



YOUR GUIDE TO GROIN STRAIN



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Introduction

Please take note of the following before starting any of the exercises in this guide:

- The information contained in this guide is intended to assist in managing your recovery.
- This guide is based on the latest medical research in the field and contains the best advice available to the best of our knowledge.
- This guide is complimentary to other medical services and is not intended as a substitute for a health care provider's consultation. Never disregard medical advice or delay in seeking it because of something you have read in this guide.

● Many people have found quick and lasting relief from their Groin Strain by acting upon the information provided, but everyone decides for themselves what to do with this information. Should you doubt a particular exercise in your situation, please consult your health professional.

When consulting your health professional, it is wise to take this guide with you to show them.

What is a Groin Strain?

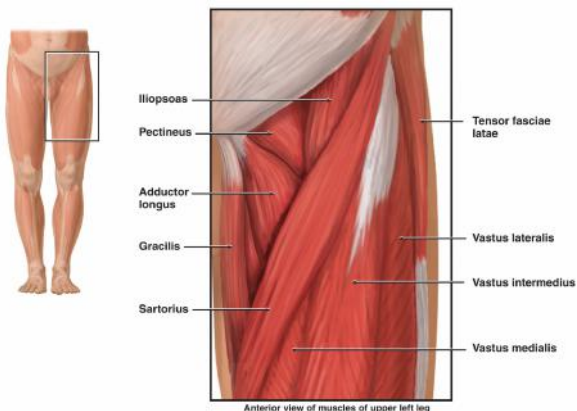
As there are more than 22 muscles on each side of the pelvis along with their associated tendons, the term 'groin injury' is often used as a general description of injury to one of these structures. There are also overlying stomach muscles which add further pulling forces to the pelvis. Therefore all groin pain is not the same and not treated in the same way. One of the most common causes of groin pain, however, is a strain to any one of the adductor muscles (muscles on the inside of the leg) at the tendon and muscle junctions. A strain is a pull or tear in the muscle or its tendon that attaches the muscle to the bone.

There are five adductor muscles, the pectineus, adductor brevis, adductor longus, adductor magnus and gracilis. The main function of the adductors is to pull the legs back towards the midline to maintain the body's balance. They are also used extensively in activities such as sprinting, playing

football, horse riding and hurdling. A strain to the adductor muscle usually occurs with twisting and turning movements such as a sudden change in direction, rapid movements of the leg against resistance e.g. kicking a ball or overstretching the adductor muscles.

The problem with groin strains is that unless recognition and correct treatment for the causative factor is performed the individual may experience further recurrent groin strains. There are a number of predisposing factors that may result in recurrent groin strains, and unless these are addressed recurrent groin strains may result. These predisposing factors include:

- 1. Inadequate rehabilitation of the initial injury**
- 2. Stiffness of the lower back**
- 3. Poor pelvic stability and muscle imbalance**



What causes a Groin Strain?

Groin strains can be caused by a variety of different factors, including:

OVERUSE

Since the adductors must stabilise the hip during each foot strike in running, they are subjected to a number of different forces in various directions repeatedly during each minute of activity. Strenuous workouts can put great strain on the adductors and if the recovery periods between workouts are not sufficient to allow adequate restoration, the adductor muscles and their tendons may become increasingly more irritated

INADEQUATE WARM UP PRIOR TO ACTIVITY

If the adductor muscles are not warmed up prior to exercise, or if the warm-up fails to prepare the nervous system to control the adductors in an optimal way, sudden movements may place undue strain on the adductors causing damage.

SUDDEN DYNAMIC MOVEMENTS

Sudden movements such as initiating a sprint, changing direction powerfully, leaping to catch a ball, sprinting up a hill, or hitting the ground after a jump, all subject the adductors to greater-than-normal force loads, which may produce damage.

POOR MECHANICS WHILE LIFTING HEAVY OBJECTS

When a large weight is lifted, there is a tendency for the thigh to undergo abduction i.e. movement away from the centre line. If this is not controlled, the adductors may experience excessive strain, due to overstretching.

A FORCEFUL CONTACT WITH AN EXTERNAL OBJECT

i.e. the head of a rugby player, a goal post, or another competitor's leg. When the strain occurs the leg is usually struck from the inside and driven away from the centre of the body, causing the adductor muscles to overstretch.

There are a number of other factors that may be causing your groin pain, other than adductor strains, and it is therefore essential that you consult with your doctor or allied health professional so that a thorough assessment can be carried out.

OTHER CAUSES OF GROIN PAIN INCLUDE

- Referred pain from the hip (this is often the case with osteoarthritis in the hip)
- Referred pain from the back
- Inguinal hernia
- Osteitis pubis (inflammation of the pelvic bone)
- Conjoint tendon injuries

What are the symptoms of a Groin Strain?

