



AAS HARM REDUCTION PATIENT GUIDE

Evidence-Based Medical Care for Enhanced Athletes

WHAT THIS HANDOUT IS ABOUT

This handout is for people who use or have used anabolic-androgenic steroids (AAS) or other performance-enhancing drugs (PEDs). It provides information about the health risks of steroid use and practical steps you can take to reduce those risks.

Your doctor's goal is to keep you as healthy as possible. Stopping steroid use is always the safest choice, and your doctor will support you if and when you are ready to stop. But if you are not ready to stop right now, this guide will help you make safer choices and understand why regular medical monitoring matters.

This is not medical clearance to use steroids. No amount of monitoring can make steroid use safe. But working with your doctor can help catch problems early and reduce the chance of serious harm.

WHY STEROIDS ARE RISKY

Anabolic steroids affect nearly every organ system in your body. The risks increase with higher doses, more compounds, longer use, and use of oral (pill-form) steroids. Here is a summary of the major risks:

Heart and Blood Vessels

- Steroids can cause your heart muscle to thicken and weaken over time
- They raise blood pressure and worsen cholesterol (lower "good" HDL cholesterol, raise "bad" LDL cholesterol)
- They increase the risk of heart attack, stroke, heart failure, dangerous heart rhythms, and blood clots
- These risks increase significantly after 5 or more years of use
- Some of these changes may not be fully reversible even after stopping

Blood

- Steroids cause your body to make too many red blood cells (a condition called polycythemia or erythrocytosis)
- When your blood becomes too thick, it increases the risk of blood clots, stroke, and heart attack
- A hematocrit level above 54% is considered dangerous

Liver

- Oral steroids (pills) are especially hard on the liver and can cause serious liver damage, including liver tumors
- Injectable testosterone is much less toxic to the liver than oral steroids
- Liver enzyme levels (AST, ALT) may be elevated from heavy weightlifting alone, so your doctor will interpret these results in context

Hormones and Fertility

- Steroids shut down your body's natural testosterone production
- They suppress sperm production, which can cause infertility — sometimes permanently
- Testicular shrinkage is common during use
- After stopping, it can take months to over a year for your hormones and sperm production to recover, and some men never fully recover
- If you want to have children in the future, this is one of the most important risks to understand

Mental Health

- Steroid use can cause mood swings, irritability, anxiety, and aggression during use
- When you stop, you may experience depression, low energy, loss of interest in activities, and sexual problems — this is called "withdrawal syndrome"
- These withdrawal symptoms are a major reason people go back to using steroids
- In rare cases, steroid use or withdrawal can cause suicidal thoughts — if this happens, seek help immediately

Other Risks

- Severe acne (especially on the back and shoulders)
- Hair loss / male pattern baldness
- Gynecomastia (breast tissue growth in men)
- Tendon injuries
- Sleep apnea
- Prostate enlargement (in older men)

HARM REDUCTION: HOW TO LOWER YOUR RISK

If you are going to use steroids, the following steps can help reduce — but not eliminate — the health risks.

Use Fewer Compounds

- Using one compound is safer than stacking multiple compounds together
- If you are going to use anything, injectable testosterone (cypionate or enanthate) has the most predictable effects and the lowest liver risk
- Avoid oral steroids (pills) such as Anadrol (oxymetholone), Dianabol (methandrostenolone), Winstrol (stanozolol), and Anavar (oxandrolone) — these are much harder on your liver and cholesterol. Use TUDCA supplements
- Avoid trenbolone — it is associated with especially severe effects on the heart, kidneys, brain, and mood

Use Lower Doses

- Higher doses mean higher risks — there is no "safe" dose, but lower doses cause less harm
- Talk to your doctor honestly about what you are using and how much

Keep Cycles Short and Recovery Periods Long

- Shorter cycles give your body less time to accumulate damage
- Longer breaks between cycles allow your hormones, blood counts, and cholesterol to recover
- Your doctor can check your blood work during off-cycle periods to see how well your body is recovering

MEDICAL MONITORING: WHAT YOUR DOCTOR WILL CHECK AND WHY

Regular blood work and check-ups are essential. Your doctor will typically recommend labs every 3–6 months, timed to check values both during and between cycles when possible.

