

## National Prevalence of Obesity

# Prevalence of obesity in Turkey

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### Summary

Obesity and overweight are increasing in Turkey according to the field surveys that were carried out a decade apart (TEKHARF 1990 and 2000). The overall prevalence of obesity in adults was 18.6% in the year 1990. Ten years later in 2000, the prevalence was 21.9%, which shows a relative increase rate of 17.7%. As it is true for most of the countries, overweight is more common in men and obesity is more prevalent among women in Turkey.

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The first population based study in Turkey, Turkish Adult Risk Factor Study (TEKHARF), was undertaken in the year 1990. The 'TEKHARF' study was carried out by the Turkish Society of Cardiology in randomly selected 59 cities in seven geographical regions. Body weight and height were measured by a trained survey team, while subjects were wearing light clothing without shoes. Waist circumference was measured midway between the lowest rib and the iliac crest. Diagnosis of obesity was made if body mass index (BMI) was  $\geq 30 \text{ kg m}^{-2}$  and central obesity was defined as waist circumference  $> 88 \text{ cm}$  in women and  $> 102 \text{ cm}$  in men.

The overall prevalence of obesity in 1990 was 18.6% (1). The same cohort (age  $> 20$  years) was followed for 10 years, hence yielding a study population with the age group  $> 30$  years in the year 2000. When re-screened for obesity a prevalence rate of 21.9% (data provided by A Onat personal communication, August 2004) was found and this shows a relative increase rate of 17.7%. In the 1990 survey 17.7% of the urban population and 19.9% of the rural inhabitants were obese. In TEK HARF 2000 16.8% of men and 55.8% of women had central obesity (1).

Turkish Diabetes Epidemiology Study (TURDEP) (2,3) and Turkish Obesity and Hypertension Study (TOHS) (4) were other large-scale population based surveys across the nation. In TURDEP study the obesity prevalence was the highest in central Anatolian (25.0%) and lowest in eastern Anatolian (17.2%) regions of the country (2) (Table 1).

Recent local field studies in adults age  $> 20$  years, in Trabzon (23.5%) (5) a city in the Black Sea region, in Adana (43.4%) (6) and Mersin (29.3%) (7) southern provinces of Turkey, and a telephone survey in Kayseri (12.0%) (8) a central Anatolian city, are surveys revealing the current magnitude of obesity in large cities.

A cross-sectional survey of 1024 children (mean age  $10.3 \pm 0.6$  years) in public primary schools was accomplished in Izmir, a city on the Aegean coast of Turkey. Children with a BMI  $\geq 95$ th percentile for age and gender were defined as obese. When stratified for socio-economic status the prevalence of obesity in school children in well developed areas was higher than that of the underdeveloped areas (1.7% vs. 0.5%) (9).

In conclusion, obesity is an alarming health issue in Turkey and it has shown an increasing trend over time according to the TEK HARF study. Nationwide surveys

**Table 1** Summarizes the results of the national surveys in Turkey

Study	n	Age (years)	Obesity percentage		
			Men	Women	Total
TEKHARF 1990	3 681	>30	12.5	32.0	18.6
TEKHARF 2000	2 494	>30	11.3	32.6	21.9
TURDEP 1999	24 788	>20	12.9	29.9	22.3
TOHS 2000	20 119	>20	14.4	24.6	19.4

need to be done in order to demonstrate the magnitude of obesity among children. The outcome of prevention and treatment should be evaluated by periodic national comparative surveys that would give us the actual trend.

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