

## Effects of Long-Term Testosterone Treatment in 300 Hypogonadal Men on Body Weight and Prostate Parameters: an Update from a Registry Study

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**Introduction:** Obesity and inflammation are recognised as risk factors for prostate diseases and LUTS (De Nunzio C et al., Eur Urol 2011; 60: 106-117; De Nunzio C et al., Eur Urol 2012; 61: 560-570; Allott EH et al., Eur Urol 2013; 63: 800-809). In this study, the effects of restoring normal testosterone (T) in obese hypogonadal men were analysed.

**Methods:** Prospective registry study in 300 men (age:  $57.7 \pm 6.8$  years) with T levels below 12.1 nmol/L presenting to a single urology office for various reasons. All patients received parenteral T undecanoate 1000 mg/12 weeks following an initial 6-week interval for up to five years.

**Results:** Weight decreased from  $104.71 \pm 16.53$  kg to  $88.41 \pm 9.26$  kg. This decrease was statistically significant vs baseline ( $p < 0.0001$ ) and each year compared to the previous year with a mean change from baseline of  $16.8 \pm 0.41$ .

Residual bladder volume decreased from  $46.78 \pm 23.58$  (minimum 0, maximum 90) to  $15.85 \pm 5.32$  (min 0, max 30) ml. IPSS decreased from  $7.62 \pm 4.2$  (min 0, max 19) to  $2.91 \pm 1.27$  (min 1, max 7).

Prostate volume increased from  $28.34 \pm 10.79$  to  $30.72 \pm 14.28$  ml, PSA from  $1.77 \pm 0.97$  to  $2 \pm 1.01$  ng/ml. Five patients were diagnosed with prostate cancer. The proportion was 1.7% and the incidence per 10,000 patient years 39.4 remaining below results of large-scale screening studies.

C-reactive protein as a marker of inflammation decreased from  $5.74 \pm 7.51$  (min 0.2, max 55.7) to  $0.94 \pm 1.69$  (min 0.1, max 7.1) mg/dl ( $p < 0.0001$ ).

**Conclusions:** Testosterone replacement therapy in hypogonadal men resulted in progressive weight loss. This effect may be beneficial not only for cardiometabolic but also urological outcomes.