**Exercises with Resistance.** Obtain a strip (about two feet long of elastic belting material, surgical tubing (from a medical-supply store), or bike tire inner tube. Work your ankle in four directions as shown. As you do each tube exercise, pull the tubing taut, heel on the floor and make sure you do the exercises only with your foot and ankle, *not your whole leg*. The tube should be placed at the base of your toes.

**Repeat each exercise____ times, ____ times/day.**

**Out and up.** Sit on floor or chair. Loop tubing over foot and around table leg. With heel on floor, work ankle out and up.

**In and up.** As before, but loop tubing to provide tension against an inward move. With heel on floor, work ankle in and up.

**Straight up.** Loop tubing over foot and around a table leg. With heel on floor, work ankle straight up.

**Straight down.** Hold tube loop with hands against bottom of foot. With heel on floor, work ankle down.

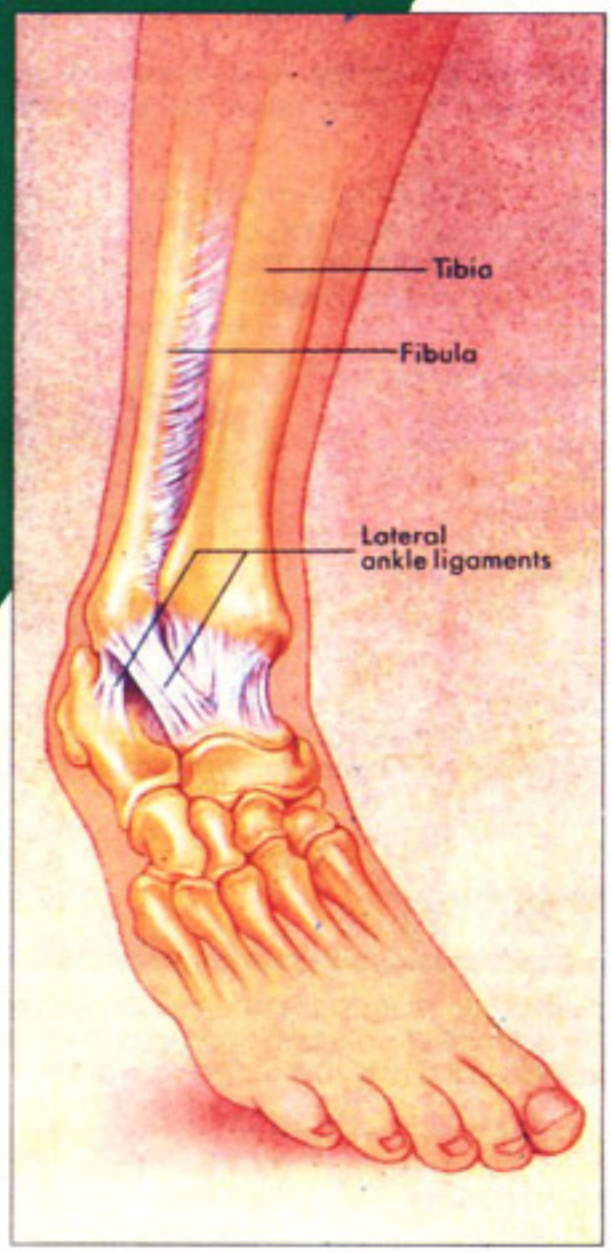
**Heel Raise.** Stand on one foot. Slowly rise up on toes and equally slowly lower heel back to floor. Progress to doing this exercise on the edge of a step.

**Repeat _____ times, _____ times/day.**

**General Exercises.**
Swimming with swim fins and riding a bicycle or exercycle can provide an excellent workout for your calf and ankle.

# Ankle Sprain

KUCHING SPECIALIST HOSPITAL




## THE INJURY

Ankle sprains are very common ankle injuries, usually the result of the ankle turning in. An ankle sprain occurs when a ligament connecting bones or cartilage of the ankle is ruptured or torn.

Ankle sprains are immediately and severely painful and incapacitating; they can often develop into a chronic problem. If treated quickly and properly, however, ankle sprains can heal well, allowing a safe and early return to activity.

