

ARBITANTE EN ELLYN'S MILLIAM LLEWELLYN'S MILLIAM ROLL MILLIAM LLEWELLYN'S MILLIAM ROLL MILLIA

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Dianabol® (methandrostenolone, methandienone)

moderate

not significant

Androgenic	40-60
Anabolic	90-210
Standard	Methyltestosterone (oral)
Chemical Names	17a-methyl-17b-hydroxy-1,4-androstadien-3-one 1-Dehydro- 17a-methyltestosterone

Methandrostenolone

Description:

Estrogenic Activity

Progestational Activity

Dianabol is the most recognized trade name for the drug methandrostenolone, also referred to as methandienone in many countries. Methandrostenolone is a derivative of testosterone, modified so that the hormone's androgenic (masculinizing) properties are reduced and its anabolic (tissue building) properties preserved. Having a lower level relative androgenicity than testosterone. methandrostenolone is classified as an "anabolic" steroid, although quite a distinct androgenic side is still present. This drug was designed, and is principally sold, as an oral medication, although it can also be found in a number of injectable veterinary solutions. Dianabol is today, and has historically been, the most commonly used oral anabolic/androgenic steroid for physique performance-enhancing purposes.

History:

Methandrostenolone was first described in 1955.¹⁹⁴ It was released to the U.S. prescription drug market in 1958, under the brand name Dianabol by Ciba Pharmaceuticals. Ciba developed methandrostenolone into a medicine with the help of Dr. John Ziegler, who was the team physician for a number of U.S. Olympic teams, including weightlifting. Ziegler makes note in Bob Goldman's Death in the Locker Room that he was first exposed to steroids at the 1956 World Games, seeing that the Russians were heavily abusing testosterone on their strength athletes. According to Ziegler, the hormone was having noticeable side effects, and one athlete had such profound prostate enlargement that he was forced to urinate with the aid of a catheter. While working with Ciba, the company tested a steroid (synthesized earlier) that had reduced androgenicity compared to testosterone, but with retained tissuebuilding (anabolic) properties. This had been accomplished by altering the basic chemical structure of testosterone in a way that altered its metabolism and disposition in the body. With the help of Dr. Ziegler, Ciba

brought to market one of the most effective oral "anabolic" steroid medicines ever known, methandrostenolone. The success of the drug was rapid and far-reaching.

Dr. Ziegler's athletes were quickly making great advancements in their competitive careers with the help of the drug. According to reports, Ziegler too seemed to be very impressed, at least for a while.¹⁹⁵ But by the early 1960's, it was starting to look like Dianabol had sparked a great wave of steroid abuse in competitive sports. Dr. Ziegler's early recommendations, which depending on the source called for as little as 5mg per day or as much as 15mg per day, were being largely ignored, as athletes developed their own more aggressive (and potentially dangerous) dosing strategies. Dr. Ziegler soon became disgusted with the misuse of the drug, and would eventually become a voice of opposition to sports doping. By 1967, approximately 10 years after first introducing Dianabol to his athletes, he had categorically condemned the use of anabolic steroids in sports. 196

As early as 1965, Dianabol was already starting to fall under scrutiny of the U.S. Food and Drug Administration. That year the FDA requested Ciba clarify Dianabol's medical uses, which were then stated to include helping patients in debilitated states and those with weakened bones. In 1970, the FDA accepted that Dianabol was "Probably Effective" in treating post-menopausal osteoporosis and pituitary-deficient dwarfism. These changes were reflected in the drug's prescribing recommendations during the 1970's, and Ciba was allowed to continue selling and studying the agent. Ciba eventually lost patent protection, however, and companies like Parr. Barr, Bolar, and Rugby were soon cutting deeply into their market with their own generic version of the drug.

By the early-80's the FDA had withdrawn its "Probably Effective" position on the pituitary-deficient dwarfism, and continued to press Ciba for more data. Sufficient clarification never came, and in 1983 Ciba officially

withdrew Dianabol from the U.S. market.¹⁹⁷ Perhaps financial disinterest had a hand in their abandoned push to keep the drug approved. The FDA pulled all generic forms of methandrostenolone from the U.S. market in 1985, a time when most Western nations were also eliminating the drug, finding its existence to be justified mainly by sports doping. Methandrostenolone is still produced today, but typically in nations with loose prescription drug regulations, and by companies that still prefer to cater to an underground athletic market.