- Tightening of the groin muscles that may not be present until the following day.
- A sudden sharp pain in the groin area or adductor muscles during exercise.
- Bruising or swelling (this might not occur until a couple of days after the initial injury)
- Inability to contract the adductor muscles (squeezing the legs together or possibly lifting the leg out in front).
- A lump or gap in the adductor muscles.

Grade I, II or III?

- Groin strains are graded I, II, or III depending on how bad they are.
- The athlete with a **grade I strain** might feel mild discomfort, possibly a little tenderness at a particular point but no swelling.
- A **grade II strain** might feel more painful with swelling, pain to touch, reduced range of motion and interference with running.
- A **grade III strain** may be very painful, lots of swelling and total inability to run or even walk.

What treatment can I receive?

WHAT CAN THE ATHLETE DO?

- Apply R.I.C.E. (Rest, Ice, Compression, and Elevation.) immediately.
- Rest and use crutches if needed.
- Ice can be applied to the injured area for 10-15 minutes at a time. This can be repeated every two hours, especially in the acute (initial) stages of the injury. Ice serves to reduce the bleeding and inflammation in the tissue and thus promotes healing of the tissue. Never apply ice directly to the skin.
- See a sports injury professional who can advise on rehabilitation of the injury. An appropriate rehabilitation programme is essential to strengthen the appropriate muscles and prevent the injury from recurring.
- For a grade III strain seek professional help immediately.

PRECAUTIONS WHEN USING ICE THERAPY.

- **Ice treatment must be used carefully otherwise it may cause a skin burn.**
- **Never put an ice pack directly onto the skin, always use a damp towel or cloth to prevent an ice burn.**
- **Only apply an ice pack to areas of skin with normal sensation i.e. you must be able to feel hot and cold.**

- **Never put an ice pack over an open wound or graze.**
- **Do not apply an ice pack to an area with poor circulation.**
- **Never leave an ice pack on the skin longer than the time stated in this advice sheet.**
- **Adults should always supervise young children when using ice packs. Application may be reduced and extra care should be taken when checking the skin.**
- **Remember to check the skin underneath every 5 minutes for:**
 - **Whiteness of the skin**
 - **Blueness of the skin**
 - **Blotchy and painful skin**
 - **Excessive numbness**
- **If you get any of these symptoms remove the ice pack immediately.**

WHAT CAN YOUR PHYSIOTHERAPIST DO?

- Assess you to ensure the problem is only a muscular issue. There are several other causes of groin pain some of which can be quite serious, so it is important for you to see a doctor or physiotherapist to rule these out.
- Use electrotherapy or acupuncture to promote healing.
- Use soft tissue mobilisation techniques after the acute (initial) phase. These are extremely important to promote healing of the tissue.

- Advise on a rehabilitation programme consisting of soft tissue treatment, stretching, strengthening and sports massage.
- If your problem persists then your therapist may recommend you are referred to see an orthopaedic

consultant to have further tests done (e.g. an x-ray or scan).
A partial rupture of the adductor muscles will often lead to inflammation of the groin after the initial rupture has healed.

What exercises should I do?

EXERCISES

It is important that you are aware that this is a general exercise programme for groin strains that can be adjusted depending on advice given by your health care provider on assessment. The goal of rehabilitation is to return you to your sport or activity as soon as is safely possible. If you return too soon, you may worsen your injury which will delay your recovery.

INSTRUCTIONS

- Keep all exercises in your pain free limits. **Trying to work in painful ranges will only prolong your recovery.**

- If you experience pain during any of the exercises, decrease the intensity of the exercises by:
 - decreasing the number of sets
 - decreasing the number of repetitions
 - decreasing the range of movement
 - decreasing the resistance
- Do all exercises slowly and breathe normally.
- Progress gradually according to your own level of comfort.
- Following exercise, stiffness or fatigue may result but should not last longer than 24 hrs. The symptoms of your injury should not be aggravated.

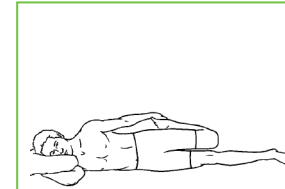
Exercises phase 1

These exercises can be started **after the initial pain and inflammation have settled down**. It is essential that you perform all exercises in a pain free range of motion. If you have restricted your range and are still experiencing pain, it is essential that you consult your doctor or physiotherapist before

continuing. The exercises in this phase should be completed for two weeks before trying to progress to phase 2. The stretches can be done daily, with the whole exercise programme being completed at least three times a week.