Blood Count (CBC)

- Checks your hematocrit (red blood cell percentage) and hemoglobin
- If your hematocrit goes above 54%, your doctor may recommend lowering your dose, stopping temporarily, or having a therapeutic phlebotomy (blood draw to thin your blood)

Cholesterol Panel (Lipids)

- Checks HDL ("good"), LDL ("bad"), apoB (actual atherogenic particles), and triglycerides
- Steroid use drops HDL to very low levels and elevates apoB— this dramatically increases heart disease risk
- Your doctor may recommend a cholesterol-lowering medication (such as a statin) if your levels stay abnormal

Liver Function Tests

- Checks AST, ALT, GGT, bilirubin, and alkaline phosphatase
- Especially important if you use oral steroids
- If liver enzymes rise above 3 times the upper limit of normal, oral steroids should be stopped immediately

Hormone Levels

- Testosterone, LH, FSH, estradiol/estrogen, SHBG, Cortisol, and Prolactin
- These help your doctor understand how suppressed your natural hormone production is
- During off-cycle periods, rising LH and FSH levels are a good sign that your body is recovering
- Elevated prolactin and/or estrogen can cause breast enlargement
- Low and very high estrogen increase cardiovascular risk

Kidney Function

- Basic metabolic panel (BMP), eGFR, and urinalysis
- Creatinine levels may be naturally higher in people with large muscle mass — your doctor will account for this and may order cystatin c

Blood Sugar and Metabolism

- Fasting glucose, HbA1c, and fasting insulin
- Especially important if you also use insulin, GLP'S, IGF1 or growth hormone

Blood Pressure

- Checked at every visit
- High blood pressure from steroid use should be treated — untreated high blood pressure damages your heart, kidneys, and brain over time

Heart Imaging

- Your doctor may order an echocardiogram (ultrasound of the heart) to check for thickening of the heart muscle or reduced heart function
- A baseline echocardiogram is recommended, with repeat studies periodically — especially for long-term or heavy users
- An ECG (heart tracing) may also be done at visits

Infectious Disease Screening

- If you inject, you should be tested for hepatitis B, hepatitis C, and HIV at baseline and periodically
- This is standard medical practice for anyone who injects any substance

Prostate Screening

- PSA testing may be recommended for men over 40 or those with urinary symptoms

INJECTION SAFETY

If you inject steroids, following safe injection practices is critical to avoid infections, abscesses, and transmission of blood-borne diseases.

- Always use a brand-new, sterile needle and syringe for every injection
- Never share needles, syringes, or vials with anyone
- Wash your hands thoroughly before preparing your injection
- Clean the injection site with an alcohol swab and let it dry before injecting
- Rotate injection sites — do not inject in the same spot repeatedly
- Dispose of used needles in a proper sharps container — never throw loose needles in the trash
- If you notice increasing redness, swelling, warmth, pain, pus, or fever at an injection site, contact your doctor or go to urgent care right away — these are signs of infection

If you need help obtaining clean needles, ask your doctor or contact a local needle exchange program.

HEART HEALTH: EXTRA STEPS FOR LONG-TERM USERS

Heart disease is the most serious long-term risk of steroid use. Standard heart risk calculators used for the general population underestimate your risk, so your doctor may take additional steps:

- Carotid ultrasound (CIMT): Measures the thickness of the artery walls in your neck to look for early signs of plaque buildup
- Coronary artery calcium (CAC) score: A CT scan that measures calcium deposits in the arteries of your heart — may be recommended if you have used steroids for more than 5 years
- Echocardiogram: Ultrasound of the heart to check for thickening, enlargement, or reduced pumping function

Based on these results, your doctor may recommend:

- A statin medication to lower cholesterol, even if you are young
- Blood pressure medication if your blood pressure is elevated
- Aspirin in certain cases (discuss with your doctor — do not start on your own)

