

MAGNUS PHARMACEUTICALS

# Test P

Testosterone Propionate 100mg/ml U.S.P. (10ml VIAL)

**Read all of this leaflet carefully before you start taking this medicine because it contains important information for you.**

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet.

## About

Testosterone propionate is a commonly manufactured injectable form of the primary male androgen testosterone. The added propionate ester will slow the rate in which testosterone is released from the injection site, but only for a few days. Testosterone propionate is, therefore, comparatively much faster-acting than other testosterone esters such as cypionate or enanthate, and requires a much more frequent dosing schedule. By most accounts testosterone propionate is an older and cruder form of injectable testosterone, made obsolete by the slower-acting and more comfortable esters that were developed subsequent to it. Still, those who are not bothered by the frequent injection schedule find testosterone propionate every bit as acceptable. As an injectable testosterone, it is a powerful massbuilding drug, capable of producing rapid gains in both muscle size and strength.

## Side Effects (Estrogenic)

Testosterone is readily aromatized in the body to estradiol (estrogen). The aromatase (estrogen synthetase) enzyme is responsible for this metabolism of testosterone. Elevated estrogen levels can cause side effects such as increased water retention, body fat gain, and gynecomastia. Testosterone is considered a moderately estrogenic steroid. An anti-estrogen such as clomiphene citrate or tamoxifen citrate may be necessary to prevent estrogenic side effects. One may alternately use an aromatase inhibitor like Arimidex (anastrozole), which more efficiently controls estrogen by preventing its synthesis. Aromatase inhibitors can be quite expensive in comparison to anti-estrogens, however, and may also have negative effects on blood lipids.

Estrogenic side effects will occur in a dose-dependant manner, with higher doses (above normal therapeutic levels) of testosterone propionate more likely to require the concurrent use of an anti-estrogen or aromatase inhibitor. Since water retention and loss of muscle definition are common with higher doses of testosterone, this drug is usually considered a poor choice for dieting or cutting phases of training. Its moderate estrogenicity makes it more ideal for bulking phases, where the added water retention will support raw strength and muscle size, and help foster a stronger anabolic environment.

## Side Effects (Androgenic)

Testosterone is the primary male androgen, responsible for maintaining secondary male sexual characteristics. Elevated levels of testosterone are likely to produce androgenic side effects including oily skin, acne, and body/facial hair growth. Men with a genetic predisposition for hair loss (androgenetic alopecia) may notice accelerated male pattern balding. Those concerned about hair loss may find a more comfortable option in nandrolone decanoate, which is a comparably less androgenic steroid. Women are warned of the potential virilizing effects of anabolic/androgenic steroids, especially with a strong androgen such as testosterone. These may

include deepening of the voice, menstrual irregularities, changes in skin texture, facial hair growth, and clitoral enlargement.

In androgen-responsive target tissues such as the skin, scalp, and prostate, the high relative androgenicity of testosterone is dependant on its reduction to dihydrotestosterone (DHT). The 5-alpha reductase enzyme is responsible for this metabolism of testosterone. The concurrent use of a 5-alpha reductase inhibitor such as finasteride or dutasteride will interfere with site-specific potentiation of testosterone action, lowering the tendency of testosterone drugs to produce androgenic side effects. It is important to remember that both anabolic and androgenic effects are mediated via the cytosolic androgen receptor. Complete separation of testosterone's anabolic and androgenic properties is not possible, even with total 5-alpha reductase inhibition.

## **Side Effects (Hepatotoxicity)**

Testosterone does not have hepatotoxic effects; liver toxicity is unlikely. One study examined the potential for hepatotoxicity with high doses of testosterone by administering 400 mg of the hormone per day (2,800 mg per week) to a group of male subjects. The steroid was taken orally so that higher peak concentrations would be reached in hepatic tissues compared to intramuscular injections. The hormone was given daily for 20 days, and produced no significant changes in liver enzyme values including serum albumin, bilirubin, alanine-amino-transferase, and alkaline phosphates.

## **Side Effects (Cardiovascular)**

Anabolic/androgenic steroids can have deleterious effects on serum cholesterol. This includes a tendency to reduce HDL (good) cholesterol values and increase LDL (bad) cholesterol values, which may shift the HDL to LDL balance in a direction that favors greater risk of arteriosclerosis. The relative impact of an anabolic/androgenic steroid on serum lipids is dependant on the dose, route of administration (oral vs. injectable), type of steroid (aromatizable or non-aromatizable), and level of resistance to hepatic metabolism. Anabolic/androgenic steroids may also adversely affect blood pressure and triglycerides, reduce endothelial relaxation, and support left ventricular hypertrophy, all potentially increasing the risk of cardiovascular disease and myocardial infarction.

