

Navicular (Scaphoid) Fracture

What is a navicular or scaphoid fracture?

Your wrist is made up of eight bones that attach to the bones in the forearm and the bones in the hand. One of the wrist bones near your thumb has two different names: it is called the scaphoid bone or navicular bone. A fracture is a break through a bone. Because this wrist bone does not have a good blood supply, fractures to this bone sometimes have a healing problem.

How does it occur?

A navicular fracture is caused by a fall or a direct blow.

What are the symptoms?

You have pain and swelling in your wrist, usually just below the thumb. If you hold your hand in the "hitchhiking position," the thumb tendons are visible on the back of your hand and thumb. The tendons make an area called the "snuff box." When the navicular bone is fractured, there will be tenderness in the "snuff box."

How is it diagnosed?

Your doctor will examine your wrist and review your symptoms. An x-ray will be ordered and may show a break in the navicular bone. Sometimes a fracture may not show up in the first x-ray and your doctor

may recommend that you have a repeat x-ray in 1 to 2 weeks.

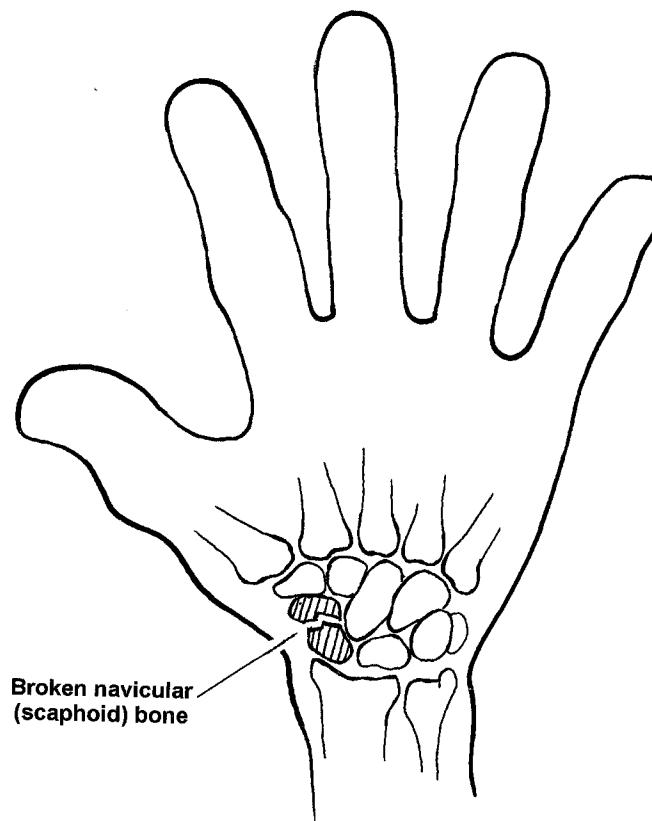
How is it treated?

You will need to wear an arm cast that will include your thumb. The cast may or may not extend above your elbow and may be left in place for up to 12 weeks to be sure the bone heals.

In some cases healing does not occur and the pieces of bone do not grow back together. This may require surgery to

fix. Sometimes the failure of the pieces of bone to grow back together leads to a problem called avascular necrosis. In avascular necrosis, part of the bone dies because it does not get enough blood. In these cases, an operation is necessary to remove part of the injured bone, insert bone to help heal the fragment, or insert an artificial bone. Complete recovery may occur or you may have some permanent stiffness or loss of range of motion.

Navicular (Scaphoid) Fracture



Navicular (Scaphoid) Fracture

When can I return to my sport or activity?

The goal of rehabilitation is to return you to your sport or activity as soon as is safely possible. If you return too soon you may worsen your injury, which could lead to permanent damage. Everyone recovers from injury at a different rate. Return to your sport or activity will be determined by how soon your wrist recovers, not by how many days or weeks it has been since your injury occurred.

You may return to your sport or activity when you have full range of motion in your wrist without pain. Your doctor may allow you to return to competition with your wrist taped or in a brace. Your injured wrist, hand, and forearm need to have the same strength as the uninjured side. You must not have any pain when you do activities such as swinging a bat or a racquet or tumbling in gymnastics.

If you return to a sport or activity too soon after a navicular fracture there still could

be problems with healing. It is very important to be sure that none of your activities cause wrist pain and that you do not develop tenderness over the "snuff-box" area of your wrist.

How can I prevent a navicular fracture?

A navicular fracture usually occurs during an accident that is not preventable. When you do activities such as rollerblading be sure to wear protective wrist guards.