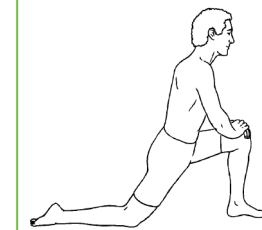
STRETCHING EXERCISES

- Perform each exercise 2-3 times, holding the stretch for 30 seconds.
- There should not be any pain when performing a stretch it should be a comfortable pull.



QUADRICEPS STRETCH

Lying on your right side, your right arm extended up to cushion your head, use your left hand to grasp your left ankle as you bend your left knee backwards. You should feel the stretch along the front of your thigh. Repeat this twice. It is important to keep the other leg bent at both the hip and the knee, so as not to hyperextend your back. A towel can be used to aid you in this exercise if you are unable to reach your ankle or bend your knee too far.



HIP FLEXORS

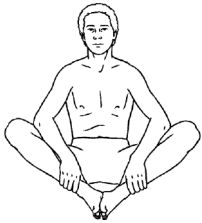
Kneel down on your left leg, your right leg extended and your right footflat on the floor with the knee bent at a 90° angle. Now lean forward on your right leg, transferring all your weight forward and thereby stretching your left thigh.

Exercises phase 1 (continued)



SPINAL TWIST

Lying down on your back, your arms outstretched and your knees bent. Gently roll your legs over to one side while turning your head to the opposite side. Hold for 20-30 seconds and then roll over to the other side. If you cannot feel the stretch along your spine, bring your legs up closer to your body.



INNER THIGH STRETCH

Sit with the soles of your feet together and your elbows resting on the inside of your knees. Gently counter resist on the knees. Progress to leaning forward, keeping the back straight.



HAMSTRING STRETCH

Lying on your back, one leg straight and one knee bent. Raise the bent leg up towards your chest until your knee is in line with your hip. Now straighten the knee. You should feel a stretch at the back of your leg. You can use a towel if necessary to aid you in lifting your leg for the stretch.



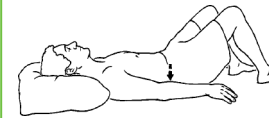
BUTTOCKS STRETCH

Lying on your back, rest your right ankle on your left knee. Using your hands lift your left leg into the air, bending the knee at 90°. Pull your left leg gently towards your body. You should feel a stretch in the upper back part of your right leg. If this stretch is too painful to do initially, leave it and only try with phase 2 exercises. A towel can be used to aid you in this stretch.

STRENGTHENING EXERCISES

● Follow the instructions in each exercise regarding sets and repetitions.

● Try and be in a neutral pelvic position throughout these exercises (see exercise 1)



NEUTRAL AND TA/PELVIC FLOOR STABILITY EXERCISES

Lying on your back with your knees bent, feet flat on the floor. Move your hip bones so they feel as though they are facing towards the ceiling (i.e. not tilted towards you - back too flat, or towards your knees - back too arched). This is your neutral pelvic position. Feeling just inside your hip bones, now pull your belly button towards your spine, and you should feel the muscle under your fingers contract slightly. You should still be able to breathe normally. Hold this contraction for 10 seconds and repeat this 10 times. Keep your spine in neutral throughout the contraction.



BALL SQUEEZING

Lying on your back, both knees bent, feet flat on the floor. Place a ball (or pillow) between your legs and squeeze. Hold for 30 seconds and repeat 10 times.



CURL UP

With arms at sides, find a neutral position in your pelvis. Raise shoulders and head from floor. Use arms to support trunk if necessary. Make sure you keep your neck stable with your chin tucked in i.e. not poking forwards. Perform 5 sets of 10 repetitions.

Exercises phase 1 (continued)



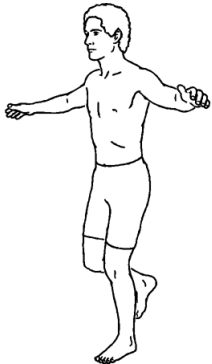
DIAGONAL CURL-UP

With arms at sides, find a neutral position in your pelvis. Raise head and shoulders, rotating to one side as shoulder blades clear floor i.e. right shoulder towards left knee and vice versa. Make sure you keep your neck stable with your chin tucked in i.e. not poking forwards. Perform 5 sets of 10 repetitions



JACK KNIFE EXERCISE:

Lying on your back, with both knees bent and feet flat on the floor. With the small ball placed between your knees, perform a sit up while at the same time bringing your knees up towards your chest (i.e. a jack knife position). Perform 5 sets of 10 repetitions.



STORK STANDING

- Balance on one leg for 30 seconds and repeat with the other leg.

- Repeat the above with your eyes closed.

