

Testosterone+ HCG Preserves Healthy Sperm in Men on Testosterone Replacement Therapy (Injections and gels)

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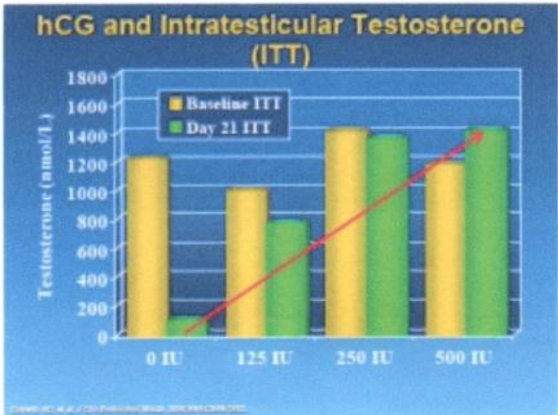
Purpose: Testosterone replacement therapy results in decreased serum gonadotropins (hormones produced by the pituitary gland- LH and FSH- that jump start testicular function) and intratesticular testosterone (inside the testicles), and impairs spermatogenesis (sperm production), leading to azoospermia (no viable sperm) in 40% of patients. However, intratesticular testosterone can be maintained during testosterone replacement therapy with co-administration of low dose human chorionic gonadotropin, which may support continued spermatogenesis in patients on testosterone replacement therapy.

Materials and Methods: We retrospectively reviewed the records of hypogonadal men treated with testosterone replacement therapy and concomitant low dose human chorionic gonadotropin(HCG). **Testosterone replacement consisted of daily topical gel or weekly intramuscular injection with intramuscular human chorionic gonadotropin (500 IU every other day.** Serum and free testosterone, estradiol, semen parameters and pregnancy rates were evaluated before and during therapy.

Results: A total of 26 men with a mean age of 35.9 years were included in the study. Mean followup was 6.2 months. Of the men 19 were treated with injectable testosterone and 7 were treated with transdermal gel. Mean serum hormone levels before vs during treatment were testosterone 207.2 vs 1,055.5 ng/dl ($p < 0.0001$), free testosterone 8.1 vs 20.4 pg/ml ($p = 0.02$) and estradiol 2.2 vs 3.7 pg/ml ($p = 0.11$). Pretreatment semen parameters were volume 2.9 ml, density 35.2 million per ml, motility 49.0% and forward progression 2.3. No differences in semen parameters were observed during greater than 1 year of followup. No impact on semen parameters was observed as a function of testosterone formulation. No patient became azoospermic during concomitant testosterone replacement and human chorionic gonadotropin therapy. Nine of 26 men contributed to pregnancy with the partner during followup.

Conclusions: **Low dose human chorionic gonadotropin appears to maintain semen parameters in hypogonadal men on testosterone replacement therapy.** Concurrent testosterone replacement and human chorionic gonadotropin use may preserve fertility in hypogonadal males who desire fertility preservation while on testosterone replacement therapy.

Low-Dose Human Chorionic Gonadotropin Maintains Intratesticular Testosterone in Normal Men with Testosterone-Induced Gonadotropin Suppression



This study shows that HCG can keep intratesticular (inside the testes) testosterone - ITT normal even when they are exposed to testosterone injections. **An HCG dose of 500 IU every other day increased ITT to levels higher than baseline. All other doses failed to achieve normalization of baseline ITT. ITT is crucial for Leydig cells to work properly so that they do not atrophy (lose volume due to inactivity)**

<http://www.ncbi.nlm.nih.gov/m/pubmed/15713727/>

MORE ON HCG:

[The Use of HCG to Prevent / Reverse Testicular Shrinkage and Preserve Fertility](#)

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