Lifestyle steps that help protect your heart:

- Do at least 150 minutes per week of cardiovascular exercise (walking, jogging, cycling, swimming) in addition to weight training
- Eat a diet rich in fruits, vegetables, whole grains, and fiber; limit saturated fat, trans fat, added sugar, and processed foods
- Do not smoke — smoking combined with steroid use dramatically increases heart attack and stroke risk
- Limit alcohol — especially if using oral steroids, as both stress the liver

MENTAL HEALTH AND EMOTIONAL WELL-BEING

Steroid use can affect your mood and mental health in ways you may not expect. Being aware of these effects can help you get support early.

During use, watch for:

- Unusual irritability, anger, or aggression

- Anxiety or panic attacks
- Rapid mood swings
- Difficulty sleeping
- Paranoia or suspiciousness

After stopping, watch for:

- Persistent sadness, low motivation, or loss of interest in things you used to enjoy
- Fatigue and low energy that does not improve with rest
- Loss of sex drive or erectile dysfunction
- Difficulty concentrating
- Thoughts of self-harm or suicide

These withdrawal symptoms are caused by your body's natural testosterone being suppressed. They are real, they are physical, and they are treatable. Do not try to push through them alone.

Your doctor will screen you for depression and anxiety at each visit using brief questionnaires. If you are struggling, your doctor can refer you to a mental health professional who understands these issues.

If you are having thoughts of suicide or self-harm, call or text 988 (Suicide and Crisis Lifeline) or go to your nearest emergency room immediately.

Body image concerns — including feeling like you are never muscular enough despite being very muscular — are common among steroid users. This is sometimes called "muscle dysmorphia." If this sounds familiar, talking to a therapist who specializes in body image can be very helpful.

FERTILITY: WHAT YOU NEED TO KNOW

Steroids suppress your body's signals (LH and FSH) that tell your testicles to make sperm. This can cause:

- Very low sperm counts (oligospermia)
- Complete absence of sperm (azoospermia)
- Testicular shrinkage

After stopping steroids:

- Hormone levels (testosterone, LH, FSH) usually recover within 3–6 months
- Sperm production takes longer — typically 6–18 months, and sometimes longer
- Some men, especially those who used steroids for many years, may never fully recover normal sperm production

If you want to have children now or in the future:

- Consider freezing your sperm (semen cryopreservation) as soon as possible — ideally before starting steroids, but it can still be done during use
- Talk to your doctor about medications that may help maintain testicular function during steroid use (such as hCG injections)
- If you are trying to conceive and having difficulty, ask for a referral to a fertility specialist (reproductive urologist or reproductive endocrinologist)

WHEN TO STOP AND SEEK HELP

If you are ready to stop using steroids, your doctor can help you through the process safely. Stopping is not always easy — withdrawal symptoms can be significant — but medical support can make it much more

manageable. Your doctor may prescribe medications to help your body restart its natural testosterone production and monitor your recovery with regular blood work.

WHEN TO GO TO THE EMERGENCY ROOM

Go to the emergency room or call 911 immediately if you experience any of the following:

- Chest pain, pressure, or tightness
- Sudden severe headache
- Sudden weakness or numbness on one side of your body
- Difficulty speaking or understanding speech
- Sudden vision changes or loss of vision
- Severe shortness of breath
- Leg swelling, pain, or redness (especially one-sided) — this could be a blood clot
- Coughing up blood
- Severe abdominal pain or yellowing of the skin/eyes (jaundice)
- Thoughts of suicide or self-harm
- Signs of severe infection: high fever, chills, red streaking from an injection site

A NOTE ABOUT TRUST

Your doctor is here to help you, not to judge you. Being completely honest about what you are using — including specific compounds, doses, how often, and for how long — is essential for your doctor to give you the best care possible. Everything you share is confidential and protected by law.

You deserve good medical care regardless of your choices. Your doctor's door is always open — whether you want to stop, are thinking about stopping, or are not ready yet.

