

ANABOLIC STEROIDS

and what you need
to know...



New Zealand
Needle Exchange
Programme



Contents

| | |
|---|----|
| What are Anabolic Steroids? | 5 |
| How do Anabolic Steroids Work? | 6 |
| Side Effects of Anabolic Steroids | 8 |
| General rules for injecting Anabolic Steroids | 10 |
| Recommended injection sites | 12 |
| Recommended Needles and Syringes | 13 |
| Advice about injecting | 13 |
| Safe Injecting Guidelines | 14 |
| Complications of incorrect injecting | 16 |
| Patterns of Anabolic Steroid Use | 18 |
| Addiction to Anabolic Steroids | 20 |
| Caution about counterfeit Anabolic Steroids | 22 |
| Human Growth Hormone & Peptides..... | 24 |
| Steroids HGH/Peptides and the Law..... | 25 |
| New Zealand Needle Exchanges | 26 |

People use anabolic steroids for a variety of reasons. Some people use them to build muscle for their job, some to help with their sport performance or body building and others use them to look good.

Regardless of the reason for using anabolic steroids, care needs to be taken in order to minimise the side effects and problems that can be caused by injecting practices.

What are ANABOLIC STEROIDS ?

Anabolic steroids are human made versions of the hormone testosterone. Testosterone is the chemical in men responsible for facial hair, deepening of the voice, and sex organ development. These masculine effects are called the **androgenic** effects.

The main reason people use anabolic steroids is for muscle growth. This stimulated growth in tissues such as muscle is called the **anabolic** effect. The androgenic effects are generally considered to be side effects.

Anabolic steroids can either be taken orally – in tablet form - or as a solution that can be injected into muscle. They are not the same as steroids prescribed for medical conditions, for example, corticosteroids, such as prednisone.



How do ANABOLIC STEROIDS work?

Anabolic steroids are made up of tiny molecules. When injected or taken orally the steroid molecules travel around the body in the bloodstream. When a molecule parks (or binds) at a receptor site, different reactions are triggered. For example, when steroid molecules bind to hair cells, it may result in an increase in facial hair. It may also mean that the brain thinks there is too much hair being grown so it shuts down the growth of hair on the head.

When steroid molecules bind to muscle cells, several things happen:

1. More protein can be used by the body's muscles, so muscle tissue can be built faster especially when combined with a high calorie diet and regular training.
2. There is an increase of muscle fuel stored in the muscles, making more energy available for the muscle to work.
3. There is an increase in red blood cells in the body, allowing more oxygen to be delivered to the muscles while training resulting in improved endurance ability of the muscles.

BUT more does not mean faster or better! The receptor sites will only bind some of the steroid molecules before they become saturated. Higher doses therefore do not have much more of an effect than lower doses. They do however cause more side effects.

**There is no 'safe' dose of an anabolic steroid.
The NZNEP advise that people using steroids keep doses low and have breaks from using.**

Aromatisation

When there is too much testosterone in the body, a process called **aromatisation** occurs. The brain tells the body to convert the excess testosterone into oestrogen (the female hormone). When this happens men can start to develop breasts. This is known as **Gynaecomastia**. The first signs are painful bumps under the nipples. In some cases Gynaecomastia is irreversible although the bumps may reduce in size when the steroid is stopped.

Side effects of ANABOLIC STEROIDS

There are risks in using anabolic steroids, whether they're in tablet or injectable form. It is essential therefore that people considering using anabolic steroids, and people close to them, know about the potential side effects of using them.

Different steroids cause different side effects at different doses. However the chances of experiencing side effects are increased by the following practises: using more than one anabolic steroid at a time; using high doses; and the prolonged use of anabolic steroids.

Common side effects in both genders include:

Baldness, acne, jaundice (yellowing of skin or eyes); aggression (roid rages), mood swings, insomnia, paranoia; depression, heart problems (abnormal heart rhythms, high blood pressure, fluid retention and/or heart attack); high cholesterol levels; permanent liver damage and liver tumours; diabetes; increased risk of infections and viruses e.g. colds and flu.

In men:

- Infertility, shrinking testicles, impotence, difficult maintaining an erection, enlarged prostate gland
- Development of breast tissue or Gynaecomastia

In women:

- Increased body and facial hair
- Deepening of the voice (this can be permanent)
- Problems with menstruation
- Enlarged clitoris
- Increased sex drive
- Effects on the unborn child if taken during pregnancy

In children and teenagers:

Anabolic steroids can cause stunted growth.