How Supplied:

Methandrostenolone is widely available in both human and veterinary drug markets. Composition and dosage may vary by country and manufacturer. Methandrostenolone was designed as an oral anabolic steroid containing 2.5mg or 5mg of steroid per tablet (Dianabol). Modern brands usually contain 5mg or 10mg per tablet. Methandrostenolone can also be found in injectable veterinary preparations. These are typically oil-based solutions that carry 25mg/ml of steroid.

Structural Characteristics:

Methandrostenolone is a modified form of testosterone. It differs by: 1) the addition of a methyl group at carbon 17-alpha to protect the hormone during oral administration and 2) the introduction of a double bond between carbons 1 and 2, which reduces its relative androgenicity. The resulting steroid also has a much weaker relative binding affinity for the androgen receptor than testosterone, but at the same time displays a much longer half-life and lower affinity for serum-binding proteins in comparison. These features (among others) allow methandrostenolone to be a very potent anabolic steroid in spite of a weaker affinity for receptor binding. Recent studies have additionally confirmed that its primary mode of action involves interaction with the cellular androgen receptor.¹⁹⁸

Side Effects (Estrogenic):

Methandrostenolone is aromatized by the body, and is a moderately estrogenic steroid. 199 Gynecomastia is often a concern during treatment, and may present itself quite early into a cycle (particularly when higher doses are used). At the same time water retention can become a problem, causing a notable loss of muscle definition as both subcutaneous water retention and fat levels build. Sensitive individuals may therefore want to keep the estrogen under control with the addition of an antiestrogen such as Nolvadex® and/or Proviron®. One may alternately use an aromatase inhibitor like Arimidex® (anastrozole), which is a more effective remedy for estrogen control. Aromatase inhibitors, however, can be

quite expensive in comparison to standard estrogen maintenance therapies, and may also have negative effects on blood lipids.

It is interesting to note that methandrostenolone is structurally identical to boldenone, except that it contains the added c17-alpha-methyl group. This fact makes clear the impact of altering a steroid in such a way, as these two compounds appear to act very differently in the body. A key dissimilarity seems to lie in the tendency for estrogenic side effects. Equipoise® (boldenone undecylenate) is known to be quite mild in this regard, and users commonly take this drug without the need to add an anti-estrogen. Methandrostenolone is much more estrogenic, often necessitating anti-estrogen use. But this difference is not caused by methandrostenolone being more easily aromatized. In fact, the 17-alpha methyl group and c1-2 double bond both slow the process of aromatization considerably. The issue actually is caused by methandrostenolone converting to 17alphamethylestradiol, a more biologically active form of estrogen than estradiol.

Side Effects (Androgenic):

Although classified as an anabolic steroid, androgenic side effects are still common 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. Individuals sensitive to the androgenic effects of methandrostenolone may find a milder anabolic such as Deca-Durabolin® to be more comfortable. Women are additionally 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.

While methandrostenolone does convert to a more potent steroid via interaction with the 5-alpha reductase enzyme (the same enzyme responsible for converting testosterone to dihydrotestosterone), it has an extremely low affinity to do so.²⁰⁰ The androgenic metabolite 5-alpha dihydromethandrostenolone is produced only in trace amounts, so the relative androgenicity of methandrostenolone is not significantly affected by finasteride or dutasteride.

Side Effects (Hepatotoxicity):

Methandrostenolone 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.

Studies have shown that several weeks of methandrostenolone administration offers minimal hepatic stress so long as it is given at a dosage of 10mg per day or below. At a dose of 15mg per day, a majority of patients will begin to demonstrate disturbed liver function as measured by clinically elevated bromosulphalein retention (a marker of hepatic stress).²⁰¹ Even at 2.5 and 5mg per day, elevations in BSP retention have been reported in patients. Severe liver complications are rare given the periodic nature in which most people use oral anabolic/androgenic steroids, although cannot be excluded with methandrostenolone, especially with high doses and/or prolonged administration periods.

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 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 of resistance to hepatic metabolism. Methandrostenolone has a strong effect on the hepatic management of cholesterol due to its structural resistance to liver breakdown and route of administration. 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.

Side Effects (Testosterone Suppression):

All anabolic/androgenic steroids when taken in doses sufficient to promote muscle gain are expected to suppress endogenous testosterone production. Methandrostenolone is no exception, and is noted for its strong influence on the hypothalamic-pituitary-testicular axis. Clinical studies giving 15mg per day to resistance-training males for 8 weeks caused the mean plasma testosterone level to fall by 69%.²⁰² Without the intervention of testosterone-stimulating substances, testosterone levels should return to normal within 1-4 months of drug secession. Note that prolonged hypogonadotrophic hypogonadism can develop

secondary to steroid abuse, necessitating medical intervention.

