

Human Chorionic Gonadotropin – By Gene Devine

When a man introduces Testosterone exogenously it significantly changes how the Hypothalamus(H), Pituitary(P) and Testicle(T) glands react to each other in keeping men's androgenic hormones in balance. Many of our hormones act in a cascading event and the axis between these three glands are no different.

When T levels are low in a normal healthy man the Hypothalamus releases a "releasing" hormone (LHRH) that tells the Pituitary to release another Gonadotropin releasing hormone (GnRH) known as Luteinizing Hormone (LH). In turn, LH reaches the receptors on the Leydig cells within the testicles telling them to do their thing among which is the synthesis of Pregnenelone from Cholesterol, Spermatogenesis and Testosterone among other things needed downstream in all three metabolic pathways.

Exogenous Testosterone halts or significantly suppresses the HPT Axis (HPTA) via the androgen pathway's negative feedback loop and as such the testicles are no longer receiving signaling via LH. This is known by most of us as simply "shutdown" or "HPTA suppression."

In order for men on a TRT protocol, where they are in a state of shutdown/suppression, to make up for the lost production of LH they will need add hCG to their protocol which is a bioidentical form of LH (or LH Analog).

hCG (http://en.wikipedia.org/wiki/Human_chorionic_gonadotropin) is a water based peptide hormone that can only be injected to replace the lost LH hormone that a TRT protocol shuts down. There are "so called" oral forms of hCG that some men are placed on, or purchased from other sources, but from all that I read it's not possible to ingest hCG and get it past the liver to make its efficacy plausible.

So what happens when a man's testicles don't function anymore due to the lack of LH?

The Biggie: Testicular Atrophy. Men will see their testes get smaller over time and hurt constantly along the way. The duration for this event seems to be different in men where younger guys can seem to go longer where middle aged or older guys see the event happen on a more accelerated scale. Some think it happens to do with the amount of active receptors on the Leydig cells...but who really knows.

Sperm production is pretty much halted.

In time, men's scrotum's will get tight and pull up against the body causing pain and end up looking like a 5-year-old.

The testes are the single largest producer of the hormone Pregnenelone; the mother of all hormones (<http://www.antiaging-systems.com/165...one-metabolite>) We need Pregnenelone for so many reasons (read the link) and while it can be supplemented it's hit or miss on how effective supplementation can be for some men.

Why we need hCG:

1. IMPORTANT → To produce Pregnenelone; hCG activates the p450 side chain cleavage (p450scc) enzyme which converts cholesterol to Pregnenelone!!! (Read the link above, please.)

2. To produce the precursors for DHEA, Estrogen, Cortisol, Testosterone and DHT...back filling the pathways (See #1 above)

3. For proper and normal brain function

4. For proper functioning of the testicles

5. If men ever want to restart

6. If men ever want to have children

7. If men don't want balls that end up in a small mass of useless Collagen

8. And the list goes on...

In short, hCG keeps the testicles functioning in a normal state and supports all three metabolic pathways. It prevents Pregnenelone deficiency and supporting all our other CHOL pathways and hormones as well.

As we've all seen firsthand in this community; when a man on a TRT protocol is not on hCG they complain of shrinking testicle and the accompanying pain that goes with it.

But when they start on hCG (because of all the things listed above and more) they all state how much better they feel and the pain associated with their testicular atrophy subsiding and that their testicles feel much better as well.

Does a man need hCG on a TRT protocol?

Nope.

But for all the reasons above a man should be made aware of why Human Chorionic Gonadotropin are important to their health and wellbeing on a life long journey of TRT.

The efficacy for hCG for both Primary and Secondary Hypogonadism has been documented. **For those whose Doctor refuses to prescribe HCG as part of your TRT protocol print this study abstract and force them to read it:**

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Purpose: Testosterone replacement therapy results in decreased serum gonadotropins and intratesticular testosterone, and impairs spermatogenesis, leading to azoospermia 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 follow-up 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 follow-up. 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 follow-up.

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.

hCG Injection Protocols

Let's start by saying that there are no hard and fast rules for hCG injection protocols. There are a number of well-known Physicians who have recommendations and prescribe based on their experience with patient's subjective responses to treatment and subsequent serum levels. There are other variables as well that need to be taking into consideration when contemplating hCG injection protocols like whether or not the man is Primary or Secondary Hypogonadal can determine hCG injection protocols.

That being said, there are a number of hCG injection protocols that appear more commonly and are based on Testosterone injection frequency and or the use of a cream or gel.

Note: It's not advisable to inject more than 500iu's of hCG in any 24-hour period as it can increase intratesticular E2 which an AI is largely ineffective in controlling. Additionally, there is a theory that large amounts of hCG may desensitize the receptors on the Leydig cells.

Once a Week Testosterone Injection Protocols

If a man injects Testosterone on a once a week basis the more common protocol is to use 250IU of hCG two days before and one day before their next testosterone injection. The theory here is that Testosterone serum levels are at near half-life and the injection of hCG on these days' increase natural production creating a bridge until the next testosterone injection.

Twice a Week Testosterone Injections

If a man injects twice a week similar to an every 3.5 day schedule the more common protocol are smaller doses more frequently. It's not uncommon to see men inject 250IU of hCG on an EOD basis or on a Monday-Wednesday-Friday protocol.

Transdermal Daily Use

If a man uses a Cream and/or Gel some of the top Testosterone Replacement Physicians, like Dr. John Crisler, recommend patients use 100iu of hCG every day.

hCG Injections

Injecting hCG prevents a drug induced Human chorionic gonadotropin deficiency and helps support the other metabolic pathways as well. When men are on a TRT protocol without hCG and then add in hCG many report a significant improvement in mood and libido that many attribute to restored Human Chorionic Gonadotropin levels.

When injecting hCG, you inject into the fat under the skin just the same as diabetics inject insulin. The product literature is all about use a fertility drug for women with large IM [injected into muscle] doses. There is no need for men to inject hCG IM.

Research using SC injections in men has demonstrated the effectiveness of the 250 iu EOD dosing. You can seek diabetic patient educational material for insulin injection techniques to use for hCG and/or testosterone injections.

There also a number of excellent instructional videos here on Excel Male within the video section that can provide you with more detailed instructions on injecting hCG properly.