



Sprains, Strains, and Overuse Injuries

Self-Care and Prevention

Prevent sprains, strains, and overuse injuries by taking precautions and staying healthy and alert.

What Is a Sprain?

- A sprain is an injury that occurs when a ligament (the band of connective tissue that joins the end of one bone to another and supports the body's joints) overstretches or tears.
- Sprains are usually caused by a sudden twist of a joint, a blow to the joint, or a fall.
- They are most common in ankles but can occur in knees, toes, shoulders, elbows, wrists, and fingers.

Pain, bruising, and inflammation are common to all three categories of sprains:

- **Mild sprain:** the ligament is stretched, but there is no joint loosening. Causes minimal pain, swelling, and little or no loss of function.
- **Moderate sprain:** a partial tearing of the ligament. Causes joint instability and some swelling.
- **Severe sprain:** a complete tear of the ligament or separation of the ligament from the bone, making the joint nonfunctional. Causes excruciating pain at the moment of injury.

What Is a Strain?

- A strain is a twist, pull, and/or tear of a muscle or the tendon that connects the muscle to bone.
- Strains are usually caused by overuse of the muscle or tendon, especially prolonged, repetitive movements.
- Acute strains are caused by trauma or an injury such as a blow to the body, improperly lifting heavy objects, or overstressing the muscles.
- Strains are common in your back, shoulders, arms, and legs.

Pain, muscle spasms, and muscle weakness may be present in all categories of strains. Localized swelling, cramping, or inflammation is also possible:

- **Mild strain:** the muscle or tendon is stretched or pulled slightly.
- **Moderate strain:** the muscle or tendon is overstretched and slightly torn. Some muscle function will be lost.
- **Severe strain:** partial or complete rupture of the muscle or tendon, often completely disabling the muscle.



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What Is an Overuse Injury?

An overuse injury occurs when repeated stress is placed on a bone, muscle, tendon, or ligament, causing damage that doesn't get a chance to heal before more stress is placed on the body.

Tendinitis, a type of overuse injury, is irritation or inflammation of a tendon, causing pain and tenderness just outside the joint.

Tendinosis is the degeneration of the tendon's collagen in response to chronic overuse.

Extended computer work or gaming are as likely to cause overuse injuries as exercise and sports.

Symptoms of an overuse injury include:

- Pain or soreness
- Mild swelling
- Restricted mobility of the joint
- Weakness or numbness

Self-Care Methods

For mild sprains, strains, and overuse injuries, the **RICE** (rest, ice, compression, elevation) method is helpful for the first 48 to 72 hours after the injury.

Rest the injured area as much as possible. This means reducing or stopping activity that causes pain.

IApply an **ice pack** to the injured area for 20 minutes at a time, several times a day, to reduce swelling. A cold pack, a bag of frozen vegetables, or a plastic bag filled with crushed ice and wrapped in a towel can be used. Do not put ice or frozen bags directly on bare skin.

CUse **compression** elastic bandages to help reduce swelling. Firmly bandage the area, but not too tight. Numbness, tingling, swelling below the bandage, and increased pain are signs that the bandage is too tight.

Elevate the area on pillows or other soft objects to reduce the blood pressure at the area and reduce the swelling.

Over-the-counter drugs such as ibuprofen and naproxen sodium are often helpful for pain and swelling; let your physician know if you experience side effects such as stomach upset with these medications. High doses of these medications should be needed only for a few days.

Once the pain and swelling are gone, begin gentle stretching, strengthening, and balance exercises, gradually increasing the duration of the exercise. Stop immediately if pain or swelling recurs and resume RICE.

Prevention Tips

Strong and flexible muscles help support your joints. Strengthening all muscles in a balanced fashion through whole-body exercises is helpful. Vary the kind of exercise you do. No one is immune to injury, but here are some other tips to help reduce your risk:

All the Time

- Maintain a healthy, well-balanced diet to keep muscles strong.
- Maintain a healthy weight and good physical condition.
- Concentrate on maintaining good posture when standing and sitting. A personal trainer, physical therapist, or athletic therapist can help with correcting posture. Your campus health or recreation/athletics center may offer services.
- Try to reduce and manage stress in your life—tension can worsen pain and make you more prone to neck and back problems.
- Practice safety measures to help prevent falls (keep areas free of clutter, run on even surfaces).

When Working Out or Playing Sports

- Always warm up and cool down.
- Slowly intensify your training program in measured steps.
- Wear properly fitted protective equipment, including goggles, helmets, gloves, and padding.
- Use proper techniques when playing sports or running to avoid causing an overload on certain muscles and tendons.
- Avoid exercising or playing sports when tired or in pain.
- Drink plenty of water before, during, and after your athletic activities.

Preventing Technology-Related Overuse Injuries

Long hours of working on a computer or playing video games can cause eyestrain; overuse injuries of the hands, wrists, and fingers; and musculoskeletal problems such as backaches and sore neck and shoulder muscles. You can reduce or eliminate these health problems by improving your posture and work habits and maintaining a well-designed workstation. Check with a campus health professional for tips on how to arrange your work environment to fit your needs.

- Make sure your computer workstation is properly set up and comfortable.
- Take regular stretch and rest breaks when using technology.

When to Seek Professional Help

- You have severe pain and cannot put any weight on the injured area.
- The area over the injury or next to it is very tender when you touch it.
- The injured area looks crooked or has lumps and bumps.
- You cannot move the injured joint.
- You have numbness in any part of the injured area.
- You see redness or red streaks spreading out from the injury.
- You injure an area that has been injured several times before.
- You have a fever and the area affected appears inflamed (swollen and warm).
- The symptoms continue more than a couple weeks without improvement.

For more serious injuries, you may be referred to a sports medicine physician or an orthopedic surgeon. Your health care provider may also recommend rehabilitative physical therapy.

You may be anxious for your injury to heal so you can get back to your sport, work, and daily routines, but rushing your recovery can put you at risk for future injury and may extend the healing process. Take your health care provider's instructions seriously, and don't put your health at risk by returning to activities too soon.

For More Information

American Academy of Orthopaedic Surgeons
www.orthoinfo.org

National Institutes of Health
www.niams.nih.gov/health-topics/sprains-and-strains

American College Health Association
(410) 859-1500 | www.acha.org

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