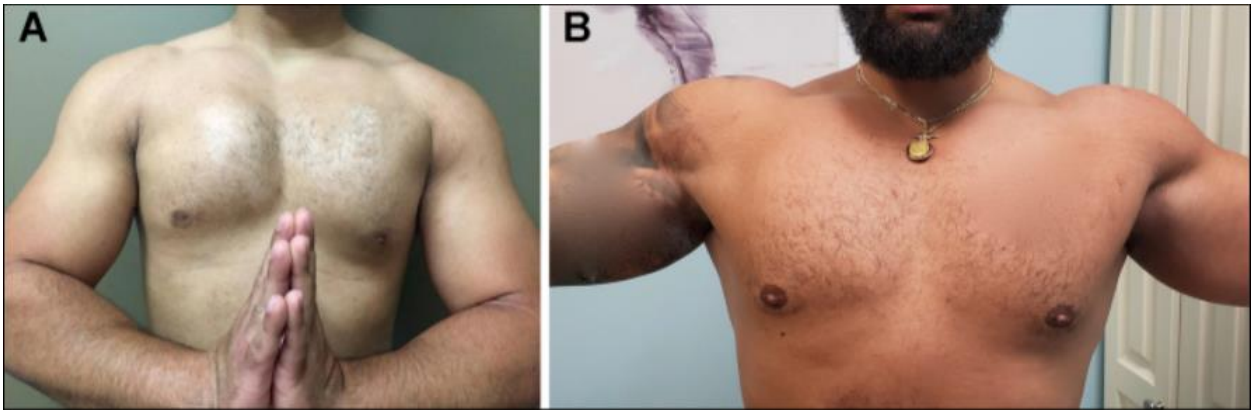
Pectoralis Major Rupture

Pectoralis major rupture is a partial or complete tear of the pectoralis major tendon which connects the pectoralis major muscle to the arm (humerus). When the tendon ruptures there is loss of connection between the pectoralis major muscle and the humerus which results in the loss of function of this muscle. The function of the pectoralis major muscle is needed to perform powerful pressing or pushing movements in the arm. Often this injury involves the tendon pulling off the humerus, although occasionally the muscle may tear in the mid-belly or at the junction between the muscle and tendon.

Frequent Signs and Symptoms

- A pop, rip, or tearing and severe, sharp, often burning pain in the chest at the time of injury
- Tenderness, swelling, warmth, or redness and later bruising over and around the pectoralis muscle-tendon, chest, and armpit region
- Pain and weakness when trying to forcefully push or press with the arm
- Loss of normal contour of the armpit region, especially when pushing your hands together in front of your body
- A palpable defect or gap between the ends of the tendon and bone where they separated from each other



Preoperative photo taken 1 day before surgery with loss of anterior axillary fold and "balling up" of right torn pec major.

Postoperative photo taken 2 years after surgery with restored cosmesis.

Etiology (Causes)

- Direct blow or injury to the chest
- Fall from a height
- Maximum bench press
- Catching oneself during a fall

Risk Factors

- Sports that require excessive muscle stress, such as with bench press weightlifting
- Contact sports
- Wrestling
- Poor physical conditioning (strength and flexibility)
- Previous pectoralis major tendon injury
- Cortisone injection into the pectoralis major tendon
- Anabolic steroid use

Prevention

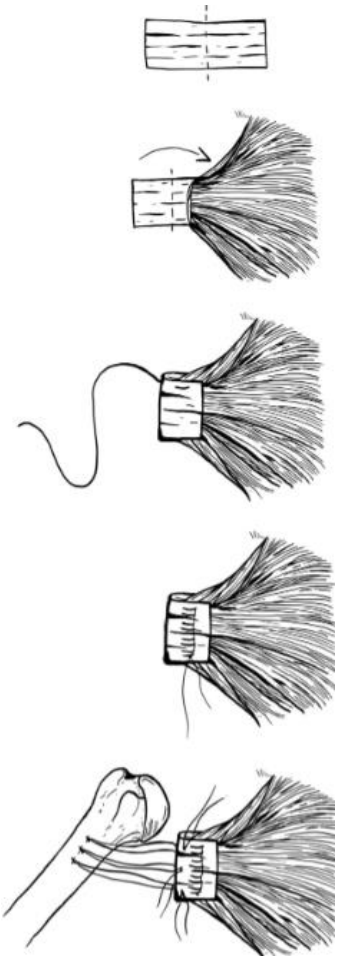
- Appropriately warm up and stretch before practice and competition.
- Allow time for adequate rest and recovery between practices and competition.
- Maintain appropriate conditioning:
  - Cardiovascular fitness
  - Shoulder flexibility
  - Strength and endurance

Outcomes

Surgery is required to restore the muscle connection and function. Surgical outcomes are good after 6-9 months of rehabilitation.

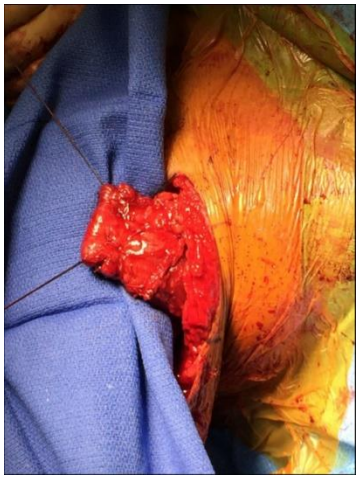
Potential Complications

- Weakness of the pectoralis major, especially if left untreated
- Re-rupture of the tendon after treatment
- Prolonged disability
- Risks of surgery, including infection, injury to nerves (numbness, weakness, or paralysis), bleeding, hematoma, pseudocyst, shoulder stiffness, shoulder weakness, and pain with strenuous activity
- Loss of chest or armpit contour
- Inability to repair rupture if treatment is delayed or tear is complicated



Treatment Considerations

Pectoralis major ruptures can be treated non-operatively as long as patients don't mind the potential visible deformity and permanent loss of pressing strength. Surgical treatment is otherwise required to repair the tendon followed by 6 weeks of sling immobilization and 6-9 months rehabilitation. Delayed surgery (greater than 3 weeks) and complex muscle tendon junction tears may require pectoralis major tendon reconstruction surgery to make a new pectoralis major tendon out of another tendon graft like the iliotibial band of the thigh. Surgery can restore near full function and strength.



Intraoperative photo of the ITB graft folded over PM with sutures running anterior to posterior in a modified Krackow fashion.

Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (**DO NOT** take within seven days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers may be prescribed by your physician. Use only as directed and only as much as you need.

Modalities (Cold Therapy)

Cold is used to relieve pain and reduce inflammation. Cold should be applied for 15 to 20 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.

Notify My Office If Symptoms Persist