PROCEDURE

Muscle strain treatment

Muscle strain treatment uses protected movement and rehabilitation to help an injured muscle heal and regain function.

PURPOSE
Reduce pain and restore safe muscle movement

PROCEDURE TYPE
Therapeutic - bedside care and outpatient rehabilitation

WHERE IT IS DONE
Outpatient clinic or at the bedside

ANAESTHESIA
None for routine treatment

HOW LONG IT TAKES
20-60 minutes per assessment or rehabilitation session

PREPARATION
Wear loose clothing; facility instructions take priority

RECOVERY
Same-day discharge; full recovery takes days to months

MAIN RISKS
Stiffness, skin injury, medicine side effects, reinjury

RESULTS
Treatment plan immediately; progress assessed during follow-up

Overview

Muscle strain treatment is a planned course of care for a muscle or tendon that has been overstretched or torn. A tendon is the strong tissue connecting muscle to bone.

Most treatment is non-surgical. It may include protecting the injured area, controlling swelling, gradually restoring movement, and completing strengthening exercises. A physiotherapist or other healthcare professional may guide rehabilitation.

The exact plan is based on the muscle involved, the size and location of the injury, your usual activities, and how well you can move. A mild strain may improve with self-care and gradual activity. A major tear or tendon pulled away from bone may need specialist assessment and, occasionally, surgery.

Why the procedure is performed

Treatment aims to help the injured tissue heal while limiting stiffness, weakness, and loss of function. It may also reduce the chance of another injury when you return to sport, work, or daily activities.

You may be offered treatment when pain, swelling, bruising, or weakness makes normal movement difficult. It can also help when symptoms are not improving as expected or when you need a structured return-to-activity plan.

An assessment is often part of the first treatment session. This helps determine whether the injury behaves like a strain or whether another problem, such as a fracture, joint injury, tendon rupture, or blood clot, needs investigation.

Who should and should not have it

Non-surgical treatment is suitable for many mild and moderate muscle strains. It may also be used for some larger tears when the muscle remains stable and useful function can be restored without an operation.

Routine strain treatment may be delayed or changed if you have:

Some treatments are not right for everyone. Anti-inflammatory medicines may be unsuitable if you have certain stomach, kidney, heart, bleeding, or pregnancy-related concerns. Do not stop prescribed blood thinners or other medicines unless the clinician responsible for them tells you to.

Surgery is usually reserved for selected complete tears, major tendon avulsions, or injuries that continue to cause substantial disability despite rehabilitation. It involves greater recovery time and surgical risks.

- A suspected broken bone, dislocation, complete tendon rupture, or tendon pulled from bone
- Severe swelling, rapidly increasing pain, or loss of feeling or circulation
- An open wound, skin infection, or recent surgery near the injured area
- Calf swelling or pain that could be caused by a blood clot
- A medical condition or medicine that affects bleeding, healing, circulation, or safe exercise

How to prepare

Follow the treating facility's own instructions first, because they take priority over general advice.

For an assessment or rehabilitation session, wear loose clothing that allows the injured area to be examined and moved. Bring a list of your medicines and any braces, crutches, scans, or reports you already have.

Be ready to explain how the injury happened, when it occurred, what movements hurt, and what activities you hope to return to. Mention previous injuries to the same area.

Fasting is not usually needed for routine treatment. If surgery, sedation, or an injection is being considered, you may receive separate instructions about eating, drinking, medicines, and transport home.

What happens during the procedure

The clinician first asks about the injury and examines the area. They may look for swelling or bruising and gently check movement, strength, tenderness, and nearby joints.

Imaging is not required for every strain. An X-ray may be used if a fracture or bone injury is possible. Ultrasound or MRI can sometimes show the location and extent of a tear, especially when the diagnosis is uncertain or surgery is being considered.

Early treatment may include protection from movements that sharply increase pain, compression, and elevation. Ice may be offered for short-term pain relief. It should be wrapped rather than placed directly against the skin.

As pain settles, treatment shifts toward controlled movement. A rehabilitation plan may include:

The exercises should become more challenging over time without causing a major or lasting increase in symptoms. Hands-on treatment may be used, but exercise and gradual loading are usually central to restoring function.

- Gentle range-of-motion work
- Progressive strengthening of the injured and surrounding muscles
- Balance or movement training when relevant
- Sport-specific or work-specific exercises
- A staged return to normal activity

Recovery and what to expect afterward

Pain: Some soreness during rehabilitation can occur. Pain should remain manageable and should not keep worsening after each session. Sudden sharp pain, new weakness, or increasing swelling may mean the activity was too demanding or the injury needs reassessment.

Eating: You can usually eat and drink normally after an assessment or therapy session. Different instructions apply if you had sedation or surgery.