- Repeat the above exercise 10 times on each side (i.e. for a total of 5 min per leg)

Progress the above exercise to standing on an unsteady surface, e.g. a cushion or a narrow piece of wood, starting with standing on both feet (Stand for a total of 5 min).

If you have access to a wobble/balance board use this instead.

Exercises phase 2

Phase 2 exercises can be started after two weeks, and you should be able to do all the Strengthening exercises in

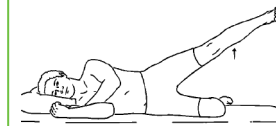
Phase 1 with no adverse effects. Continue with the stretches of phase 1 with each exercise session

STRENGTHENING EXERCISES

- You should be aiming to perform these exercises slowly, concentrating on controlling the movement and being aware of your pelvic position.

- Phase 2 should be started along side phase 1, with phase 2 exercises being performed every other day (i.e. the days you are not doing phase 1).

- Follow the instructions within each exercise regarding sets and repetitions.



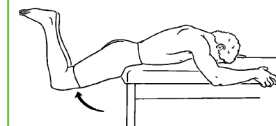
SIDE-LYING HIP ABDUCTION

Lying on side, tighten muscle on front of thigh, and then lift leg 8-10 inches away from the floor. Repeat 5 sets of 10 repetitions.



SIDE-LYING HIP ADDUCTION

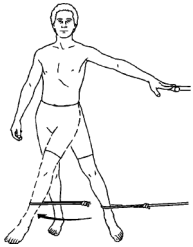
Lying on side, bend the top leg over the bottom one, and keep the bottom leg straight. Now raise the bottom leg 8-10 inches away from the floor. Repeat 5 sets of 10 repetitions.



HIP EXTENSION

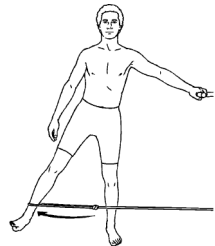
With support, leaning torso on table, raise both legs up behind you to a comfortable height. Be sure not to arch your lower back. Repeat 5 sets of 10 repetitions.

Exercises phase 2 (continued)



RESISTED ADDUCTION

Place a piece of elastic tubing / band around your ankle, and slowly bring the leg across the body. When returning the leg to the starting position, this should be done even more slowly. Make sure you don't lean to the side as you lift your leg. Perform 5 sets of 10 repetitions.



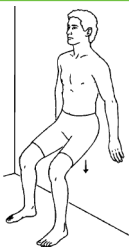
RESISTED ABDUCTION

Place a piece of rubber tubing around your ankle, and lift your leg outwards. When returning the leg to the starting position, this should be done even slower. Make sure you don't lean to the side as you lift your leg. Perform 5 sets of 10



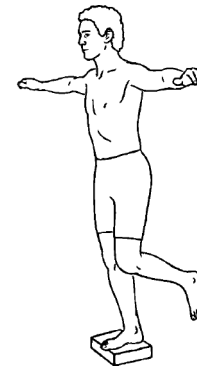
STORK STAND PICK-UP

Standing on one leg, with your weight on your heel, bend down to pick up a weight with the opposite hand ensuring that your weight stays on your heel, and that your knee goes down in line with your second toe. Also ensure that your knee and not your back does the bending work. Repeat 10 times on each leg (up and down is one repetition)



WALL SLIDES

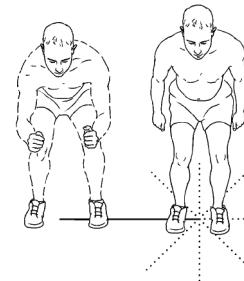
Stand leaning up against a wall, your feet a little away from the wall, shoulder width apart and knees parallel to each other. Keep your back against the wall throughout the movement. Slowly lower your body into a seated position (knees to 90°) and hold for 10 seconds. Perform 10 repetitions.



STORK STANDING

- Balance on one leg for 30 seconds and repeat with the other leg.
- Repeat the above with your eyes closed.
- Repeat the above exercise 10 times on each side (i.e. for a total of 5 min per leg)

Progress the above exercise to standing on an unsteady surface, e.g. a cushion or a narrow piece of wood, starting with standing on both feet (Stand for a total of 5 min). If you have access to a wobble/balance board use this instead.



SKATING MOVEMENTS

This can be done on a sliding board or on a smooth surface. Make sure that you have a definite start and stop point about a metre distance apart. Standing at the one end, push off with your left foot sliding across the floor to the stop point, now repeat the same back again pushing off with your right foot. You should be performing a side to side skating movement. Repeat 5 times for 1 minute duration each.

Contact us

This guide is designed to assist you in the self-management of your injury/condition.

We are here to assist your recovery in the shortest but safest possible time. If you have any uncertainties or queries regarding the information, please do not hesitate to contact us on:

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