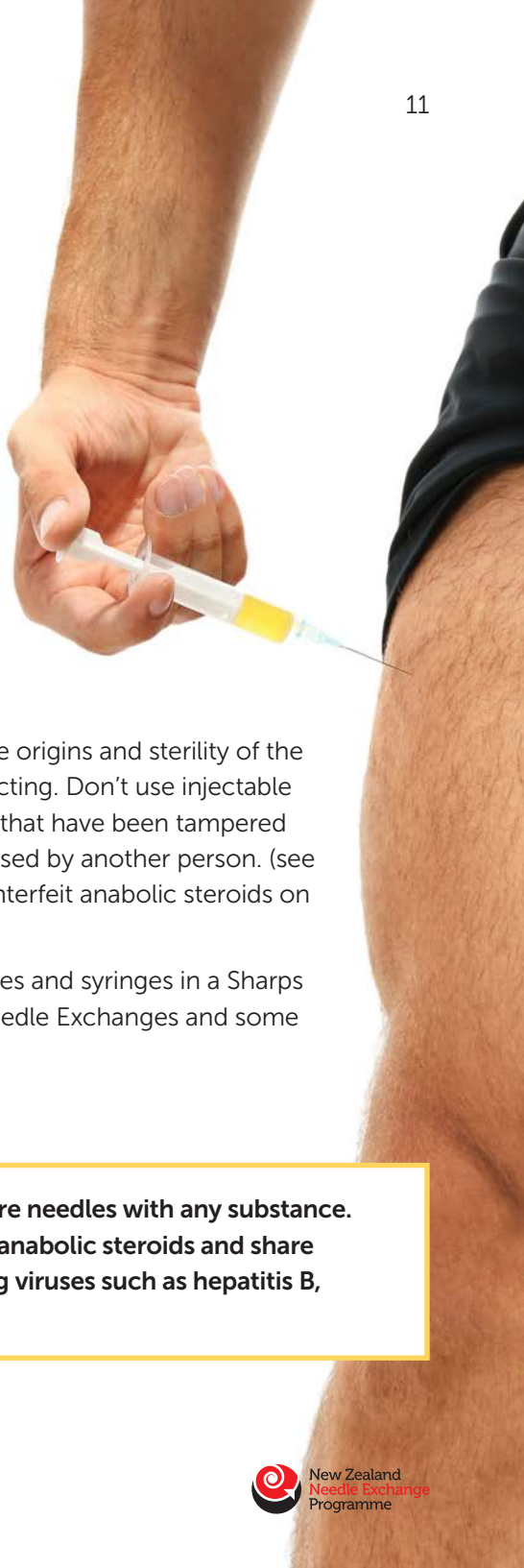
Most side effects generally cease after the drug is stopped

It is not recommended that other drugs be used to treat side effects. Depending on the drug, they can cause as many problems as anabolic steroids themselves. It is particularly dangerous to use diuretics (drugs which reduce fluid retention) with anabolic steroids. They may cause abnormal heart rhythms which may lead to death. This is because diuretics can suddenly and markedly change the quantity of sodium and potassium in cells in the body, which can be very dangerous for blood cells, the heart muscle and brain tissue.

General rules for injecting ANABOLIC STEROIDS

People who use anabolic steroids usually take them orally or inject them into muscles. When injecting there are a number of safety precautions to be aware of. They include:

- Use a different needle to draw up the substance into the syringe than the one used for the injection as drawing up can blunt the needle which could cause tissue damage
- Use a new needle and syringe for each injection
- Discoloured steroid solution or a solution that has particles floating in it should not be used
- If the solution has been in the fridge – warm it to room temperature before injecting it
- Injections need to be into a muscle (buttock and thigh best). **Never inject into a vein.**
- Do not inject more than 2mls of fluid at a time.
- The needle should not be inserted up to the hilt - leave 1/4 out so that it can be removed if it breaks. Inserting too shallow can however cause abscesses.
- If there is a hard lump in a muscle use a different site until the lump disappears
- Alternate injection sites to reduce tissue damage e.g. right thigh one day, left one next etc
- Keep doses to a minimum and take breaks from use



- Make sure about the origins and sterility of the product before injecting. Don't use injectable solutions or tablets that have been tampered with or previously used by another person. (see Caution about counterfeit anabolic steroids on page 22).
- Dispose of all needles and syringes in a Sharps Bin (provided by Needle Exchanges and some Pharmacies).

