

MAGNUS PHARMACEUTICALS

# Oxandrolone

Oxandrolone 10mg

**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

Oxandrolone is an oral anabolic steroid derived from dihydrotestosterone. It was designed to have a very strong separation of anabolic and androgenic effect, and no significant estrogenic or progestational activity. Oxandrolone is noted for being quite mild as far as oral steroids are concerned, well tailored for the promotion of strength and quality muscle tissue gains without significant side effects. Milligram for milligram it displays as much as six times the anabolic activity of testosterone in assays, with significantly less androgenicity. This drug is a favorite of dieting bodybuilders and competitive athletes in speed/anaerobic performance sports, where its tendency for pure tissue gain (without fat or water retention) fits well with the desired goals.

## Side Effects (Estrogenic)

Oxandrolone is not aromatized by the body, and is not measurably estrogenic. Oxandrolone also offers no related progestational activity. An anti-estrogen is not necessary when using this steroid, as gynecomastia should not be a concern even among sensitive individuals. Since estrogen is the usual culprit with water retention, oxandrolone instead produces a lean, quality look to the physique with no fear of excess subcutaneous fluid retention. This makes it a favorable steroid to use during cutting cycles, when water and fat retention are major concerns. Oxandrolone is also very popular among athletes in strength/speed sports such as sprinting, swimming, and gymnastics. In such disciplines one usually does not want to carry around excess water weight, and may find the raw muscle-growth brought about by oxandrolone to be quite favorable over the lower quality mass gains of aromatizable agents.

## Side Effects (Androgenic)

Although classified as an anabolic steroid, androgenic side effects are still possible with this substance. This may include bouts of oily skin, acne, and body/facial hair growth. Anabolic/androgenic steroids may also aggravate male pattern hair loss. Women are warned of the potential virilizing effects of anabolic/androgenic steroids. These may include a deepening of the voice, menstrual irregularities, changes in skin texture, facial hair growth, and clitoral enlargement. Oxandrolone is a steroid with low androgenic activity relative to its tissue-building actions, making the threshold for strong androgenic side effects comparably higher than with more androgenic agents such as testosterone, methandrostenolone, or fluoxymesterone.

The low androgenic activity of oxandrolone is due in part to it being a derivative of dihydrotestosterone. This creates a less androgenic steroid because the agent lacks the capacity to interact with the 5-alpha reductase enzyme and convert to a more potent "dihydro" form. This is unlike testosterone, which is several times more active in androgen responsive target tissues such as the scalp, skin, and prostate (where 5-alpha reductase is present in high amounts) due to its conversion to DHT. In essence, oxandrolone has a more balanced level of potency between

muscle and androgenic target tissues. This is a similar situation as is noted with Primobolan). Such stacks are highly favored for increasing definition and muscularity. An in-between (lean mass gain) might be to add in 200-400 mg of a low estrogenic compound like Deca-Durabolin (nandrolone decanoate) or Equipoise (boldenone undecylenate).

## Side Effects (Hepatotoxicity)

Oxandrolone is a c17-alpha alkylated compound. This alteration protects the drug from deactivation by the liver, allowing a very high percentage of the drug entry into the bloodstream following oral administration. C17-alpha alkylated anabolic/androgenic steroids can be hepatotoxic. Prolonged or high exposure may result in liver damage. In rare instances life-threatening dysfunction may develop. It is advisable to visit a physician periodically during each cycle to monitor liver function and overall health. Intake of c17-alpha alkylated steroids is commonly limited to 6-8 weeks, in an effort to avoid escalating liver strain.

Oxandrolone appears to offer less hepatic stress than other c-17 alpha alkylated steroids. The manufacturer identifies oxandrolone as a steroid that is not extensively metabolized by the liver like other 17-alpha alkylated orals, which may be a factor in its reduced hepatotoxicity. This is evidenced by the fact that more than a third of the compound is still intact when excreted in the urine. Another study comparing the effects of oxandrolone to other alkylated agents including methyltestosterone, norethandrolone, fluoxymesterone, and methandriol demonstrated that oxandrolone causes the lowest sulfobromophthalein (BSP; a marker of liver stress) retention of the agents tested. 20 mg of oxandrolone produced 72% less BSP retention than an equal dosage of fluoxymesterone, which is a considerable difference being that they are both 17-alpha alkylated.

A more recent study looked at escalating doses (20 mg, 40 mg, and 80 mg) of oxandrolone in 262 HIV+ men. The drug was administered for a period of 12 weeks. The group taking 20 mg of oxandrolone per day showed no statistically significant trends of hepatotoxicity in liver enzyme (AST/ALT; amino-transferase and alanine amino-transferase) values. Those men taking 40 mg noticed a mean increase of approximately 30-50% in liver enzyme values, while the group of men taking 80 mg noticed an approximate 50-100% increase. Approximately 10-11% of the patients in the 40 mg group noticed World Health Organization grade III and IV toxicity according to AST and ALT values. This figure jumped to 15% in the 80 mg group. While serious hepatotoxicity cannot be excluded with oxandrolone, these studies do suggest that it is measurably safer than other alkylated agents.

