

What is it?

A pectoralis major strain refers to a tear in the large muscle which covers the chest. See figure 1 which illustrates the location of this muscle group.

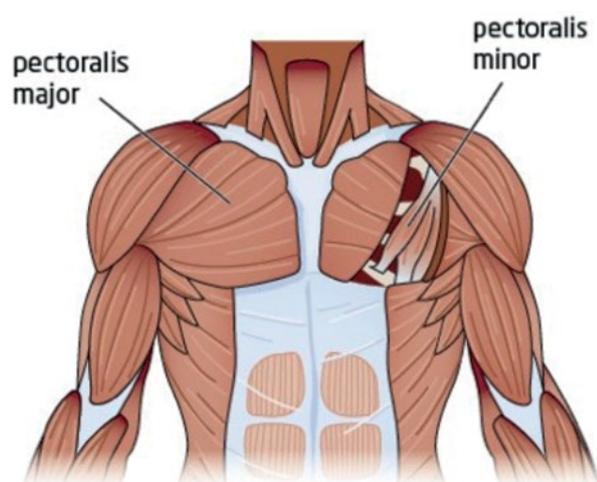


Figure 1



Figure 2

What are the symptoms?

The first sensation you feel when the pectoralis major muscle is torn is sudden pain felt in the chest or more commonly, at the front of the armpit. See figure 2 for the most common pain locations. At the same time you may have a sensation of something tearing. In minor tears you may be able to continue participating with minimal hindrance. However, as the muscle cools down following participation, pain may gradually increase as bleeding and swelling around the injured muscle takes place. This may be associated with progressive tightening and stiffening of the pectoralis muscle. In more severe tears these sensations may be exaggerated such that you are unable to continue participating immediately following injury due to excessive pain and muscle tightness, weakness and spasm. In complete tears of the pectoralis major muscle, you may have instant pain which quickly subsides. However, as the muscle is completely torn, you are unable to produce force and the arm is substantially weakened.

How did I get it?

A pectoralis major strain typically occurs when the muscle is forcibly contracted whilst in a stretched position. This can occur during weight training when performing bench press exercises. When the bar is lowered, the pectoralis major muscle is stretched across the chest. In this position, overstretching of the muscle combined with the need to generate high muscle forces to lift and lower the bar may place too much stress on the muscle. The muscle subsequently tears. Collision sports and wrestling are other activities where this can occur.

Pectoralis Major Strain

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What should I do?

To limit the severity of the injury it is advisable to cease participation immediately the injury occurs. Even if you have a small partial tear it is important to cease the activity. If you continue participating and go on to have a complete rupture the injury will be more serious and consequently will take longer to heal. The critical period in the treatment of a pectoralis major strain is the first 24—48 hours. This is when bleeding and swelling around the injured muscle is most active. Although swelling is a necessary step in the healing process, too much can delay healing and cause further tissue damage. To control the amount of swelling and limit the degree of damage to the pectoralis muscle, it needs to be both rested and iced. Ice is very useful initially and helps decrease the amount of swelling. Usually 10 mins on, 10 mins off, 10 mins on every 2 hours is effective and decreases the likelihood of nerve damage from ice burn.

Ideally, it should be applied using crushed ice wrapped in a moist cloth or towel. You should continue this until you consult a sports medicine

professional which ideally should occur as soon as possible following the injury (within the first couple of days). In the first few days following a pectoralis major strain you shouldn't undertake activities which increase blood flow to the injured muscle. These include hot showers, pectoralis stretching, heat rubs, massage, consumption of alcohol and excessive use of the arm. These can prolong muscle bleeding and exaggerate swelling resulting in further pain and an extended recovery period. Most pectoralis major strains heal without complication within a matter of weeks. However, a proportion of injuries can result in longer-term effects depending on the severity of the injury and the extent of damage. Complete tears of the muscle rarely heal by themselves and may require surgery to reunite the torn ends of the muscle. If a complete tear is not diagnosed and addressed early, it may prolong your recovery. Similarly, in more minor tears, recovery may be prolonged if the tear is not appropriately managed. This may result in a tight, weak pectoralis major muscle which is prone to re-injury when you return to participation.

What does rehab involve?

It is extremely important that the injury is graded properly. A full rupture may need surgery and has an approximate 6 month rehab period whereas a minor tear can often have you return to play or your activity within a matter of weeks. For minor tears you will need to initially rest and undertake a careful graded return to strength training and sporting activities.

For major tears a decision regarding surgical vs non-surgical management needs to be determined quickly. If delayed a retracted tear may be too difficult to repair leaving permanent weakness and deformity. The decision whether surgery is needed or not depends largely on your physical requirements. If losing a large portion of your strength is not going to affect you then surgery may not be necessary. Most young competitive athletes with complete ruptures who wish to continue will need surgery or will not have the strength to continue to compete at a high level.

How is a diagnosis made?

Diagnosis is usually made based on history and examination. If there is concern that the tear is high grade an MRI will usually be requested. Ultrasounds can be performed but are less accurate for pectoralis tears than for other injuries.



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