It is not safe to share needles with any substance. People who inject anabolic steroids and share needles risk getting viruses such as hepatitis B, hepatitis C or HIV.

Recommended INJECTION SITES

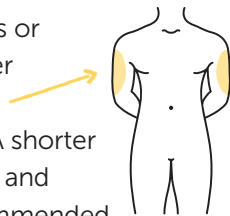
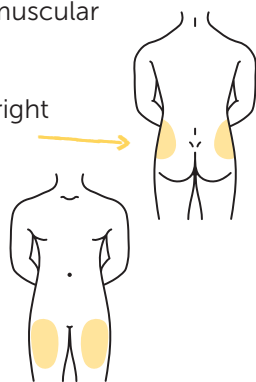
Two sites are recommended for intramuscular injections. They are:

1. the upper outer quadrant (the top right or the top left sides) of the buttock (gluteus maximus); and
2. the middle outer muscle of the thigh (vastus lateralis).

Caution should be taken when injecting into the gluteus maximus so that the sciatic nerve is not hit. If this occurs it is likely to be very painful and can cause lasting injury. It is less likely to occur when injecting into the upper/outer quadrant. *(see diagram)*

Injection sites should be rotated to avoid damage in one place. Anabolic steroids work throughout the body. They do not act locally - therefore repeated injections in one place to build up a particular muscle are not effective.

If it is not possible to inject into the thighs or buttocks, the deltoid muscles in the upper arm could be used. Because they are a smaller muscle injecting can be painful. A shorter needle from the ones used for the thighs and buttocks may be required. It is also recommended that a smaller dose be used when injecting into a smaller muscle e.g. 1ml or less into the deltoid muscle.



Recommended NEEDLES + SYRINGES

Needles must be long enough to reach into the muscles and with a bore size appropriate for injecting an oil based solution. Two needles are needed for each injection – one for drawing up and one for injecting. The NZNEP recommend that an 18 gauge needle be used for drawing up and that a 23 to 25 gauge x 1 or 1 ½ inch needle (depending on the injection site) be used for injecting.

A 2 ml syringe should be used although a 1ml or 3ml syringe will do if there are no 2mls available. It is important to remember that **no more than 2ml** should ever be injected into a muscle at any one time.

All used needles and syringes should be disposed of in a sharps bin after a single use

Advice about injecting

NZNEP staff are trained to provide advice on safe injecting practises. They can also provide information on services that offer help for medical and/or addiction problems.

The following safe injecting guidelines (next page) are for people, especially new users, to follow.

Safe injecting GUIDELINES

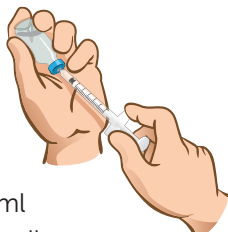
1. Wash and dry your hands thoroughly

Arrange all your sterile equipment on a clean surface

Clean the injection site with soap and water or an alcohol swab (swipe in one direction only – don't rub)

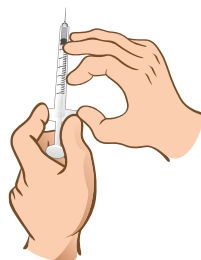
Check your steroid solution. If it is discoloured or has particules floating in it – do not use it. If it has been in the fridge – warm it to room temperature

2. Draw up the steroid solution into a 2ml syringe (a 1ml or 3ml syringe will do if there are no 2ml's available) with a new needle (an 18g needle is ideal) then dispose of the drawing up needle in a Sharps Box. If using a 1ml syringe it should have a detachable needle.



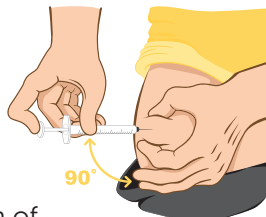
Do not backfill as contamination can occur during the process.

3. Put a new needle onto the syringe (23g – 25g x 1.5 is recommended depending on the site i.e. longer for large muscles). Remove any bubbles by flicking the syringe with your fingers and pushing the plunger up to remove any air and until a drop of the solution appears on the tip of the needle.



4. Stretch the skin around the clean injection site with your finger and thumb.

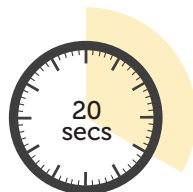
Hold the syringe like a dart and quickly jab the needle in at a right angle, up to about $\frac{3}{4}$ of the length of the needle, into the muscle.



