



## Operation Information

### Repair of Achilles Tendon

#### Introduction

Achilles tendon is the largest and strongest tendon that connects the calf muscles to the heel bone. When calf muscle contracts, the tendon pulls the foot down allowing tiptoes standing and pushing off motion while walking, running, and jumping. The tendon is strong but it is vulnerable to injury, due to its limited blood supply and the high stress placed on it.

Ruptured achilles tendon can be treated non-surgically by immobilization with cast. This treatment has a higher re-rupture rate than surgical repairment. Nevertheless, it is a reasonable option for those who are in higher operative risk because of age or comorbidity, and who are physically inactive.



Source:

<https://medicaldialogues.in/orthopaedics/news/early-walking-in-a-brace-for-achilles-tendon-rupture-safe-and-effective-lancet-63083>

Achilles tendon repairment can be performed in either an open method or a minimally invasive method. If the tendon is ruptured, the tendon will be stitched back together. If the tendon is degenerated, the damaged part of the tendon may be removed and the rest of the tendon will be repaired with stitches. If there is severe damage to a length of the tendon, a graft tissue may be harvested from another part of your foot to replace the damaged part of the tendon.

#### Outcomes

It is expected that the achilles tendon is repaired and it reconnects the calf muscle with the heel bone in order to restore push off strength, to prevent further damage and complications.

#### Procedures

1. The operation can be performed under general or regional anaesthesia.
2. An incision(s) is made at the back of the leg above the heel.
  - Open method
    - A larger incision is made
  - Minimally invasive method
    - Several smaller incisions are made
3. The achilles tendon is repaired.
  - Open method
    - If autograft is needed, a graft tissue is harvested from another part of the body.
    - The damaged part of the tendon may be cut and replaced, depending on the condition of the tendon.
    - The tendon is stitched back together.
  - Minimally invasive method
    - The tendon is stitched back together with the aid of a specially-designed suture device passing through the small incisions.
4. The operated limb is compared with the other leg, to ensure the foot and ankle are in the same level.
5. The wound(s) is closed with stitches or staples, and covered with a sterile dressing.

## **Possible Risks and Complications:**

1. Wound problems, including infection and dehiscence
  - Minimally invasive: 5-10%; Open method: 2-5%
2. Re-rupture
  - Minimally invasive: 2-5%; Open method: 1-2%
3. Sural nerve damage
  - Minimally invasive: 2-5%; Open method: 1-2%
4. Deep vein thrombosis
  - Minimally invasive: 1-2%; Open method: <1%
5. Haematoma
  - Minimally invasive: <1%; Open method: <1%
6. Stiffness: 1-5%
7. Keloid scar: <1%

\*\* The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all operations are carried out with utmost professionalism and care, this does not rule out the possibility of complications arising. In the event of peripheral organ damage or post-operative haemorrhage or leakage, further operations may be required.

## **Pre-operative Preparations**

1. The surgery is usually performed within 2-3 weeks after an injury while swelling has reduced and premature healing has not yet occurred. Physiotherapy may be arranged in this period.
2. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the operation.
3. Please inform the doctor and nurse all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia.
4. Cigarette smoking may reduce your ability to heal. We strongly recommend you to quit smoking.
5. Routine pre-operative investigation such as blood test, ECG, X-ray and MRI scan may be performed.
6. No food or drink six hours before operation.
7. Nursing staff will assist you to clean the skin and perform shaving if necessary.
8. Please change into a surgical gown after removing all clothing including undergarments, dentures, jewellery and contact lenses.
9. Please empty your bladder before the operation.

## **Post-operative Instructions**

### General

1. After general anaesthesia, you may:
  - experience discomfort in the throat after tracheal intubation.
  - experience side effects of anaesthesia including feel tired, drowsy, nausea or vomiting. Inform the nurse if symptoms persist or worsen.
2. Please inform the nurse of wound pain. Proper pain relief treatment by injection or oral medication may be prescribed by the doctor.
3. Cryotherapy and elevation can reduce pain and swelling of the affected leg.

### Wound Care

1. The wound is covered with a sterile dressing with cast.
2. Keep the wound and cast dry and clean. Follow doctor's and nurse's advice on wound care.
3. Stitches or staples will be removed or dissolved in 3 weeks.

## Diet

1. In general, diet is allowed gradually after recovery from anaesthesia.

## Activities

1. Early mobilization is encouraged as it enhances recovery after surgery. Please follow doctor's advice to resume light activities gradually.
2. Elevate the affected limb for a few days to help reduce swelling and/or pain.
3. The affected limb needs to be immobilized for a while. Please use the crutches or wheelchair as directed.
4. Physiotherapist and occupational therapist may be referred for rehabilitation. You are recommended to participate in the tailor-made rehabilitation program in order to improve the chances of a full recovery.

## **Advices on Discharge**

1. Please comply with the medication regime as prescribed by your doctor.
2. Your wound may be still covered with dressing when discharge. Do not remove it until you are told to do so. Please keep the dressing clean and dry.
3. Prolonged bed rest can slow down blood circulation and increase the likelihood of developing deep vein thrombosis. Gentle physical exercise is strongly advised.
4. During your recovery you will likely lose muscle strength in the injured area. Specific exercise will keep restore normal muscle strength, joint motions and flexibility. Therefore, please follow your physiotherapist's advice to continue exercise.
5. In the initial period of recovery, the operated foot is immobilized by a cast with toes pointing downward for at least 2 weeks, and then resumes normal gait with weight bearing as tolerated using an immobilizing boot. In this period, please use the crutches or wheelchair as directed.
6. Heavy lifting and vigorous exercises should be avoided for 3-12 months until the tendon is completely healed.
7. Immediately consult your doctor or return to hospital for professional attention in the event of severe wound pain, massive bleeding, drainage pus, loss of feeling and sensation at the surgical site, cold or turn pale of the toes, cough, shortness of breath, chest pain, fast heartbeat, shivering, fever over 38°C or 100°F, etc.
8. Any follow-up consultations should be attended as scheduled.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

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Compiled by Union Hospital Operating Theatre (OT) Governance Committee

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