

# Obesity

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## High prevalence of overweight and obesity in Asians and Arabs living in United Arab Emirates: UAEDIAB study

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**Background:** Obesity is a major public health problem worldwide and represents a significant risk factor for non-communicable diseases (NCD) including diabetes and heart diseases. The Prevalence of overweight and obesity is increasing in both males and females in countries of the Gulf Cooperation Council (GCC) including the UAE. This paper describes obesity prevalence and related NCD in expatriates living in UAE during 2013/2014.

**Methods:** The study is part of Large National UAE Diabetes and Lifestyle Study- a cross-sectional survey designed to investigate the prevalence of diabetes and associated risk factors in Expatriates living in UAE for at least four. The study was conducted during 2013 and 2014 using innovative, cost effective, random, representative sample of residents in Dubai, Sharjah and Northern Emirates. In summary a sample was drawn by the UAE National Bureau of Statistics based on actual data of expatriates visiting the preventive medicine clinics and fitness centers for visa renewal the year before the survey. Medical check-up for visa renewal every 2-3 years is a legal requirement in UAE. A systematic random sample of every 10th visitor was recruited for face-to-face interview, measurements of weight, height, waist and hip circumference and blood pressure. A sample of blood was collected and sent to one reference laboratory to test for blood glucose, cholesterol, lipids as well as insulin.

**Results:** A total of 2722 expatriates were recruited and has full set of data. Expatriates were mainly from South East Asia (70.7%), non-local Arabs (25.9%) and (European/ Africans 3.4%). The mean Body Mass Index (BMI) was 27 ( $\pm$ SE =5.383). Only 1% was underweight. The prevalence of overweight and obesity was 41.9% and 22.3% respectively. The prevalence of Obesity (BMI 30+) was more in females (30.9%) than males (20.3%) ( $p < 0.001$ ). The highest prevalence of obesity was amongst 51-60 years in both males (32.7%) and females (53.3%) and in those doing moderate and vigorous physical activity in both males and females. Diabetes (FBS  $\geq 7$  mmol/L) is more common in obese females (22%) than obese males (16.6%), similarly high cholesterol ( $\geq 5$  mmol/L) is more in females (64.8%) than males (60.2). However hypertension ( $\geq 140/90$  mm Hg) is more prevalent in obese males (37.8%) than obese females (26.8%). Also triglycerides ( $\geq 1.7$  mmol/L) are more in males (50.2%) than females (39.6%). Snoring and sleep apnea was more in males (36.9%, 6.6%) than females (32.3%, 3.8%) respectively.

**Conclusions:** Overweight and Obesity is a major health problem in expatriates living in UAE, it is associated with diabetes, hypertension, high lipids and cholesterol as well as snoring and sleep apnea. A longitudinal follow-up study with individual, household and community-level information is needed to determine the trends in obesity and associated factors and to measure impact of health interventions.

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