



TOWN & COUNTRY

compounding | consultation

106 PROSPECT STREET | RIDGEWOOD, NJ 07450



PH (201) 447-2020
 FX (201) 447-3253
 info@tccompound.com
 tccompound.com

John Herr, R.Ph., Owner
 Ben Fais, R.Ph. | Grace Kim, Pharm.D. | Kim Hansen, R.Ph.

January 2018

Men's Health - Customized Therapy for Hormone Replacement and Erectile Dysfunction

In most men, serum testosterone concentrations decline steadily with age. Studies report that the total serum testosterone concentration of men at age 75 years is about two thirds of the levels at age 25 years. Approximately 50% of men older than 80 years and about 20% of men older than 60 years have low serum testosterone concentrations. However, some men may go through a rather sudden change in testosterone levels. Signs and symptoms may include:

- weakness
- fatigue
- osteoporosis
- heart disease
- atherosclerosis
- irritability
- depression, anxiety
- metabolic syndrome
- slow wound healing
- reduced libido
- erectile dysfunction
- prostate problems
- low sperm counts
- reduced muscle mass
- disturbed sleep; insomnia
- impaired blood cell formation
- reduced cognitive function



The diagnosis of low testosterone levels (hypogonadism) is based on the presence of signs or symptoms and must be confirmed by laboratory testing, which should include Total Testosterone, Bioavailable Testosterone (Free plus Albumin Bound), Estradiol, Cholesterol, Prostate Specific Antigen (PSA), Complete Blood Count (CBC), Hemoglobin, and Hematocrit. A consensus statement by the International Society of Andrology, International Society for the Study of Aging Male, European Association of Urology, European Academy of Andrology, and American Society of Andrology, concluded that men with a serum concentration above 350 ng/dL generally do not require therapy, while men with serum testosterone concentrations below 230 ng/dL will usually benefit from testosterone replacement therapy (TRT).

In older men, an optimal plasma testosterone level is associated with reduced all-cause mortality. When hormones are replaced or restored back to physiologic levels considered normal for younger males, men may experience a dramatic reversal of many signs and symptoms. Proper monitoring of laboratory values and clinical response are essential for optimal testosterone replacement therapy.

Testosterone Replacement Therapy for men with low testosterone levels may produce a wide range of benefits including:

- improvement in libido and sexual function
- increased muscle mass and body composition
- increased strength and stature
- preservation of bone mass
- improvement in mood and depression
- enhanced cognition, concentration and memory
- improvement in sleep and quality of life
- reduced risk of developing type 2 diabetes mellitus and metabolic syndrome
- possible decrease in cardiovascular risk
 - » lower cholesterol and triglycerides
 - » lower blood glucose levels
 - » decrease visceral fat mass
 - » normalize blood clotting

What is the Optimal Form of Testosterone for Replacement Therapy?

Testosterone USP is natural testosterone that has a monograph in the United States Pharmacopoeia (USP). Upon a prescription order, compounding pharmacists can use pure Testosterone USP to compound numerous dosage forms. The information that follows should be considered as doctor or health care practitioner, patient, and pharmacist work together to meet each patient's specific needs. Compounded preparations can have many advantages. For example, there is no need to shave the area to apply transdermal testosterone preparations. The medication can be administered as a single dose (rather than multiple patches), and there is no skin irritation from patch adhesive. The cream or gel can be applied two or three times daily to simulate the normal circadian rhythm.

A healthy adult male secretes 8-15mg/day of testosterone. This "physiologic dose" should be considered when prescribing replacement therapy. Excessive doses leading to high serum levels of testosterone can result in a greater conversion to estradiol (and side-effects resulting from abnormally high estradiol levels), because the body cannot effectively store excess testosterone. This may be a reason to administer testosterone on a daily basis, rather than using long-lasting injections.

Transdermal drug administration allows application of a specific dose of a hormone to be applied to the skin and then be absorbed into the systemic circulation. Transdermal medications have the advantage of high bioavailability, absence of hepatic first pass metabolism, increased therapeutic efficacy, and steadiness of plasma concentrations of the drug. Testosterone is well-absorbed from transdermal creams/gels. Dosage forms also include sublingual drops or troches.

Natural testosterone must not be confused with synthetic derivatives or "anabolic steroids," which when used by athletes and body builders have caused disastrous effects, such as heart problems and cancer. Use of synthetic androgens, like stanozolol or methyltestosterone, causes profound decreases in HDL-C and significant increases in LDL-C, and has been associated with serious heart disease. However, natural testosterone lowers total cholesterol and LDL cholesterol levels while having little to no impact on serum HDL cholesterol levels.

Screening for potential risks of androgen therapy should be performed prior to the initiation of treatment. Contraindications to testosterone replacement therapy include an elevated level of Prostate-Specific Antigen (PSA), or history or presence of prostate or breast cancer. There is a risk of

worsening symptoms of benign prostatic hypertrophy (enlarged prostate), sleep apnea, congestive heart failure, gynecomastia (breast enlargement), infertility and skin diseases.

Drug Design, Development and Therapy 2014:8 101-112



RIDGEWOOD, NJ 07450
106 PROSPECT STREET



The following need to be considered in men receiving Testosterone Replacement Therapy:

- the role of estrogen/androgen imbalance in the development of benign prostatic hypertrophy (BPH).
- the use of 5-alpha reductase inhibitors and aromatase inhibitors to modify the level of metabolites such as DHT and estradiol that are produced when testosterone is broken down by the body.
- DHEA (dehydroepiandrosterone) and its role as an “anti-aging” supplement and in the treatment of symptoms of low testosterone.

Erectile Dysfunction

Our compounding pharmacist works closely with physicians and their patients who seek to improve their quality of life, especially those who have not responded to traditional options. We customize hormones and other medications to treat each individual's symptoms, while considering his lifestyle and medical history.

Ask our pharmacist about compounded transdermal creams, troches, nasal sprays, sublingual drops, and capsules, as well as customized strengths of medications.

Tri-mix Injections

We compound Tri-mix (alprostadil-papaverine-phentolamine) injections in our clean room for men in need of this therapy for erectile dysfunction. It is compounded and stored in sterile single dose vials in accordance with FDA and USP guidelines for this specific product.

See our website under *Specialties/Men's Health/Tri-mix Injections*.

At Town & Country Compounding Pharmacy, we are experts in medications to serve men's needs

When it comes to restoring balance to our bodies as we age, there's no such thing as one size fits all. Town & Country Compounding Pharmacy can compound various therapies to fit your patients' individual needs. For added convenience, shipping on is available.

Testosterone Absorption Issues?

We now have a new compounding gel base available that helps provide superior testosterone delivery in men. Independent testing showed that testosterone compounded into **Atrevis™ Hydrogel base** delivered more testosterone through the skin than other tested compounding bases. Our formulas range from concentrations of 0.5% up to 20%.

We now carry a new line of supplements for sexual health for both men and women. Desire, erection support, stimulation and “O” are available.



Visit www.tccompound.com under Providers/Rx Order Forms to see various ideas for men and women.

Utilizing the most advanced compounding techniques, T&C Compounding works with physicians to provide patients with customized medications to best fit their health needs.