5. Carefully pull back on the plunger a little bit to make sure you haven't hit a blood vessel. If blood does appear withdraw the needle and put pressure on the site for a few minutes. Put a new needle on and try again at a different cleaned site.

If you feel a hard lump in the muscle – also withdraw and use a different site with a new needle.

6. Slowly inject the substance – (take at least 20 seconds) to minimise damage and so that the substance is absorbed more effectively.



7. Take the needle out carefully and apply pressure to the site for a few minutes to stop any bleeding or leakage.

Gently massage the area to help disperse the substance.

There may be some swelling, itching or burning following the injection. If this persists you should seek medical assistance.

8. Dispose of all used equipment in your Sharps Bin.

Wash your hands thoroughly.



Complications of INCORRECT INJECTING

Blood-borne virus

Sharing any injecting equipment can result in transmission of blood borne viruses such as Hepatitis B and C and HIV.

Redness and swelling at the injection site

Ineffective cleaning of hands and injection sites and using unsterile equipment can cause inflammation or abscesses at injection sites. These can often take a long time to heal. If the site becomes painful, hot (burning), red or weepy or if hard lumps appear - medical attention should be sought.

Muscle damage

Muscles can be damaged and scarred by repeated injection. This can result in impaired function and pain.

Tendon, Ligament and Nerve damage

When injections are not positioned correctly damage to the tendons and ligaments can occur. This will cause pain and restrict movement. Hitting a nerve can result in problems with sensation and temporary and sometimes long term paralysis.

Internal bleeding / haemorrhage

When blood vessels are accidentally punctured deep bleeding inside the muscle can occur. This will likely result in stiffness and discomfort.

It is very important to always check that the needle is not inserted into a blood vessel (by pulling back on the plunger) before proceeding with the injection.

Anaphylactic shock

Some people have an allergic reaction to the injection – although this is rare. Immediate medical attention should be sought if symptoms include frequent urination, increased thirst, breathing difficulties and low blood pressure.



Patterns of ANABOLIC STEROID use

Cycles

Steroids should not be used continuously as this is harmful to the body. In an effort to reduce unwanted side effects and to maximise the effects of anabolic steroids some people take them in cycles. A cycle is a pre-planned length of time, typically between 8-12 weeks, when an individual uses steroids and other performance enhancing drugs.

Following a cycle is an 'off cycle' when no steroids are used. This allows the body to rest from the side effects and for the receptor sites to 'recharge' or regain sensitivity to steroids. The 'off' cycle should be at least the same length as the 'on' cycle.

Stacking

During a cycle some people take a combination of two or more substances. This is known as the stack or stacking. When stacking more than one steroid the dose of each can be reduced, with the same effects obtained. This is because more receptors are used than when using a single steroid. Some people find that using certain steroids together optimises the effect of each one.

Advice on cycling and stacking should be sought from a medical professional before commencing use.

Pyramiding

Pyramiding refers to a combination of both stacking and cycling. For example, one or more anabolic steroids are taken in a low dose. This is achieved by gradually increasing the dose or frequency before reaching a peak amount and then gradually tapering off to zero to give the body a break before the cycle is started again.

Users tend to exercise more when they are taking high doses to make the most of their improved performance during this time.

Addiction to ANABOLIC STEROIDS

Anabolic steroids do not have the same short-term effects on the brain as other drugs. The most important difference is that they do not trigger rapid increases in the brain chemical dopamine, which causes the 'high' that drives people who use other substances. However long-term steroid use can act on some of the same brain pathways – including dopamine, serotonin and opioid systems – that are affected by other drugs. This may result in a significant effect on mood and behaviour – both positive and negative.

Although it is less likely that people using anabolic steroids will become physically addicted to them, as they might with alcohol or opioids, continued anabolic steroid use can lead to psychological addiction. People who continue to use steroids despite experiencing unpleasant side effects; who prioritise purchasing steroids over other essentials; who experience cravings; or who are experiencing problems in their relationships with others due to their use; may be experiencing addiction to steroids.



Stopping anabolic steroid use can be problematic for people who have been using steroids over a long period of time. They may experience the following discontinuation symptoms:

- headaches
- anxiety
- low mood
- difficulty concentrating
- fatigue
- restlessness
- loss of appetite
- insomnia
- lowered sex drive
- cravings
- joint and muscle discomfort

Seeking assistance of a medical professional or from an Addiction Treatment Service may be helpful. NZNEP staff can provide information on local addiction services.

