#### MAGNUS PHARMACEUTICALS

# Nandro D

Nandrolone Decanoate 250mg/ml U.S.P.

## 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

Nandrolone decanoate is an injectable form of the anabolic steroid nandrolone. The decanoate ester provides a slow release of nandrolone from the site of injection, lasting for up to three weeks. Nandrolone is very similar to testosterone in structure, although it lacks a carbon atom at the 19th position (hence its other name, 19- nortestosterone). Like testosterone, nandrolone exhibits relatively strong anabolic properties. Unlike testosterone, however, its tissue-building activity is accompanied by weak androgenic properties. Much of this has to do with the reduction of nandrolone to a weaker steroid, dihydronandrolone, in the same androgen-responsive target tissues that potentate the action of testosterone (by converting it to DHT). The mild properties of nandrolone decanoate have made it one of the most popular injectable steroids worldwide, highly favored by athletes for its ability to promote significant strength and lean muscle mass gains without strong androgenic or estrogenic side effects.

### Side Effects (Estrogenic)

Nandrolone has a low tendency for estrogen conversion, estimated to be only about 20% of that seen with testosterone. This is because while the liver can convert nandrolone to estradiol, in other more active sites of steroid aromatization such as adipose tissue nandrolone is far less open to this process. Consequently, estrogen-related side effects are a much lower concern with this drug than with testosterone. Elevated estrogen levels may still be noticed with higher dosing, however, and may cause side effects such as increased water retention, body fat gain, and gynecomastia. An anti-estrogen such as clomiphene citrate or tamoxifen citrate may be necessary to prevent estrogenic side effects if they occur. 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.

It is of note that nandrolone has some activity as a progestin in the body. Although progesterone is a c-19 steroid, removal of this group as in 19-norprogesterone creates a hormone with greater binding affinity for its corresponding receptor. Sharing this trait, many 19-nor anabolic steroids are shown to have some affinity for the progesterone receptor as well. The side effects associated with progesterone are similar to those of estrogen, including negative feedback inhibition of testosterone production and enhanced rate of fat storage. Progestins also augment the stimulatory effect of estrogens on mammary tissue growth. There appears to be a strong synergy between these two hormones here, such that gynecomastia might even occur with the help of progestins, without excessive estrogen levels. The use of an anti-estrogen, which inhibits the estrogenic component of this disorder, is often sufficient to mitigate gynecomastia caused by nandrolone.



#### Side Effects (Androgenic)

Although classified as an anabolic steroid, androgenic side effects are still possible with this substance, especially with higher doses. 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. Nandrolone is a steroid with relatively low facial hair growth, and clitoral enlargement. Nandrolone is a steroid with relatively 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. It is also important to point out that due to its mild androgenic nature and ability to suppress endogenous testosterone, nandrolone is prone to interfering with libido in males when used without another androgen.

Note that in androgen-responsive target tissues such as the skin, scalp, and prostate, the relative androgenicity of nandrolone is reduced by its reduction to dihydronandrolone (DHN). The 5-alpha reductase enzyme is responsible for this metabolism of nandrolone. The concurrent use of a 5-alpha reductase inhibitor such as finasteride or dutasteride will interfere with site-specific reduction of nandrolone action, considerably increasing the tendency of nandrolone to produce androgenic side effects. Reductase inhibitors should be avoided with nandrolone if low androgenicity is desired.

#### Side Effects (Hepatotoxicity)

Boldenone is not c-17 alpha alkylated, and not known to have hepatotoxic effects. Liver toxicity is unlikely.

#### 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. Studies administering 600 mg of nandrolone decanoate per week for 10 weeks demonstrated a 26% reduction in HDL cholesterol levels. This suppression is slightly greater than that reported with an equal dose of testosterone enanthate, and is in agreement with earlier studies showing a slightly stronger negative impact on HDL/LDL ratio with nandrolone decanoate as compared to testosterone cypionate. Nandrolone decanoate should still have a significantly weaker impact on serum lipids than c-17 alpha alkylated agents. 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.

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. Studies administering 100 mg per week of nandrolone decanoate for 6 weeks have demonstrated an approximate 57% reduction in serum testosterone levels during therapy. At a dosage of 300 mg per week, this reduction reached 70%. It is believed that the progestational activity of nandrolone notably contributes to the suppression of testosterone synthesis during therapy, which can be marked in spite of a low tendency for estrogen conversion. Without the intervention of testosterone-stimulating substances, testosterone levels should return to normal within 2-6 months of drug secession.

Note that prolonged hypogonadotrophic hypogonadism can develop secondary to steroid abuse, necessitating medical intervention.

#### Administration (Men)

For general anabolic effects, early prescribing guidelines recommend a dosage of 50-100 mg every 3-4 weeks for 12 weeks. To treat renal anemia, the prescribing guidelines for nandrolone decanoate recommend a dosage of 100- 200 mg per week. The usual dosage nandrolone decanoate recommend a dosage of 100- 200 mg per week.

The usual dosage for physique- or performance-enhancing purposes is the range of 200-600 mg per week, taken in cycles 8 to 12 weeks in length. This level is sufficient for most users to notice measurable gains in lean muscle mass and strength. It is often stated that nandrolone decanoate will exhibit its optimal effect (best gain/side effect ratio) at 2 mg per pound of bodyweight/weekly, although individual differences in response will likely dictate varying ideal doses for different users. Deca is not known as a very "fast" builder. The muscle-building effect of this drug is quite noticeable, but not dramatic. In general, one can expect to gain muscle weight at about half the rate of that with an equal amount of testosterone.

Nandrolone decanoate is often combined with other steroids for an enhanced effect. A combination of 200-400 mg/week of nandrolone decanoate and 10-20 mg daily of Winstrol, for example, is noted to greatly enhance the look of muscularity and definition when dieting/cutting. A strong non-aromatizing androgen like Halotestin or trenbolone could also be used, again providing an enhanced level of hardness and density to the muscles. Being a moderately strong muscle builder, nandrolone can also be incorporated into bulk cycles with acceptable results. The classic "Deca and D-bol" stack (usually 200-400 mg of nandrolone decanoate per week and 15-25 mg of Dianabol per day) has been a bodybuilding basic for decades, and always seems to provide excellent muscle growth. A stronger androgen such as Anadrol 50 or testosterone could also be substituted, producing greater results, but with more water retention.

#### **Administration (Women)**

For general anabolic effects, early prescribing guidelines recommend a dosage of 50-100 mg every 3-4 weeks for 12 weeks. To treat renal anemia, the prescribing guidelines for nandrolone decanoate recommend a dosage of 50-100 mg per week. When used for physique- or performance-enhancing purposes, a dosage of 50 mg per week is most common, taken for 4-6 weeks. Although only slightly androgenic, women are occasionally confronted with virilization symptoms when taking this compound. Studies have demonstrated high tolerability (minor but statistically insignificant incidence of virilizing side effects) with a dose of 100 mg every other week for 12 weeks, while long-term studies (+12 months of use) have demonstrated virilizing side effects on a dose as low as 50 mg every 2-3 weeks. Should virilizing side effects become a concern, nandrolone decanoate should be discontinued immediately to help prevent their permanent appearance. After a sufficient period of withdrawal, the shorter-acting nandrolone Durabolin might be considered a safer option. This drug stays active for only several days, greatly reducing the withdrawal time if indicated.