

Testosterone, Anabolic Steroids and Musculoskeletal Health

What you're feeling

You may notice pain in your shoulder or other joints. Your doctor might check your hormone levels because low testosterone is linked to a higher risk of wear-and-tear arthritis. This relationship is complex, but maintaining healthy levels is important for joint health. If your levels are too low, your joints may feel stiffer or ache more than usual.

You might find that certain movements become difficult or painful. Reaching behind your back to fasten a bra or tucking in a shirt can be challenging. Lifting objects overhead may trigger sharp pain or a feeling of weakness. These symptoms often flare up after activity or at night, making it hard to sleep on your side. You may also feel general fatigue or notice changes in your muscle strength.

Be aware that testosterone therapy can change how your body responds to injury. Using testosterone or anabolic steroids is linked to a higher risk of tearing tendons, such as those in the rotator cuff, biceps, or quadriceps. You might experience a sudden pop or pain if a tendon ruptures. This risk is higher in men using testosterone replacement therapy. If you have had shoulder surgery, testosterone use is also associated with a higher chance of needing another operation or dealing with an infection.

Your doctor will discuss your hormone history with you. They will help you understand your unique risk for injury or re-injury. If you are considering testosterone therapy, it is important to weigh these risks carefully. Your medical team needs to know about any supplements or prescriptions you are taking to keep you safe during recovery.

What's actually happening

Testosterone acts like a switch for your body's tissues, but it does not always turn things on smoothly. Your doctor looks at your hormonal levels because they directly affect your muscles, bones, and tendons. Think of your tendons as thick ropes that connect muscle to bone. When testosterone levels are too low or fluctuate wildly, these ropes can become brittle. They lose their natural elasticity and become more likely to snap under normal stress.

This brittleness explains why you might face a higher risk of tendon ruptures. Studies show that testosterone users have a 2.9-fold increased risk of tendon rupture compared to nonusers. This includes common injuries

like rotator cuff tears in the shoulder or distal biceps injuries in the arm. The tissue simply cannot handle the load it used to. It is not just about strength; it is about the quality of the connective tissue itself.

Your joints also rely on this balance. Cartilage is the smooth coating on the ends of your bones that allows them to glide without friction. Low testosterone levels are linked to a higher risk of wear-and-tear arthritis (osteoarthritis). The relationship is complex, but maintaining optimal levels helps keep this protective layer healthy. Without it, the bone ends can rub together, causing pain and stiffness.

There is also a risk of infection and reoperation after joint replacement surgery. Testosterone use is associated with a higher risk of infection-related reoperations after primary total shoulder arthroplasty in male patients. It also increases the risk of all-cause reoperations. Your doctor needs to know your full history to manage these risks. They will assess your unique profile to decide if hormone therapy is safe for you. This careful planning helps protect your long-term joint health and reduces the chance of needing another surgery.

What we can do about it

Start with self-care and physical therapy. Your doctor may recommend specific exercises to strengthen the muscles around your joints and tendons. This helps support the area and reduces strain. You should give this approach enough time to work, typically several weeks. Consistency is key. Gentle movement often helps more than rest alone. Avoid activities that cause sharp pain. Listen to your body and stop if something feels wrong. This foundation is the first step in managing your symptoms safely.

Medical management involves medication and hormone therapy. For pain, your doctor might suggest anti-inflammatory drugs. These help reduce swelling and discomfort. If you have low testosterone, your doctor will discuss hormone therapy carefully. Testosterone replacement can improve body composition and bone density after surgery. However, it carries risks. It is linked to a higher chance of tendon ruptures, including in the biceps and quadriceps. Users face a 2.9-fold increased risk of tendon rupture compared to nonusers. There is also an increased risk of rotator cuff tears and repairs. Your doctor will weigh these benefits against the risks based on your unique health profile. Do not start or stop hormone therapy without medical guidance.

Seek specialist input if symptoms persist or worsen. If self-care and medication do not help, your doctor may refer you for further assessment. In some cases, a procedure might be considered to repair damaged tissue. For example, if you have a pectoralis major rupture, surgery may be needed. Interestingly, continuing anabolic steroids during recovery from such a rupture does not seem to negatively affect functional recovery. However, testosterone use is associated with increased odds of surgically treated tendon ruptures. Your doctor will determine if a procedure is necessary based on your specific injury and overall health. Always follow their advice closely to ensure the best outcome.

When to see someone

See your GP if you have persistent pain that does not improve with rest. Ask for a specialist review if you notice weakness or instability in your joints. Seek care for locking or giving way sensations. Contact your doctor if symptoms interfere with your sleep or work. Go to urgent care for sudden worsening of pain. Be aware that low

testosterone levels are linked to an increased risk of osteoarthritis, also known as wear-and-tear arthritis. Testosterone therapy may increase the risk of tendon ruptures, including injuries to the rotator cuff, biceps, and quadriceps. It is also associated with a higher chance of anterior cruciate ligament injuries. Your doctor should discuss your hormonal history to assess these risks.