Caution about counterfeit ANABOLIC STEROIDS

Anabolic steroids for non-medical use are only available via the black market and come from all over the world. Because there is no way to control quality, counterfeits and poor quality products swamp the market.

Counterfeit steroids are copies of the real ones. They are often made in unsterile conditions and may contain products that are not steroids. Other counterfeits contain steroids but not necessarily the one printed on the label, or at a higher or lower dose. This makes controlling the dose very difficult.

People using steroids should take the following precautions:

- Inspect the packaging and wrapping.
- Legitimate products usually have safety seals and inserts carrying information.
- Single shot vials should have even levels.
- Never use multi-shot water based steroids.
- Batch/Lot numbers should be printed in a different ink or paint than the rest of the label, because they are printed on later. Dates and batch numbers should correspond and make sense.
- Check the bottle or vial. Labels should be straight and the stopper on top of the bottle should not be able to be turned by hand.

- Once the steroid solution is drawn up into the syringe, hold it up to the light and check for bits floating about in the liquid. Oil based steroids should be clear and not cloudy.

Steroids purchased from a gym or a dealer may be produced for use on animals or they may be fake or labelled incorrectly.



If in doubt, chuck it out!

Human growth HORMONE & PEPTIDES

Human growth hormone (HGH) is known as a protein hormone (or peptide hormone). Not all peptides are HGHs however. When injected it enters the bloodstream and spreads around the body, concentrating in the liver, where it converts into IGF-1 (insulin-like growth factor). This substance is responsible for muscle growth.

HGH can cause a number of side effects including:

- Carpal tunnel syndrome
- Raised blood sugar levels which can trigger diabetes 2
- Low blood sugar – symptoms include confusion, trouble talking, loss of consciousness, seizures
- Acromegaly – enlarged hands, feet, nose, ears or jaw
- Swelling in the arms and legs
- Joint and muscle pain
- Gynecomastia (man boobs)
- Water retention – causing puffiness and bloating
- Hypertension (high blood pressure). HGH should not be used by people with hypertension
- High Cholesterol

Human growth hormone usually comes in powder form. Sterile water should be used for mixing. NZNEP advise the use of a 1ml insulin syringe. These syringes have markings on the side that help to properly determine the dose of HGH. International Units IU's are standard measurements concerning amount/quantity, not strength. The difference between mls and IU's can be confusing. It is important to

follow the instructions on the vial to get the correct dose.
1ml is equivalent to 100 IU's.

HGH/peptides can be very fragile when mixed with water so it needs to be treated gently and kept in the fridge.

HGH can be injected intramuscularly – (into a muscle) or subcutaneously (into fatty tissue just below the skin). Subcutaneous injections can be given in the arms, legs or abdomen (lower tummy). A different spot should be used for each injection to avoid damage.

For subcutaneous injections the skin should be pinched and the needle inserted at a 90 degree angle. The substance should be injected slowly. For intramuscular injections the needle must be fully inserted into the muscle as per instructions for anabolic steroids.

Due to the risk of contamination the NZNEP do not recommend the practice of backfilling of syringes.

For more information refer to: <https://www.eroids.com/forum/high-peptides/peptides/how-to-reconstitute-hcg-peptide-step-by-step-guide-wpictures>

Steroids HGH/Peptides and THE LAW

Steroids and Human Growth Hormones(HGH)/Peptides are controlled drugs in New Zealand. This means that the possession, use, import, and supply of steroids are illegal unless they are authorised and prescribed by a medical practitioner, dentist, or veterinarian.

www.punchsupplements.co.nz/steroids

New Zealand

NEEDLE EXCHANGES

A Needle Exchange is a service which provides injecting equipment including needles, syringes, sharps containers, filters and swabs; and a safe place to dispose of your used injecting equipment. It is a totally anonymous and confidential service with friendly staff who can provide sound advice and information about safer ways to inject.

Some pharmacies also provide free needles and syringes and a place to dispose of used equipment. There is usually a limited range of equipment on offer at a pharmacy. They are also totally anonymous.

Needle Exchanges and pharmacies that offer needle exchange services have this symbol in the window:



Check out www.nznep.org.nz for more information and the location of the nearest outlet

Injectable steroids are designed to be injected into the muscle tissue.

NEVER inject into veins or arteries.

Be aware that any liquid injected just under the skin could cause an abscess.

NEVER share any needles or syringes because of the risk of contracting blood borne viruses such as Hepatitis and HIV.



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