Activity: Avoid complete rest for longer than necessary. Begin safe movement as advised, then increase activity in stages. Returning too quickly can lead to reinjury, while prolonged inactivity can contribute to stiffness and weakness.

Driving: You may drive when you can safely control the vehicle, turn to check traffic, and perform an emergency stop without hesitation. Do not drive while wearing a device that prevents safe control or while taking medicine that makes you drowsy. You must not drive home after sedation or general anaesthesia.

Work: Desk work may be possible early if you can sit comfortably and move safely. Physical work may require modified duties. Return to heavy lifting, climbing, running, or repetitive movement is usually based on strength and function rather than a fixed number of days.

Risks and possible complications

Routine treatment has fewer risks than surgery, but problems can still occur.

Possible complications include stiffness, ongoing weakness, scar tissue, persistent pain, and another strain after returning to activity. Compression that is too tight can affect circulation. Ice or heat can injure skin, especially if sensation or circulation is reduced.

Medicines may cause side effects, including stomach irritation, bleeding, kidney problems, allergic reactions, or drowsiness, depending on the medicine used.

Surgery carries additional risks such as infection, bleeding, blood clots, nerve injury, anaesthesia complications, and failure of the repair to restore full strength. Your surgical team should explain the risks that apply to the proposed operation.

Results and follow up

You will usually receive an initial treatment plan at the first appointment. If imaging is

performed, an X-ray result may be available promptly, while formal ultrasound or MRI interpretation may take longer.

Follow-up focuses on whether pain is settling and movement, strength, and confidence are improving. The plan may be adjusted as you regain function.

Healing time is not the same for every strain. Mild injuries may settle relatively quickly, while large tears or tendon injuries can require months of rehabilitation. Returning to sport or demanding work is usually safer when you can complete the required movements with near-normal strength and without significant pain.

Alternatives

For a mild injury, self-care and gradual activity may be reasonable. This is convenient and avoids appointment costs, but it provides less guidance and may miss a more serious tear or another condition.

A home exercise programme can restore movement and strength without repeated visits. Supervised physiotherapy takes more time and may cost more, but it offers tailored exercise progression, technique checks, and return-to-activity testing.

Pain-relieving medicine may make movement easier, but it does not repair the tear or replace rehabilitation. Every medicine has potential side effects.

Injections, including platelet-rich plasma injections, are sometimes marketed for muscle injuries. They add cost and procedure-related discomfort, and evidence of reliable benefit for routine strains is uncertain.

Surgery can reattach selected complete tears or avulsed tendons. It may restore anatomy when rehabilitation alone cannot, but it trades this potential benefit for anaesthesia, surgical risks, and a longer recovery.

When to call your healthcare team

Contact your healthcare team during routine hours if pain or swelling is not improving, exercises repeatedly cause a lasting flare, or you remain unable to use the muscle as expected. Also call if you develop medicine side effects, increasing bruising, or new weakness.

Seek urgent medical assessment for:

Call emergency services for chest pain, severe shortness of breath, fainting, or coughing up blood. These can be signs of a medical emergency rather than a routine muscle strain.

- A visible deformity or a sudden loss of muscle function
- A limb that becomes cold, pale, blue, numb, or unusually weak
- Rapidly increasing swelling or severe pain
- A hot, swollen calf, especially without a clear injury
- Fever, spreading redness, drainage, or worsening pain after surgery

Common questions

Will I be asleep?

Not for routine assessment or rehabilitation. General anaesthesia may be used if you need surgical repair.

Can I drive home?

Usually, if you can control the vehicle safely and have not received sedating medicine. You cannot drive home after sedation or general anaesthesia.

How painful is treatment?

Examination and exercise may cause temporary soreness, but treatment should not cause severe or steadily worsening pain. Tell the clinician if a movement feels sharp or unsafe.

When will I know if it is working?

Early changes may include less pain and easier movement. Strength and confidence usually improve more gradually and are checked during follow-up sessions.

Will I need a scan?

Not always. Imaging is more likely when a major tear, fracture, tendon avulsion, or another diagnosis is suspected.

When can I return to sport?

Return is based on your movement, strength, and ability to complete sport-specific tasks without significant symptoms. A calendar date alone cannot show whether the muscle is ready.

Sources

- American Academy of Orthopaedic Surgeons. "Sprains, Strains and Other Soft-Tissue Injuries." OrthoInfo



- NHS. "Sprains and strains." NHS Health A to Z
- MedlinePlus Medical Encyclopedia. "Strains." U.S. National Library of Medicine
- Martin RL, Cibulka MT, Bolgla LA, et al. "Hamstring Strain Injury in Athletes: Clinical Practice Guidelines." Journal of Orthopaedic & Sports Physical Therapy . 2022;52(3):CPG1-CPG44
- Dubois B, Esculier JF. "Soft-tissue injuries simply need PEACE and LOVE." British Journal of Sports Medicine . 2020;54(2):72-73