Testosterone tends to have a much less dramatic impact on cardiovascular risk factors than synthetic steroids. This is due in part to its openness to metabolism by the liver, which allows it to have less effect on the hepatic management of cholesterol. The aromatization of testosterone to estradiol also helps to mitigate the negative effects of androgens on serum lipids. In one study, 280 mg per week of testosterone ester (enanthate) had a slight but not statistically significant effect on HDL cholesterol after 12 weeks, but when taken with an aromatase inhibitor a strong (25%) decrease was seen. Studies using 300 mg of testosterone ester (enanthate) per week for twenty weeks without an aromatase inhibitor demonstrated only a 13% decrease in HDL cholesterol, while at 600 mg the reduction reached 21%. The negative impact of aromatase inhibition should be taken into consideration before such drug is added to testosterone therapy.

Due to the positive influence of estrogen on serum lipids, tamoxifen citrate or clomiphene citrate are preferred to aromatase inhibitors for those concerned with cardiovascular health, as they offer a partial estrogenic effect in the liver. This allows them to potentially improve lipid profiles and offset some of the negative effects of androgens. With doses of 600 mg or less of testosterone per week, the impact on lipid profile tends to be noticeable but not dramatic, making an anti-estrogen (for cardioprotective purposes) perhaps unnecessary. Doses of 600 mg or less per week have also failed to produce statistically significant changes in LDL/VLDL cholesterol, triglycerides, apolipoprotein B/C-III, C-reactive protein, and insulin sensitivity, all indicating a relatively weak impact on cardiovascular risk factors. When used in moderate doses, injectable testosterone esters are usually considered to be the safest of all anabolic/androgenic steroids.

To help reduce cardiovascular strain it is advised to maintain an active cardiovascular exercise program and minimize the intake of saturated fats, cholesterol, and simple carbohydrates at all times during active AAS administration. Supplementing with fish oils (4 grams per day) and a

natural cholesterol/antioxidant formula such as Lipid Stabil or a product with comparable ingredients is also recommended.

## Side Effects (Testosterone Suppression)

All anabolic/androgenic steroids when taken in doses sufficient to promote muscle gain are expected to suppress endogenous testosterone production. Testosterone is the primary male androgen, and offers strong negative feedback on endogenous testosterone production. Testosterone-based drugs will, likewise, have a strong effect on the hypothalamic regulation of natural steroid hormones. Without the intervention of testosterone-stimulating substances, testosterone levels should return to normal within 1-4 months of drug secession. Note that prolonged hypogonadotropic hypogonadism can develop secondary to steroid abuse, necessitating medical intervention.

## Administration (General)

Testosterone propionate is often regarded as a painful injection. This is due to the very short carbon chain of the propionic acid ester, which can be irritating to tissues at the site of injection. Many sensitive individuals choose to stay away from this steroid completely, their bodies reacting with a pronounced soreness and low-grade fever that may last for a few days after each injection. Even the mild soreness that is experienced by most users can be quite uncomfortable, especially when you take into account that the drug is being administered multiple times each week for a number of consecutive weeks.

## Administration (Men)

To treat androgen insufficiency, early prescribing guidelines recommended a dosage of 25 mg given two to three times per week. Modern product literature usually recommends 25 mg to 50 mg given two to three times per week for the same purpose. The usual dosage among male athletes is in the range of 50-100 mg per injection, which is given every second or third day. Similar to other esters of testosterone, testosterone propionate is commonly used at a weekly cumulative dosage between 200 mg to 400 mg. This level is sufficient for most users to notice exceptional gains in muscle size and strength.

Testosterone propionate is usually incorporated into bulking phases of training, when added water retention will be of little consequence, the user more concerned with raw mass than definition. Some do incorporate this drug into cutting cycles as well, but typically in lower doses (100-200 mg per week) and/or when accompanied by an aromatase inhibitor to keep estrogen levels under control. Testosterone propionate is a very effective anabolic drug, and is often used alone with great benefit. Some, however, find a need to stack it with other anabolic/androgenic steroids for a stronger effect, in which case an additional 200-400 mg per week of boldenone undecylenate, methenolone enanthate, or nandrolone decanoate should provide substantial results with no significant hepatotoxicity. Testosterone is ultimately very versatile, and can be combined with many other anabolic/androgenic steroids to tailor the desired effect.

## Administration (Women)

Testosterone propionate is rarely used with women in clinical medicine. When applied, it is most often used as a secondary medication during inoperable breast cancer, when other therapies have failed to produce a desirable effect and suppression of ovarian function is necessary. Testosterone propionate is not recommended for women for performanceenhancing purposes due to its strong androgenic nature and tendency to produce virilizing side effects. Female bodybuilders who insist on using testosterone, however, often choose propionate, as blood levels are easier to control with this ester compared to cypionate or enanthate. Should virilization symptoms develop, hormone levels will decline in a matter of days, instead of weeks, following drug cessation. The administration schedule is often more conservative as well, with a small injection (25 mg at most) given every 5 to 7 days, and cycle duration limited to 6-8 weeks or less.