

# Abdominal Muscle Strain

## **What is an abdominal muscle strain?**

A strain is a stretch or tear of a muscle or tendon. People commonly call such an injury a "pulled" muscle. Your abdominal muscles may be strained during a forceful activity.

## **How does it occur?**

During a vigorous activity, such as lifting or even hard coughing or sneezing, these muscles may become strained.

## **What are the symptoms?**

There will be pain over the abdominal muscles.

At times these muscles may be torn. A tear all the way through the muscles and the covering of the abdomen (called the fascia) may result in an abdominal wall hernia. In a hernia, some of the contents of the belly (intestines and connective tissue) protrude through the tear and cause a bulge in the abdominal wall.

## **How is it diagnosed?**

Your doctor will examine your abdomen. Your doctor will ask you to do an exercise such as a sit-up or abdominal "crunch," and this will reproduce some of your symptoms. If you have a hernia, your doctor will be able to feel and see a bulge in your abdomen.

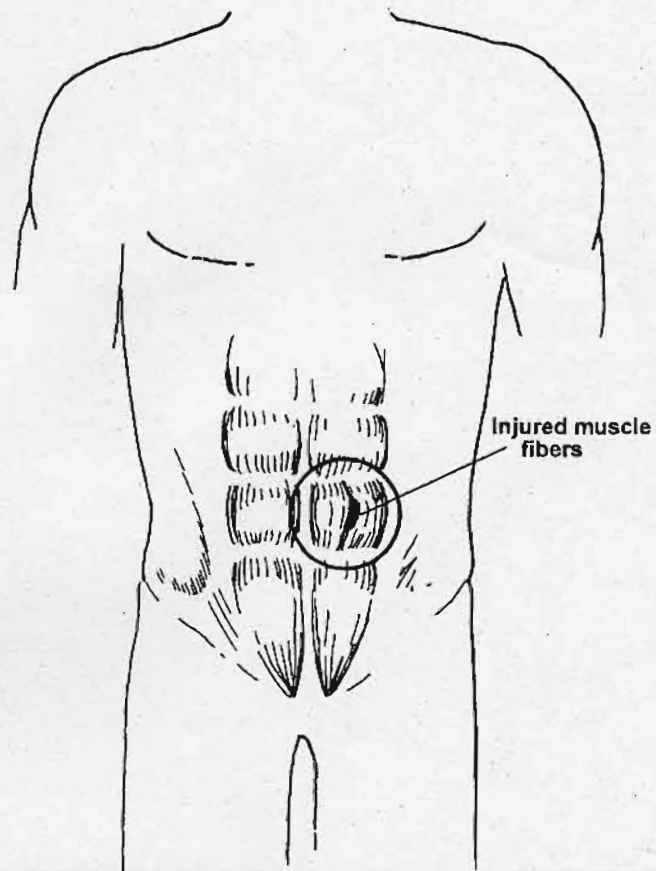
## **How is it treated?**

After your initial injury, you should apply ice to the strained muscle for 20 to 30 minutes every 3 to 4 hours for 2 to 3 days or until the pain goes away. Your doctor may prescribe an anti-inflammatory medication. If you have an abdominal hernia you may need surgery to correct this problem.

## **When can I return to my sport or activity?**

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 could lead to permanent damage. Everyone recovers from injury at a different rate. Return to your activity will be determined by

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how soon your abdominal muscles recover, not by how many days or weeks it has been since your injury occurred. In general, the longer you have symptoms before you start treatment, the longer it will take to get better.

You may return to your activity when you can bend at the waist to touch your toes and straighten back up without pain. You should be able to do a sit-up or abdominal

crunch without pain. If you have a hernia, be cautious about doing strenuous abdominal activities and talk to your doctor about having it repaired.

### ***How can I prevent abdominal muscle strains?***

Abdominal muscle strains are best prevented by having well toned abdominal muscles

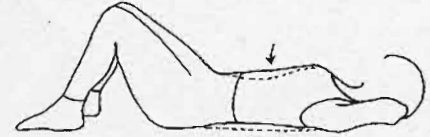
prior to vigorous activities. You can accomplish this by doing sit-ups or abdominal crunches or by using one of the popular abdominal exercise machines. It is important not to overdo it when beginning your exercise program. When lifting heavy objects it is important to lift correctly, with knees bent and your back and abdomen straight.



## Abdominal Muscle Strain Rehabilitation Exercises

You may do exercise 1 right away. You may do exercises 2, 3, and 4 when the pain is gone.

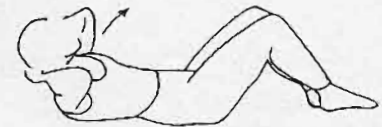
1. Pelvic tilt: Lying on your back with your knees bent and your feet flat on the floor, tighten your stomach muscles and gently press the arch of your back into the floor. Hold this position for 5 seconds. Repeat 10 times.



Pelvic tilt

After you have mastered this, tighten your abdominal muscles, press your lower back to the floor and lift one foot off the floor about 3 to 4 inches. Hold it for 5 seconds and then put it down. Repeat with the opposite leg. Make sure you keep your pelvis tilted using your abdominal muscles, not your legs. Repeat this 10 times on each side.

2. Partial curl: Lie on your back on the floor or another firm surface. Clasp your hands behind your neck for support, keeping your elbows pointed out to the side. Look straight up at the ceiling, tighten your stomach muscles, and slowly lift your shoulders off the floor toward the ceiling. Make sure to keep your elbows pointed out to the side and don't use your arms to lift your upper body off the floor. Hold for 3 seconds and slowly lower your shoulders to the floor. Repeat 10 times. Do 3 sets of 10.



Partial curl

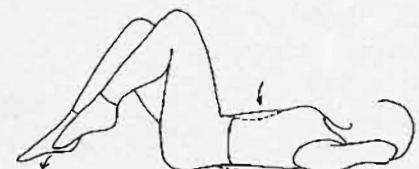
After you have become good at the partial curl you can do a diagonal curl to help strengthen your oblique abdominal muscles.

3. Diagonal curl: Lie on your back with your knees bent and your feet flat on the floor. Clasp your hands behind your neck to support your head. Tighten your stomach muscles and lift your head and shoulders off of the floor while rotating your trunk toward the right. Make sure you don't use your arms to lift your body off the floor. Hold this for 3 seconds. Return to the starting position. Then rotate toward your left side. Do this 10 times on each side. Do 3 sets of 10.



Diagonal curl

4. Lower abdominal exercise: Lie on your back with your knees bent, and hold your feet just off the floor. Next, hold yourself in a pelvic tilt. Your knees should be pointed toward the ceiling. Lower your right foot until it barely touches the floor and then bring it back up to the starting position. Do the same with your left foot. Remember to hold the pelvic tilt while you lower each foot until it just touches the floor. Repeat 10 times on each side.



Lower abdominal exercise