

Most hypogonadal men are obese; long-term testosterone treatment leads to continuous reductions of body weight and waist circumference

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Introduction: This study investigated the distribution of obesity and effects of TRT in an unselected cohort of hypogonadal.

Methods: Open-label, single-center, cumulative, prospective registry study of 255 men (mean age 60.6 years), with testosterone levels between 5.89 –12.13 nmol/L (mean: 9.93 ± 1.38) receiving parenteral testosterone undecanoate for up to 5 years.

Results: At baseline, 13 patients (5.1%) had normal weight ($BMI \leq 24.9 \text{ m/kg}^2$). 61 (23.92%) were overweight, and 181 (70.98%) were obese ($BMI \geq 30 \text{ m/kg}^2$). 36 men (14.12%) were morbidly obese ($BMI \geq 40 \text{ m/kg}^2$). At baseline, 11 patients (4.31%) had a waist circumference < 94 cm, 70 (27.45%) 94-101.9 cm, and 174 (68.24%) ≥ 102 cm. After 5 years of testosterone treatment, weight (kg) decreased by 16.15 kg from 106.22 to 90.07. Waist circumference (cm) declined by 8.78 cm from 107.24 to 98.46. Both parameters showed a statistical significance ($p < 0.0001$ vs baseline and vs the previous year over 5 years) indicating continuous reductions. The mean per cent weight loss after 5 years was $13.21 \pm 7.24\%$. 95% of men had any weight loss, 90% lost ≥ 5 kg, 76% ≥ 10 kg, 53% ≥ 15 kg, 31% ≥ 20 kg. The 5% who gained exclusively belonged to the group with normal weight at baseline. 97% of men had any reduction in waist size, 86% lost ≥ 5 cm, 46% ≥ 10 cm, 7% ≥ 15 cm.

Conclusions: Normalising testosterone produced progressive loss of weight, and waist circumference over the full 5 years of the study.