The above side effects are not inclusive. For more detailed discussion of potential side effects, see the Steroid Side Effects section of this book.

Administration (General):

Studies have shown that taking an oral anabolic steroid with food may decrease its bioavailability.²⁰³ 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 Dianabol called for a daily dosage of 5mg. This was to be administered on an intermittent basis, with the drug taken for no more than 6 consecutive weeks. Thereafter, a break of 2 to 4 weeks was advised before therapy was resumed. For physique- or performance-enhancing purposes, the drug is also used intermittently, with cycles usually lasting between 6 and 8 weeks in length followed by 6-8 weeks off. Although a low dose of 5mg daily may be effective for improving performance, athletes typically take much higher amounts. A daily dosage of three to six 5mg tablets (15-30mg) is most common, and typically produces very dramatic results. Some venture even higher in dosage, but this practice usually leads to a more profound incidence of side effects, and is generally discouraged.

Dianabol stacks well with a variety of other steroids. It is noted to mix particularly well with the mild anabolic Deca-Durabolin®, for example. Together one can expect exceptional muscle and strength gains, with side effects not much worse than one would expect from Dianabol alone. For sheer mass, a long-acting testosterone ester like enanthate or cypionate can be used. With the high estrogenic/androgenic properties of this androgen, however, side effects should be more pronounced. Gains would be pronounced as well, which usually makes such an endeavor worthwhile to the user. As discussed earlier, ancillary drugs can be added to reduce the side effects associated with this kind of cycle.

The half-life of Dianabol is only about 3 to 5 hours. A single daily dosage schedule will produce a varying blood level, with ups and downs throughout the day. The user, likewise, has a choice, to either split up the tablets during the day or to take them all at one time. The usual recommendation has been to divide them and try to regulate the concentration in your blood. This, however, will produce a lower peak blood level than if the tablets

were taken all at once, so there may be a trade-off with this option. Both options work fine, but anecdotal evidence seems to support single daily doses as being better for overall results. With such a schedule, it seems logical that taking the pills earlier in the day would be optimal. This would allow a considerable number of daytime hours for an androgen-rich metabolism to heighten the uptake of nutrients, especially the critical hours following training.

Administration (Women):

Being moderately androgenic, Dianabol is really only a popular steroid with men. When used by women, strong virilization symptoms are possible. Some do experiment with it, however, and often find low doses (2.5-5mg) of this steroid quite effective for new muscle growth. Studies have demonstrated that a majority of women will notice acne, which is indicative of androgenicity, at a dosage of only 10mg per day. Children are likely to notice virilizing effects with as little as 2.5mg per day.

Availability Trends:

Dianabol is one of the most popular steroids in the world, and consequently one can find a variety of such preparations on the black market. You must be warned, though. This drug is also amongst the most widely counterfeited. You need to do some educated shopping to avoid getting ripped off. One of the first things you need to remember is that most of the Western world has completely done away with this steroid. In medical circles here it is thought to hold no real value anymore. Its potential existence is viewed as supporting doping/performance-enhancement only. Therefore, you are not going to come across legitimate Dbol from the U.S., Canada, or Western Europe. This drug is made exclusively in areas such as Asia, South America (limited), Mexico, and Eastern Europe. Ignore anything labeled as Italian or Spanish, etc. They will not be legitimate. In regards to some of the most popular legitimate brands on the black market, here is what to look for.

Animal Power's Methan Tabs (Mexico) is no longer available, as the company is no longer in business.

Pet's Pharma's Metandiol products (Mexico) are no longer available, as the company has halted production of all anabolic steroid products.

Denkall's D-Bol (Mexico) is no longer available, as the company is no longer in business.

Loeffler's Reforvit products are no longer available, as the company appears to have halted its steroid products.

Norvet's Anabol-Jet (Mexico) is no longer available, as the company appears to have halted its steroid products.