Navicular (Scaphoid) Fracture Rehabilitation Exercises

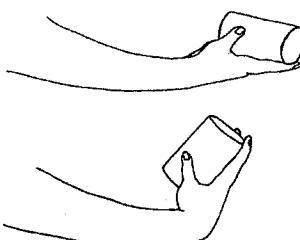
You may do stretching exercises 1 and 2 when your cast is removed. You may do strengthening exercises 3 through 7 when stretching is nearly painless.

1. Active range of motion

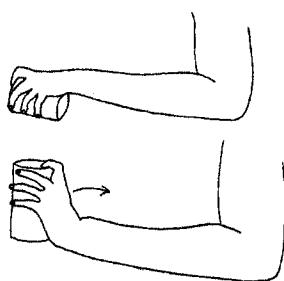
- Flexion (forward bending): Bend your wrist as far forward as you can, trying to touch your fingers to your wrist.
- Extension (backward bending): Try to bend your wrist backward as far as you can.
- Side to side: Move your wrist from side to side.

2. Stretching

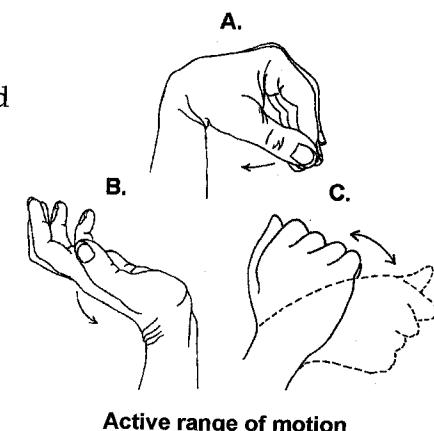
- Wrist flexion and extension: With your hand bent forward stretching into the flexion position, apply pressure with your other hand to push it farther. Next, with your palm up, apply pressure on your fingers with your other hand to bend your hand and fingers backward.
- Wrist flexion stretch: Standing with the back of your hand on the table, your fingers and palms facing up and your elbows straight, lean away from the table. Hold this position for 15 to 30 seconds.
- Wrist extension stretch: Standing at a table with your palms down, your fingers flat, and your elbows straight, lean your body weight forward and hold this position for 15 to 30 seconds.



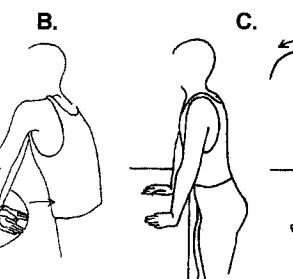
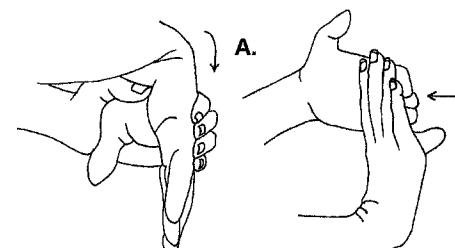
Wrist flexion



Wrist extension

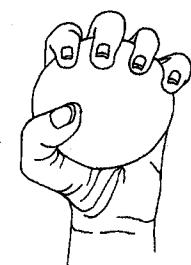


Active range of motion



Stretching

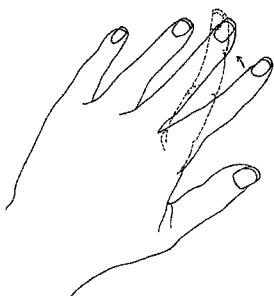
- Wrist flexion: Holding a soup can or hammer handle with the palm facing up, bend your wrist upward. Slowly lower the weight and return to the starting position. Repeat 10 times. Do 3 sets of 10.



Finger flexion

- Wrist extension: With your palm facing down and holding a can of soup or hammer handle, slowly bring the wrist and hand up. Slowly lower the weight down again to the starting position. Repeat 10 times. Do 3 sets of 10.
- Finger flexion: Using a rubber ball or other object that you can grasp in your hand, squeeze as tight as you can with your fingers and hold for 5 seconds. Release and repeat this 10 times. Do 3 sets of 10.

Navicular (Scaphoid) Fracture Rehabilitation Exercises



Finger extension

6. Finger extension: With your palm flat on a table and your fingers straight out, lift each finger straight up one at a time. Hold your finger up for 5 seconds then and put it down. Continue until you have done all 5 fingers. Repeat 10 times.

7. Pronation and supination of the forearm:
With your elbow bent 90 degrees, turn your palm up and then turn your palm down without letting your elbow move. To challenge yourself, hold a hammer by the end of the handle and slowly turn the palm up. Then turn the palm down. Repeat 10 times. Do 3 sets of 10.



**Pronation and supination
of the forearm**