The use of a liver detoxification supplement such as Liver Stabil, Liv-52, or Essentiale Forte is advised while taking any hepatotoxic anabolic/androgenic steroids.

## 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. Oxandrolone has a strong effect on the hepatic management of cholesterol due to its structural resistance to liver breakdown, non-aromatizable nature, and route of administration. In the previously cited study in HIV+ males, 20 mg of oxandrolone daily for 12 weeks caused a mean serum HDL reduction of 30%. HDL values were suppressed 33% in the 40 mg group, and 50% in the 80 mg group. This was accompanied by a statistically significant increase in LDL values (approximately 30-33%) in the 40 mg and 80 mg groups, further increasing atherogenic risk. Anabolic/androgenic steroids may also adversely effect blood pressure and triglycerides, reduce endothelial relaxation, and support left ventricular hypertrophy, all potentially increasing the risk of cardiovascular disease and myocardial infarction.

At one time oxandrolone was looked at as a possible drug for those suffering from disorders of high cholesterol or triglycerides. Early studies showed it to be capable of lowering total cholesterol and triglyceride values in certain types of hyperlipidemic patients, which was thought

to signify potential for this drug as a lipid-lowering agent. With further investigation it was found, however, that any lowering of total cholesterol values was accompanied by a redistribution in the ratio of good (HDL) to bad (LDL) cholesterol that favored greater atherogenic risk. This negates any positive effect this drug might have on triglycerides or total cholesterol, and actually makes it a potential danger in terms of cardiac risk, especially when taken for prolonged periods of time. Today we understand that as a group, anabolic/androgenic steroids tend to produce unfavorable changes in lipid profiles, and are really not useful in disorders of lipid metabolism. As an oral c17 alpha alkylated steroid, oxandrolone is even more risky to use in this regard than an esterified injectable such as a testosterone or nandrolone.

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. Oxandrolone is no exception. In the above-cited study on HIV+ males, twelve weeks of 20 mg or 40 mg per day caused an approximate 45% reduction in serum testosterone levels. The group taking 80 mg noticed a 66% decrease in testosterone. Similar trends of decrease were noticed in LH production, with the 20 mg and 40 mg doses causing a 25-30% reduction, and the 80 mg group noticing a decline of more than 50%. Additionally, studies on boys with constitutionally delayed puberty have demonstrated significant suppression of endogenous LH and testosterone with as little as 2.5 mg per day. 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)**

Studies have shown that taking an oral anabolic steroid with food may decrease its bioavailability. This is caused by the fat-soluble nature of steroid hormones, which can allow some of the drug to dissolve with undigested dietary fat, reducing its absorption from the gastrointestinal tract. For maximum utilization, this steroid should be taken on an empty stomach.

## **Administration (Men)**

The original prescribing guidelines for Anavar called for a daily dosage of between 2.5 mg and 20 mg per day (5-10 mg being most common). This was usually recommended for a period of two to four weeks, but occasionally it was taken for as long as three months. The dosing guidelines recommended with the current U.S. production form of the drug (Oxandrin, Savient Pharmaceuticals) also call for between 2.5 and 20 mg of drug per day, taken in intermittent cycles of 2 to 4 weeks. The usual dosage for physique- or performanceenhancing purposes is in the range of 15-25 mg per day, taken for 6 to 8 weeks. These protocols are not far removed from those of normal therapeutic situations.

Oxandrolone is often combined with other steroids for a more dramatic result. For example, while bulking one might opt to add in 200-400 mg of a testosterone ester (cypionate, enanthate, or propionate) per week. The result should be a considerable gain in new muscle mass, with a more comfortable level of water and fat retention than if taking a higher dose of testosterone alone. For dieting phases, one might alternately combine oxandrolone with a non-aromatizing steroid such as 150 mg per week of a trenbolone ester or 200-300 mg of Primobolan (methenolone enanthate). Such stacks are highly favored for increasing definition and muscularity. An in-between (lean mass gain) might be to add in 200-400 mg of a low estrogenic compound like Deca-Durabolin (nandrolone decanoate) or Equipoise (boldenone undecylenate).

## **Administration (Women)**

The original prescribing guidelines for Anavar did not offer separate dosing recommendations for women, although it was indicated that women who were pregnant, or may become pregnant, should not use the drug. The current guidelines for Oxandrin also do not make special dosing recommendations for women. Women who fear the masculinizing effects of many steroids would be quite comfortable using this drug, as these properties are very rarely seen with low doses. For physique- or performance-enhancing purposes, a daily dosage of 5-10 mg should illicit considerable growth without the noticeable androgenic side effects of other drugs. This would be taken for no longer than 4-6 weeks. Eager females may wish to add another mild anabolic such as Winstrol, Primobolan or Durabolin. When combined with such anabolics, the user should notice faster, more pronounced muscle-building effects, but it may also increase the likelihood of seeing androgenic side effects (or hepatotoxicity in the case of Winstrol).