

# ***ACHILLES TENDON RUPTURE***

## **DESCRIPTION**

Complete rupture of the Achilles Tendon. This tendon, sometimes called the heel cord, is the tendon attachment of the calf muscles, from the leg and knee to the heel bone. There is loss of continuity between the calf muscles and the heel bone and thus, loss of function of the calf muscles. The function of the calf muscles is to forcefully push the front of the foot down (stand on toes, push off with walking, running or jumping)

## **FREQUENT SIGNS AND SYMPTOMS**

- A “pop” or rip is often felt in the back of the heel at the time of injury – sometimes an athlete will feel like someone hit them in the back of the leg with a wood bat or were shot in the back of the leg.
- Pain and weakness with moving the foot (especially pushing down with the front of the foot).
- Tenderness, swelling, warmth and redness around the Achilles tendon
- Bruising at the Achilles tendon and heel after 48 hours
- Loss of firm fullness when pushing on the area where the tendon ruptured (a defect between the ends of the tendon where they separated from each other).

## **CAUSES**

- Sudden episode of stressful over-activity, such as with jumping, hurdling, or starting a sprint.
- Direct Blow or injury to the lower leg, foot or ankle.

## **RISK INCREASES WITH**

- Sports that require sudden, explosive muscle contraction, such as those involving jumping and quick starts. Also with running or contact sports.
- Poor physical conditioning (strength/flexibility)
- Previous Achilles tendon injury
- Untreated Achilles tendinitis
- Cortisone injection into the Achilles Tendon
- Medical problems, such as decreased circulation due to any cardiovascular medical problem or obesity

## **PREVENTIVE MEASURES**

- Appropriate warm up and stretching before practice or competition
- Give time for adequate rest and recovery between practices and competition
- Appropriate conditioning:
  - Ankle / leg flexibility
  - Muscle strength & endurance
  - Cardiovascular fitness
- Taping, protective strapping, or an adhesive bandage may be recommended before practice or competition

## **EXPECTED OUTCOME**

Usually curable with appropriate treatment. Return to sports is usually after 4 to 12 months

## **POSSIBLE COMPLICATIONS**

- Weakness of the calf muscles, especially if untreated.
- Re-rupture of the tendon after treatment
- Prolonged disability
- Risks of surgery, including infection, bleeding, injury to nerves, wound healing problems

## **GENERAL TREATMENT CONSIDERATIONS**

Initial treatment consists of not walking on the affected leg, icing the area, applying a compressive elastic bandage, and elevating the injured leg to eye level. Definitive treatment options include surgical and non-surgical intervention. The return to sports is usually about the same or a few weeks earlier with surgery.

- *Non-surgical treatment* usually involves a cast for 4 to 12 weeks, possibly with a walking boot part of that time. The advantages of non-operative treatment include no risk of anesthesia or surgery (infection, bleeding or injury to nerves). The disadvantages include usually longer immobilization in a cast resulting in stiffer ankle and knee joints. Also the calf muscles are slightly weaker, and there is a higher risk of re-rupture of the tendon.
- *Surgical treatment* usually involves sewing the ends of the tendon back together, followed by immobilization in a cast (usually short leg cast - below the knee to toes). The advantages of surgery include usually not needing to immobilize the knee, lower risk of re-rupture of the tendon, slightly stronger calf muscles. The disadvantages include the risks of anesthesia and surgery, specifically risks of wound healing problems and risk of injury to a nerve that provides sensation to the side of the foot.

## **MEDICATION**

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned in 7 days or less), or other minor pain relievers, such as acetaminophen are often recommended. Take these as directed by your physician. Contact him/her immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Pain relievers may be prescribed as necessary by your physician. Use only as directed and only as much as you need.

## **NOTIFY OUR OFFICE IF**

- Pain increases, despite treatment
- Cast discomfort develops (see cast care)
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.