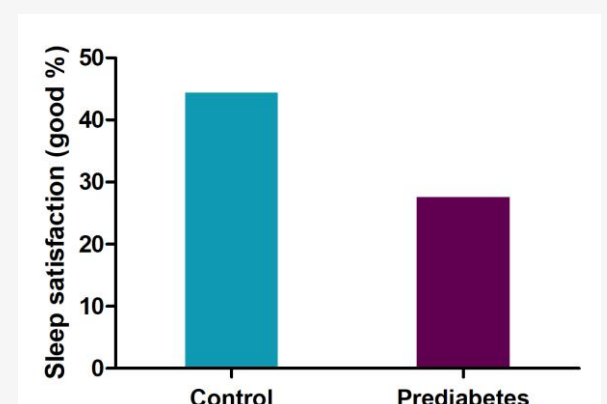
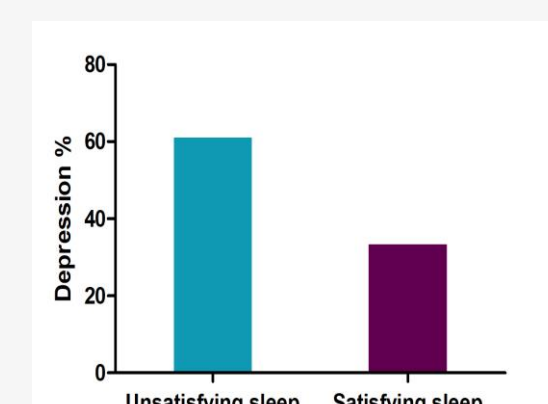
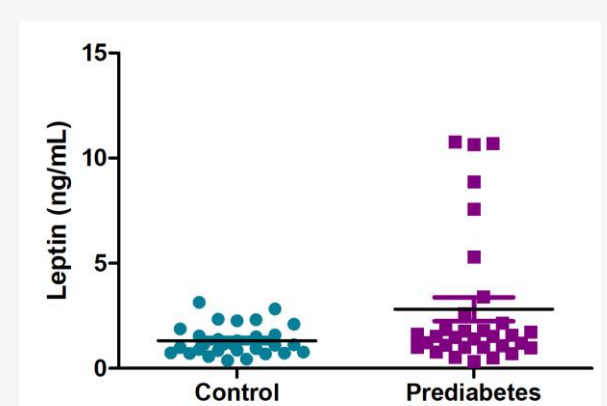
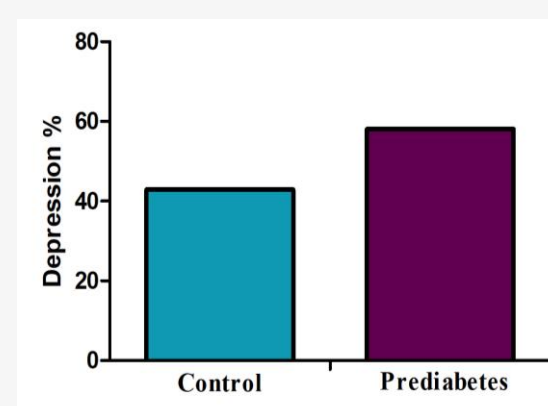
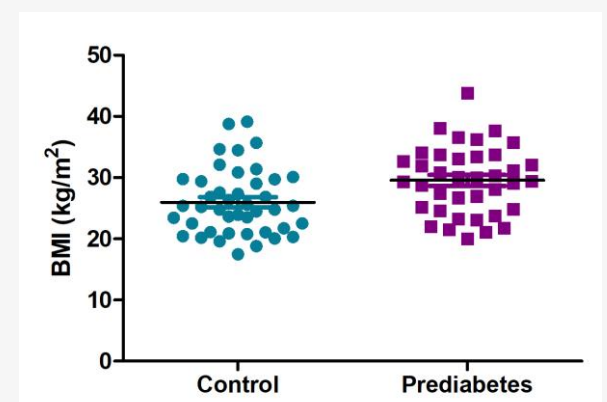
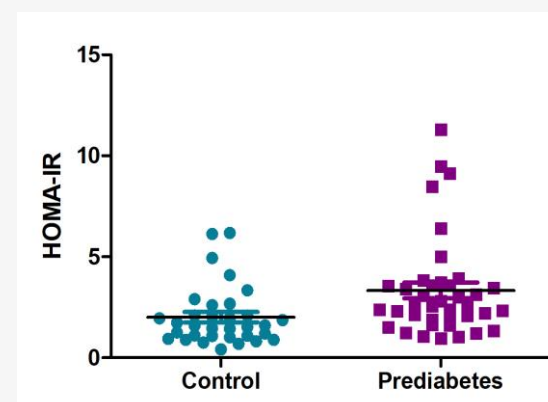
➤ Individuals who were not on medication for regulating blood glucose levels or for depression were recruited for the study



➤ Fasting blood glucose levels between 100–125 mg/dL, and/or HbA1c between 5.6-6.9% were considered as prediabetic

➤ Participants who reported having mild and moderate symptoms were regarded as depressive according to the BDI

Characteristics of study groups	Control (Mean/%)	Prediabetes (Mean/%)	P values
Age (Years)	35.21 ± 0.94	37.13 ± 1.55	0.296
Gender (Female %)	60.46	46.15	0.194
BMI	25.99 ± 0.81	29.54 ± 0.89	0.004**
HOMA-IR	2.01 ± 0.25	3.34 ± 0.39	0.008**
Fasting glucose (mmol/L)	88.36 ± 0.99	98.28 ± 1.95	0.000***
HbA1c (%)	5.29 ± 0.04	5.87 ± 0.04	0.000***
Fasting insulin (μU/mL)	9.04 ± 1.07	13.13 ± 1.27	0.019*
Total cholesterol (mmol/L)	214.92 ± 7.33	203.00 ± 6.08	0.213
Triglyceride (mmol/L)	101.97 ± 8.15	125.76 ± 11.2	0.090
HDL cholesterol (mmol/L)	53.30 ± 2.72	47.23 ± 2.26	0.090
LDL cholesterol (mmol/L)	134.93 ± 4.99	122.60 ± 5.11	0.089
Leptin (ng/mL)	1.32 ± 0.13	2.81 ± 0.56	0.015*
Depression (Exist) %	42.85	58.06	0.218
Physical activity level (intermediate & above %)	86.8	78.1	0.335
Social activity active (%)	68.4	62.5	0.603
Sleep satisfaction (Good %)	44.4	27.6	0.162



According to the results of the Beck Depression Inventory, there is a tendency towards depression in the prediabetic period, but the difference did not reach statistically significant level. Poor sleep quality was found to be a significant factor to increase the progression of depression.