HCG

History and Background

Human Chorionic Gonadotropin (HCG) is a glycoprotein hormone with a similar structure to luteinizing hormone (LH) but with a much longer half-life (30 hours vs 30 minutes). In men, HCG mimics LH by stimulating Leydig cells in the testes to produce testosterone. Originally isolated from pregnant women's urine, it has been used medically since the 1950s for fertility treatment and now commonly prescribed alongside testosterone replacement therapy (TRT) to maintain testicular function and fertility.

Primary Uses

HCG is investigated for preserving fertility during testosterone replacement therapy, maintaining testicular size and function, preventing testicular atrophy, supporting natural testosterone production, and treating hypogonadotropic hypogonadism. It's commonly used by men on TRT who wish to maintain fertility or prevent testicular shutdown.

How It Works

HCG binds to LH receptors on Leydig cells in the testes, stimulating them to produce testosterone locally within the testes (intratesticular testosterone). This maintains spermatogenesis and prevents testicular atrophy that commonly occurs with exogenous testosterone use. The local testosterone production keeps the testes functioning even when pituitary LH is suppressed by TRT.

Standard Protocol

Dosing: Low dose: 250-500 IU 2-3 times weekly. Standard: 500-1000 IU 1-3x weekly. High dose fertility protocol: 1500-3000 IU 2-3 times weekly.

Administration: Subcutaneous or intramuscular injection. Most commonly administered subcutaneously.

Timing: Consistent schedule important. Many prefer dosing in evening.

Titration Schedule:

Fertility Preservation with TRT: 500 IU every other day

Standard with TRT: 500-1000 IU, 1-3x weekly

Pregnancy Planning (6-12 months): 500 IU every other day with continued TRT

Pregnancy Planning (>12 months): 3,000 IU every other day for 4 weeks (cycle off TRT every 6 months)

Duration: Ongoing when used with TRT. Fertility protocols require minimum 3-6 months for sperm production improvement.

What to Expect

Positive Effects (Week 1-2)

Maintained testicular size and function. Preserved fertility potential. Sustained intratesticular testosterone levels. Prevention of testicular atrophy. May improve libido and sexual function. Some report improved mood and well-being.

Timeline to Results

Testicular size maintenance: 2-4 weeks. Fertility preservation: 3-6 months. Full spermatogenesis recovery (if needed): 4-6 months or longer.

Dose Response

Low doses (500 IU 3x weekly) adequate for maintaining intratesticular testosterone. Higher doses needed for fertility restoration in men with suppressed spermatogenesis. Excessive doses may cause estrogen elevation.

Pros

Effectively preserves fertility in men on TRT
Prevents testicular atrophy and maintains size
Maintains intratesticular testosterone levels
Can restore fertility even after prolonged TRT
Well-studied with decades of clinical use
Generally well-tolerated
Flexible dosing options
Can be used long-term alongside TRT

Cons

Requires refrigerated storage
Must be reconstituted before use
Can increase estrogen levels (aromatization)
May cause acne or oily skin
Possible testicular sensitivity initially
More expensive than TRT alone
Requires consistent injection schedule
May cause water retention
Can increase red blood cell count

Who Should Consider It

Men on TRT desiring to preserve fertility, those planning future pregnancy, individuals wanting to prevent testicular atrophy, and men with hypogonadotropic hypogonadism seeking fertility.

Who Should Avoid It

Those with hormone-sensitive cancers (prostate, breast), men with significant prostate enlargement, individuals with polycythemia, or those with allergies to HCG preparations.

For research purposes only. HCG for fertility preservation should be used under medical supervision with appropriate monitoring.