British Dispensary Anabol tablets from Thailand are still very popular. Due to rampant counterfeiting, the manufacturer has instituted three security guards. One is a hologram sticker, which is affixed to each 1,000-count tub of tablets. Second, the tablets themselves are imprinted with the company's snake emblem. Lastly, the 1,000-count tub bears the company logo formed into the plastic top. Are these three features effective at blocking fakes? In the case of Anabol, the answer is "not really." While many fakes are poor in quality and lack all of these, Anabol is in such high demand that some advanced counterfeiters have been duplicating British Dispensary's holograms, custom tablet dyes, and logo-impressed plastic bottles. They look good, but all fakes thus far have minor deviations from the original. Be sure to compare your product's features to the real Anabol photos very closely. Note that as of late 2006, the product now appears to carry a computer printed lot number and expiration date, similar to Anabol 10.

British Dispensary is aware of the current most accurate fake, and has made the following observations. 1) The hologram on the real item is more yellow and crisp than the fake. 2) The fake tablet has white specs in it, showing that their blending was not complete. 3) The lot number and expiration date are too clean on the fake. These numbers are stamped on the real item, and are never that neat. Also note that BD has recently introduced a 10mg version of Anabol called Anabol 10. This product sports the same security features as the regular Anabol product, but in a smaller yellow and white package. The tablets themselves are identical in shape to the 5mg version, and also carry the company logo stamped into them. The only difference is their color, which is yellow instead of pink.

The Thai export company British Dragon was selling Methanabol tablets until the end of 2005. To deter counterfeiting, all pouches carried a holographic security sticker. The firm also made an injectable methandrostenolone called Averbol 25, which used a cap that displayed the product name formed into the plastic. When removed it revealed the company's dragon logo, which was formed directly into the rubber stopper. British Dragon was dissolved at the end of 2006, however, and the quality of BD products placed into the marketplace shortly before its closing could not be verified.

Generic "Russian D-Bol" (METAHAPOCTEHOROH) is still being produced in Russia by Akrikhin (the name looks like Akpnxnh in Cyrillic). The current box is purple in color, and carries 10 strips of 10 tablets each. This has always been a highly regarded form of Dbol. As such, it has also been a regularly counterfeited one. Most of the fakes have been poor copies of the original, often coming as bottles of loose tablets instead of proper foil and plastic push-

through strips. That is not to say locating the current production version in tablet strips assures a safe purchase, however, so take care to compare your product to the original photos closely. Note that the manufacturer has started making a version of this product for the Ukrainian market. This product can be identified by the company name, which appears as Akpixih on the packaging. Some have mistakenly identified these as fakes, believing this to be a typographical error.

Russian Bioreaktor (Peaktop) methandrostenolone is no longer available. Before production was halted, this brand was subject to a high degree of counterfeiting.

Naposim from Rumania is still available. It comes in a white box, containing 10 triangle stamped pills to each foil and plastic strip. Note that the foil strip on real Naposim has date and lot number stampings on both ends. Some fakes in the past have overlooked this, placing them only on one end. Additionally, there is a little nipple in the center of each pill bubble on the real Naposim strip. Fakes of this product have been located in the past with smooth pill bubbles. Also, be sure the triangle on your tablets is sharp and even. One recent fake has been seen with stampings that look more like Star Trek emblems than triangles. Also, note that some strips are found with the generic name metandienona instead of metandienonum. This is simply how the company labels the product for export.

Danabol DS from Body Research/March Pharmaceutical Company in Thailand appears to be in production again. Note that the tablets are made in the form of distinct small blue heart shapes. Body Research products are often counterfeited, so take care when shopping.

Methandon and Melic from Thailand are both legit items, and come packed in containers of 1,000 tablets each. Both of these products are relatively rare on the black market these days, although it is believed that both are still in production. Their lack of abundance may simply be due to the far greater popularity and recognition of Anabol, which continued to dominate the Thai Dianabol market in spite of growing competition. Both products have pink 5-sided tablets like Anabol, and are very similar in appearance without the bottles. The Methandon product (which used to use plain white tablets) is the most distinct, as it carries the letters "ES" etched into them.

Dronabol from Plaza Dispensary, Methan Tabs from Remy Pharm, the generic from LA Labs, and Metabolin are all fake products on the Thai market. It may be good advice to stick with the known brands like BD and Acdhon, instead of risking these.

Bionabol from Bulgaria is no longer in production. In mid-

2005, the Bulgarian Ministry of Health refused to renew Balkanpharma's license to sell this drug. Drug companies are normally required to renew their drug permits every 5 years in Bulgaria, and it is speculated that in anticipation of entry into the European Union in 2007, the government is discontinuing certain "controversial" medicines like Dianabol. The last batch should expire in early 2009 (02 2009 is the last date of manufacture I have seen).