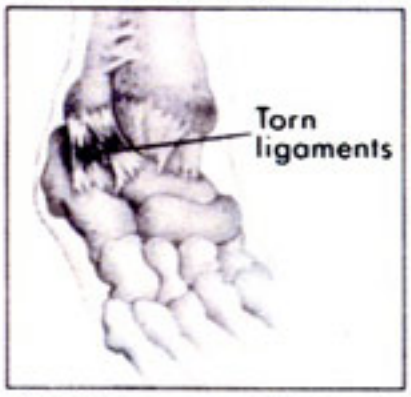
### Contributing Factors

- Previous injury
- Weak or imbalanced muscles
- Inappropriate/worn-out shoes
- Uneven surface
- Overweight
- Family tendency

**Three Degrees of Severity.** Ankle sprains are graded into three degrees of severity. The more severe the sprain, the longer the time to recover.

**First Degree.** This injury is the most common and , if not neglected, the most minor. Ligaments connecting bones of the ankle are stretched but not torn, with little swelling and no instability. With a first-degree injury, you can expect to be back to sports within a couple of weeks.

**Second Degree.** Ankle ligaments are partially torn, and the ankle usually swells immediately. There is bruising. A second-degree ankle sprain may require a three-to six week rest before you return to full activity.




**Third Degree.** This injury is a more serious tear of ligaments but rarely requires surgery. A third-degree ankle sprain requires eight to twelve months for ligaments to fully heal.

# TREATMENT

Treatment is divided into four stages. The rate of progress depends on the amount of pain and swelling and whether your doctor has used tape or a cast to stabilize your ankle.

**Stage1** (up to 72 hours)

To reduce pain and swelling, ice the ankle for 60 minutes every two hours; apply a plastic bag of crushed ice over a towel. Compression of the ankle may also limit swelling--an elastic bandage is usually sufficient. Elevate the ankle as much as possible. Depending on the injury, tape, splint, or a cast may be applied to immobilize the ankle.

Your doctor may also prescribe anti-inflammatory / analgesic medication (in tablet form) to relieve pain and to reduce swelling and inflammation.

**Stage 2** (1st week)

You can walk on the ankle as soon as it feels comfortable. Crutches can be used as partial support when you begin to walk. Further support for your ankle may be needed in the form of tape, a brace, or a cast. Let pain be your guide as to how much activity is enough.

After an injury your ankle will get stiff. It is important to maintain the full range of motion of your ankle, even with external support. For exercise, rest heel on floor and write the alphabet in the air with your big toe, making the letters as large as you can.

**Stage 3** (second week or longer)

The crucial part of the treatment is a rehabilitation program to regain ankle flexibility and to strengthen supporting muscles. Your doctor will advise you about exercise and physical therapy.

**Stage 4** (variable)

Your ankle must be strong before you return to full daily activity or sports. Too early a return may lead to re-injury and a chronic problem.

To test your readiness: when you can stand on the toes of the injured ankle for 20 seconds and hop on your toes 10 times you can begin to run. Initially you should be jogging in a straight line. As you get stronger, you can progress to large figure 8's. Finally you can cut and zig-zag. You can return to your sport when you can zig-zag without pain or instability.

Your ankle should be protected for a minimum of six months after injury. Follow your doctor's advice.

**Shoes.** Athletic shoes that fit well will stabilize your foot and minimize slippage. They should have strong, flat, even soles that are neither too spongy nor too thick.

# EXERCISES

Exercising will strengthen muscles that support the injured area and help prevent re-injury and chronic problems.
DO EACH PRESCRIBED EXERCISE TWO TIMES A DAY OR AS OFTEN AS YOUR DOCTOR RECOMMENDS.

**Stretches.** Do stretches before and after activity. Lean against a table with your back knee locked your front knee bent. Press forward until a moderate stretch is felt in the calf muscles of your straight leg. Hold 15 seconds. Keeping both heels on the floor, bend the knee of your straight leg until a moderate stretch is felt in your Achilles tendon. (The Achilles tendon attaches the muscles of the calf to the heel bone). Hold 15 seconds. You should feel a moderate pull, but no pain. Change legs and stretch the other leg.

**Repeat** _____ **times** _____ **times/day**