

207 obese hypogonadal men treated with testosterone undecanoate up to 72 months progressively lose weight: an observational registry study

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Background: Obesity may induce male hypogonadism at all ages by various mechanisms affecting the hypothalamic-pituitary-gonadal axis [1]. Low testosterone promotes further accumulation of fat mass thus creating a vicious circle. We analysed the effects of normalising testosterone in obese hypogonadal men.

Methods: Cumulative, prospective, observational registry study of 207 obese men with testosterone levels below 12.1 nmol/L and a body mass index (BMI) of ≥ 30 kg/m² received parenteral testosterone undecanoate 1000 mg/12 weeks following an initial 6-week interval for up to six years.

Results: At the end of the observation period, mean weight (kg) decreased from 113.33 ± 11.63 to 91.59 ± 8.14 . This decrease was statistically significant vs baseline ($p < 0.0001$) and each year compared to previous year. The mean change from baseline was -20.68 ± 0.4 kg.

Mean waist circumference (cm) as a measure of abdominal fat decreased from 110.57 ± 7.3 to 99.35 ± 7.11 . This decline was statistically significant vs baseline ($p < 0.0001$) and each year compared to the previous year except the last year where statistical significance was approached ($p = 0.0564$). The mean change from baseline was -10.48 ± 0.28 cm.

BMI (kg/m²) decreased from 36.3 ± 3.69 to 29.69 ± 2.6 . This change was statistically significant vs baseline ($p < 0.0001$) and each year compared to previous year.

The mean per cent weight loss (%) was $5.39\% \pm 0.24$ after 1 year, 9.41 ± 0.25 after 2 years, 12.02 ± 0.26 after 3 years, 14.39 ± 0.26 after 4 years, 16.93 ± 0.28 after 5 years and 18.15 ± 0.33 after 6 years.

Conclusions: Raising serum testosterone to normal resulted in loss of weight and waist circumference. Improvement in weight was progressive over the full 6 years of the study, improvement in waist circumference was progressive over 5 years and still approached significance at 6 compared to 5 years.

[1] Saboor Aftab et al. Clin Endocrinol 2013; 78: 330–337