Sprains and strains are common musculoskeletal injuries.

Sprains are a stretch or tear of a ligament. Ligaments are the tissue that connect two bones; they stabilize and support the body’s joints.

Strains are a twist, pull, or tear of a muscle or tendon. Tendons are cords of tissue that connect muscles to bones.

X-rays are the most commonly used diagnostic imaging for sprains and strains, and may be indicated to exclude more serious injuries of the muscles, bones or joints, such as a fracture.

**Sprains**

A sprain is caused by trauma (a fall, a twist, a blow to the body) that overstretches or even ruptures supporting ligaments. Common sites for sprains include the thumb, ankle and wrist. Some examples of this are when a person lands on an outstretched arm or rolls their ankle awkwardly as the foot hits the ground during motion.

There are three categories of sprains: severe, moderate and mild. Pain, bruising and inflammation are common to all three types, although the intensity varies.

A ligament is stretched in a mild (grade I) sprain, but there is limited pain or impact, and no joint loosening or instability.

A moderate (grade II) sprain partially tears the ligament, producing joint instability, stiffness and swelling.

With a severe (grade III) ankle sprain, ligaments tear completely or separate from the bone. This loosening impairs joint function, which results in limited balance and inability to bare weight without pain.

**Strains**

A strain is caused by twisting or pulling a muscle or tendon. Strains can happen suddenly or develop over days or weeks. Chronic strains are the result of overuse—prolonged, repetitive movement—of muscles and tendons. Common sites for a strain are the back, elbow and the hamstring muscle in the back of the thigh.

Athletes are particularly vulnerable to strains because of frequent jumping, running and kicking motions, as well as recurring use of racquets and bats.
SPRAINS & STRAINS

Immediate management

The first 72 hours are critically important in the effective management of sprains and strains. The goal within this timeframe is to reduce bleeding, swelling and limit the damage within the injury.

The "RICE" protocol should be implemented immediately and continued for the first 72 hours: Rest, Ice, Compression and Elevation.

- **REST.** Avoid activities that cause pain. If you are unable to put weight on your leg comfortably, use crutches.
- **ICE.** Apply an ice pack (you can use ice cubes or frozen peas) wrapped in a wet cloth or towel to the injury for 15 minutes every two to four hours. Never apply ice directly to the skin as this can cause nerve damage.
- **COMPRESSION.** Apply compression elastic bandage firmly to extend well beyond the injury. Ensure the bandage does not increase your pain or restrict blood flow.
- **ELEVATE.** Keep the injured body part raised.

Ibuprofen or acetaminophen can be used to manage swelling and pain. Before consumption, it is important that you read and understand any information included with the packaging. If you are unsure, speak to the pharmacist. If there is no improvement to your injury after one week, see your local doctor or osteopath.

In addition, in the first 72 hours, avoid “HARM”: Heat, Alcohol, Re-injury and Massage. These activities increase blood flow and swelling, which will aggravate your injury.

Recovery

The rate of recovery depends on the severity of the injury.

Mild sprains and strains will typically repair within three to six weeks and you should be able to return to your normal activities. Severe sprains and strains can take a recovery timeframe of up to three months.

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Disclaimer: This health information is for general education purposes only. Please consult with your doctor or other health professional to make sure this information is right for you.

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Prevention

Sprains and strains are often preventable, although factors such as medical history, age, strength, balance, flexibility (or lack thereof) can predispose a person to injuries.

There are simple measures you can take to reduce the risk of sprains and strains:

- Stretching and strengthening exercises prior to exercise
- Wearing appropriate, supportive footwear
- Taking adequate rest breaks during intense training
- Applying caution when moving on uneven surfaces
- If you have previously suffered a sprain or strain, you may need to apply taping or bracing for athletic activities. Speak to your osteopath for further information.

Role of osteopathy

An osteopath should be consulted as soon as possible, particularly for moderate and severe injuries.

Your osteopath is highly trained to facilitate a return to optimal function and will work with patients to:

- Re-establish full range of motion, improve joint mobility and balance
- Correct compensatory movement patterns that cause further strain on other parts of the body
- Strengthen surrounding muscles that may increase likelihood of recurrent sprain
- Minimise or reduce guarding, swelling, inflammation and associated pain
- Prescribe exercises and education to encourage patients’ self-management
- Improve function in activities of daily living, including athletics specific skills.

Osteopathic treatment involves exercise prescription and a diverse range of manual techniques including soft tissue stretching, mobilisation, inhibition and manipulation. These techniques allow a quicker return to physical activity and assist in improving elasticity, strength, endurance, mobility and performance.

About Osteopathy

Osteopathy is a form of manual healthcare which recognises the important link between the structure of the body and the way it functions. Osteopaths focus on how the skeleton, joints, muscles, nerves, circulation, connective tissue and internal organs function as a whole unit. In Australia, osteopaths are government registered practitioners who complete a minimum of five years’ university training in anatomy, physiology, pathology, general medical diagnosis and osteopathic techniques. Osteopathy is covered by most private health funds and by Medicare’s Chronic Disease Management (CDM) Plans. Osteopaths are registered providers for DVA patients, as well as by workers’ compensation schemes and motor accident insurers.