Anabolex 3mg tabs from the Dominican Republic are still a safe buy. Note that each pill contains an added 1.5mg of Periactin, used as an appetite stimulant. It's an antihistamine and may cause drowsiness. Make sure your product is packaged in the modern-style blue pouches, not the older plain white ones. These are long off the market at this point.

Metanabol from Poland is another legit brand, but be sure to purchase these only in strips of 20 tabs, as shown in the picture library.

Nerobol from Hungary is no longer being manufactured. Avoid all products bearing this brand name.

Pronabol 5 is no longer being manufactured by PBL in India. This product was once very popular on the black market, however, but has been a scarce find for many years now.





1,000 tablet and 500 tablet bottles of Dronabol DS from Berich (Thailand)



SAMPLE



AMPLE

Dronabol from Plaza (Thailand)

Melic from Thailand



Danabol DS (Thailand)

Di-Anabol from SB Labs (Thailand)



Methandon (Thailand)

Methandon (older packaging)



Anabol 10 from British Dispensary (Thailand)

Anabol 5mg tab and bottle from British Dispensary



Real bottle with "pormotion" typo

Counterfeit with same typo

Another counterfeit

Counterfeit tabs



Old LP Standard Anabol (NLM)

Fake 100 tab LP bottle

50mg Metanabol from British Dragon (Thailand) NLM



British Dragon 10mg (Thailand) - NLM

BD's injectable Averbol (Thailand)

Fake Italian D-Bol (sold in Thailand)



Generic from Ramopharmin (Iran)

Development Labs generic (Mauritius, Export)



Restauvit Tabs (Mexico)

Methan Tabs from Animal Power (Mexico) NLM



Metavet from Quality Vet (Mexico) NLM

Anabol-Pet's from Norvet (Mexico) NLM



Oral Metandiol from Pet's Pharma (Mexico) NLM

Injectable Metandiol (NLM)







Loeffler Reforvit Simple (Mexico) NLM

Older Reforvit packaging (NLM)

Reforvit-B 10ml (NLM)









Reforvit-B 50ml (NLM)

Older Reforvit-B vial (NLM)

Old Reforvit-B tabs (NLM)







Denkall injectable (Mexico) NLM

Denkall 100 tablet bottle (NLM)

96 and 300 capsule packaging (NLM)









Bogus Denkall Methan

Dianabol tabs from Salud (Mexico)









10ml injectable from Salud

Older 50ml packaging

Old Ganabol from Salud (NLM)





METANDROL 10
NE HANI MUSTENDION C
SOR iddets

VETERDIARIAN LUSE

Made in flumps for
BRATISLARS LUBOPE
SWEED BRATISLARS
WHEN BRATISLARS
EUROPE

BL BRATISLARS
EUROPE



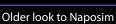
Ttokkyo generic in 5mg and 10mg from Mexico (NLM)

Two versions of Bratis Metandrol - Mexican UG product (NLM)



Naposim from Rumania





1PLE



Fake Naposim on left (no nipple on blister, lacks numbers on both ends)

Nerobol from Hungary (NLM)



Bionabol from Bulgaria (NLM)

Old Bionabol box and bottle



Three different counterfeit Bionabol products



Pronabol from P/B/L India (NLM)

Trinergic from Unichem India (NLM)



Anabolex from Dominican Republic (old strip on right)

Dianabol from Planet Pharmacy (Belize) NLM



Bioreaktor from Russia (NLM)

Counterfeit strip

Counterfeit Bioreaktor box



Another counterfeit Bioreaktor

Russian Dianabol from Akrikhin



Older packaging

Older packaging w/English text

Russian Export to Ukraine



Very old Russian D-Bol

Three different counterfeit bottles











Metanabol from Poland (NLM)

Generic from Genesis (Singapore, export)

U.S. generic (NLM)









International Pharmaceuticals injectable and 500 count tablet bottle (UG)











IP 100 count bottle

Atlanta and British Pharm pouches (UG)

Tabs from Farmakeio (UG)







Underground products from Generic Supplements, Continental, and Golden Triangle











Underground products from DDD, Alpha Tech (NLM), Spectro (NLM), and Moonlight





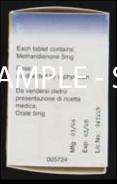




Underground products from 5 Star, Syrus, and R.O.H.M.









Underground products from GPL and Apex



Three fake products with fabricated trade names



Four more fake methandrostenolone products



Another five bogus Dianabol products