

SCAPHOID FRACTURE



■ ■ ■ Description

Scaphoid fracture is a complete or incomplete break of the scaphoid bone of the hand and wrist. The scaphoid bone has poor blood supply and is at high risk of not healing.

■ ■ ■ Common Signs and Symptoms

- Usually, severe pain at the time of injury
- Pain, tenderness, swelling, and occasionally bruising around the fracture site
- Numbness, coldness, and swelling in the hand, causing pressure on the blood vessels or nerves (uncommon)

■ ■ ■ Causes

Scaphoid fracture is caused by a direct blow or indirect stress to the bone. This usually occurs as a result of a fall on an outstretched hand.

■ ■ ■ Risk Increases With

- Participation in contact sports or jumping sports, such as football, soccer, basketball, boxing, and wrestling
- Sports in which falling onto outstretched hands is commonplace, such as snowboarding and rollerblading
- History of bone or joint disease, including osteoporosis or previous hand immobilization

■ ■ ■ Preventive Measures

- Maintain appropriate conditioning:
 - Cardiovascular fitness
 - Forearm and wrist strength, flexibility, and endurance
- For participation in contact sports, wear appropriate protective equipment for the hand and ensure correct fit.
- For sports in which falling is likely, wear appropriately fitted wrist protectors.
- Use proper technique when hitting, punching, and landing from a fall.
- If you have had a previous injury, use tape or padding to protect your hand before participating in contact or jumping sports.

■ ■ ■ Expected Outcome

This bone may heal in an average of 4 to 5 months with appropriate treatment and normal alignment. The bone may not heal, even if the position of the bones is normal. Surgery is often needed.

■ ■ ■ Possible Complications

- Nonunion (fracture does not heal)
- Malunion (heals in a bad position)
- Impaired blood supply to the fracture and bones
- Chronic pain, stiffness, or swelling of the hand and wrist, especially with prolonged casting

- Excessive bleeding in the hand, causing pressure and injury to nerves and blood vessels (rare)
- Unstable or arthritic wrist joint following repeated injury or delayed treatment
- Shortening or injured bones
- Risks of surgery, including infection, bleeding, injury to nerves (numbness, weakness), nonunion, malunion, arthritis, and stiffness

■ ■ ■ General Treatment Considerations

If the bone ends are in appropriate alignment (position), the initial treatment consists of ice and elevation of the injured hand at or above heart level to reduce swelling. Pain medications help to relieve pain. Immobilization by splinting or casting for an average of 4 to 5 months is usually recommended to protect the bones while they heal. For fractures that are displaced (out of alignment), surgery is usually recommended. Surgery may also be recommended for nondisplaced fractures. Surgery usually involves placement of removable pins or screws. After immobilization (with or without surgery), stretching and strengthening of the injured and weakened joint and surrounding muscles (due to the injury and the

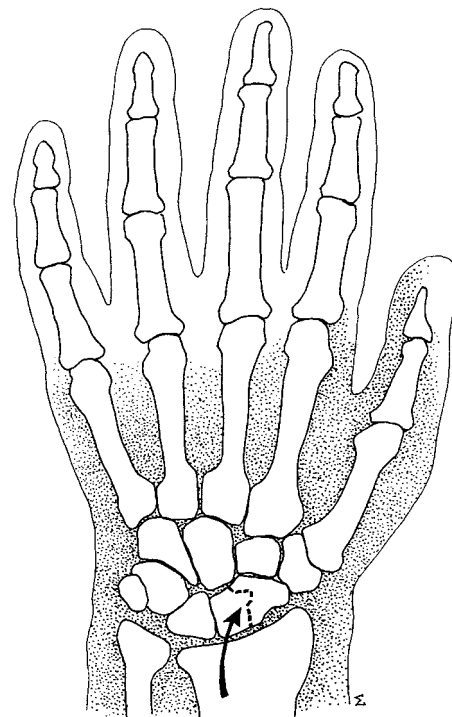


Figure 1

From Economou SG, Economou TS: *Instructions for Surgery Patients*. Philadelphia, WB Saunders, 1998, p. 427.

immobilization) are necessary. These may be done with or without the assistance of an occupational or physical therapist or athletic trainer. Occasionally, depending on the sport and position, a brace or splint may be recommended when initially returning to sports.

■ ■ ■ Medication

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 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.
- Strong pain relievers may be prescribed as necessary. Use only as directed and only as much as you need.

■ ■ ■ Cold Therapy

Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every 2 to 3 hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage.

■ ■ ■ Notify Our Office If

- Pain, tenderness, or swelling worsens despite treatment
- You experience pain, tingling, numbness, or coldness in the hand
- Blue, gray, or dusky color appears in the fingernails
- Any of the following occur after surgery: fever, increased pain, swelling, redness, drainage, or bleeding in the surgical area
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

Notes:

(Up to 4400 characters only)

Notes and suggestions