

# HAMATE (HOOK) FRACTURE



## ■ ■ ■ Description

A hamate fracture is a complete or incomplete break of a part of the hamate bone of the hand and wrist. The hamate bone has a bony protuberance, the hook, that is susceptible to injury and is at high risk of not healing.

## ■ ■ ■ Common Signs and Symptoms

- Pain or soreness on the side of the wrist near the little finger, on the palmar side, or occasionally on the back side
- Pain, tenderness, swelling, and occasionally bruising around the fracture site at the base of the wrist
- Pain gripping or swinging a golf club, bat, or racquet
- Numbness and coldness in the hand
- Swelling in the hand, causing pressure on the blood vessels or nerves

## ■ ■ ■ Causes

- Direct force across the base of the palm from a grasped object, such as the end of a golf club, baseball bat, or racquet

## ■ ■ ■ Risk Increases With

- Participation in sports in which a bat (baseball, cricket), club (golf), or racquet (tennis, racquetball) are used
- History of bone or joint disease, including osteoporosis, or previous hand immobilization

## ■ ■ ■ Preventive Measures

- Maintain appropriate conditioning:
  - Hand and forearm strength
  - Flexibility and endurance
- For participation in risky sports, wear appropriate protective equipment, such as padded gloves, or use clubs, racquets, or bats with padded tips.
- Use proper technique when hitting or swinging a bat, racquet, or club.
- 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 fracture occasionally may heal with immobilization. Because it usually does not heal spontaneously, surgery to remove the broken piece is often recommended, with return to sports after 6 to 10 weeks.

## ■ ■ ■ Possible Complications

- Nonunion (fracture does not heal; common)
- 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

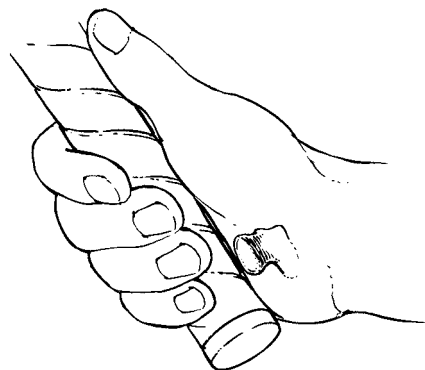
- Excessive bleeding in the hand, causing pressure and injury to nerves and blood vessels (rare)
- Tendon rupture of the tendons that bend the wrist or fingers
- Nerve injury to the hand, causing pain, numbness, and weakness or clumsiness in the hand and fingers
- Risks of surgery, including infection, bleeding, injury to nerves (numbness, weakness), nonunion, malunion, arthritis, stiffness, and pain

## ■ ■ ■ 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. Medications help to relieve pain. Immobilization by splinting or casting is usually recommended to protect the bones while they heal, an average of 6 to 8 weeks. For fractures that are displaced (out of alignment), surgery is usually recommended. Surgery may also be recommended for nondisplaced fractures. Surgery usually involves removal of the broken piece or fixing it with 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 immobilization) are necessary. These may be done with or without the assistance of an occupational or physical therapist or athletic trainer. Depending on the sport and the position played, a brace or splint may be recommended initially when 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



**Figure 1**

From Jobe FW: Operative Techniques in Upper Extremity Sports Injuries. St. Louis, Mosby Year Book, 1996, p.665.

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. Use ice packs or an ice massage.

### ■ ■ ■ Notify Our Office If

- Pain, tenderness, or swelling worsens despite treatment
- You experience pain, 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