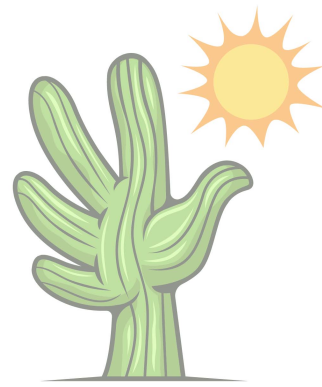


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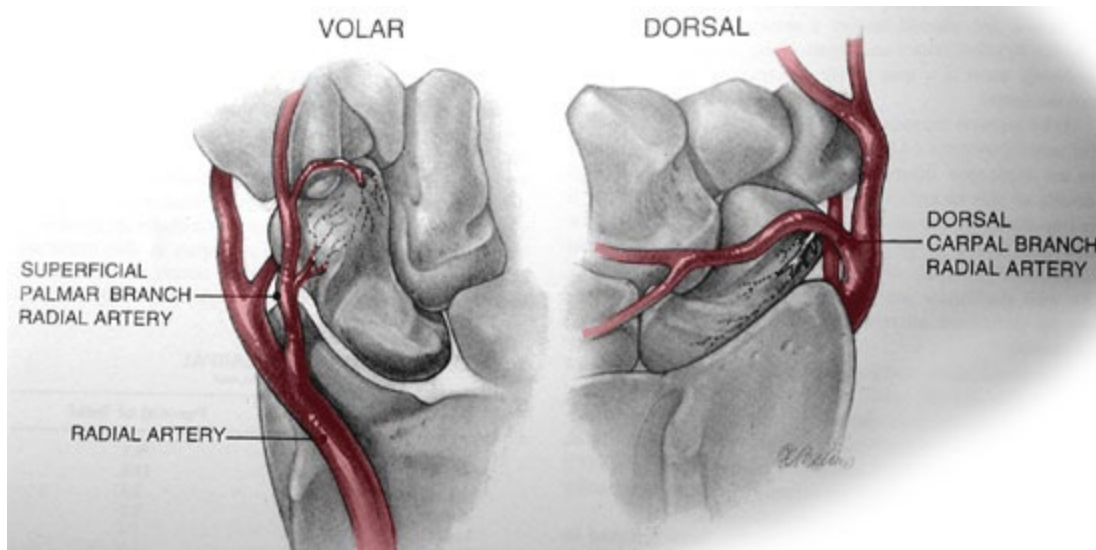
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**SCAPHOID FRACTURE**



What is it?

- The Scaphoid bone is covered in cartilage and is shaped like a boat or twisted peanut.
- While it is the most important bone in the wrist – it also has the worst blood supply and is always at risk for both fracture and for not healing after fracturing.
  - o The blood supply to the proximal pole of the bone is very poor.
- Many important ligaments attach to the Scaphoid.



Who gets it?

- 15% of all wrist injuries.
- Most common among men in their 20-30s after a fall onto an outstretched wrist in contact sports.
  - o Many patients may think the injury is a sprain and the fracture can go un-diagnosed for years.
  - o If the fracture is not treated, the scaphoid may lose blood supply and painful arthritis will develop.

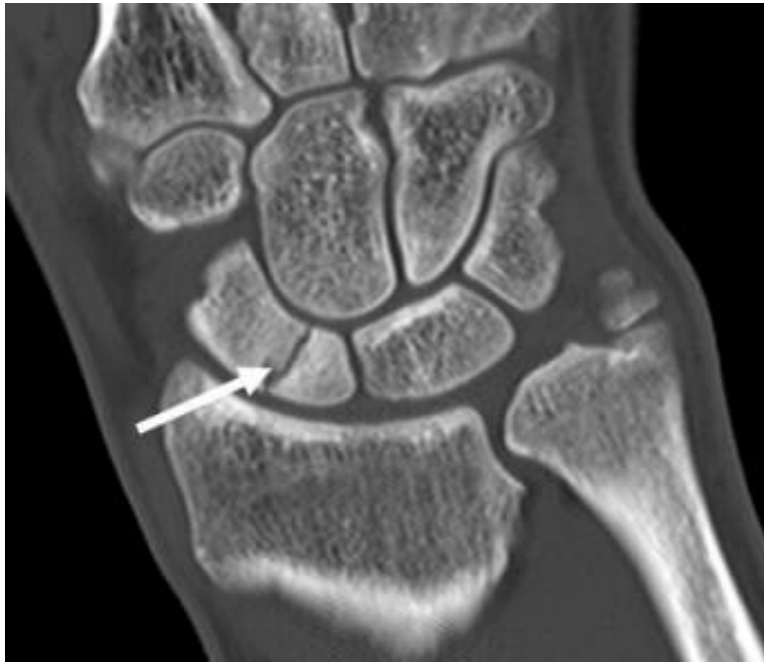
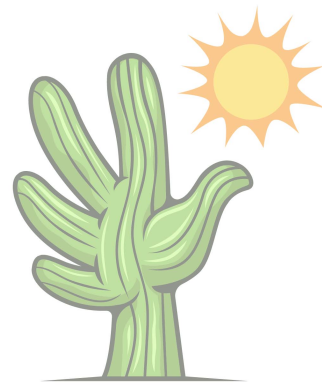
What can you do about it?

- No MRI/CT is needed in *most* cases. X-Rays are required.
  - o For fractures which are not initially evident, sometimes a MRI or CT will be ordered – which will help the surgeon see subtle fractures.
- Depending on the patient's age, bone quality, activity level, type of fracture, chronicity of fracture, presence of arthritis, and preference for surgery, fractures may be treated with:
  - o Short arm cast.
  - o Surgery with a single screw.
    - Depending on the location of the fracture – the incision may be on the palm or on the back (dorsum) of the wrist.

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**Surgery:**

- The surgery involves a 4 cm incision over the scaphoid bone.
  - o A single screw is placed in the middle of the bone – holding the two ends together.
  - o Sometimes bone graft is used from your distal radius.
  - o Rarely, bone morphogenetic protein may be used to help stimulate healing.

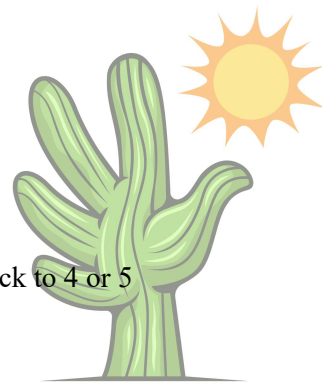
**Post-operative course:**

- Pain pills may be needed for the first 5-7 days.
- Black nylon sutures are removed at the first post-operative visit in 2 weeks.
  - o This suture is inert (does not react with your body) and is sturdy.
  - o The wrist is immobilized with a splint until sutures are removed.
    - Depending on the fracture – you will likely be put into a short arm cast for an additional 4 weeks at this point.
- You can text, type, and do light duties with the hand in the splint (but no weight bearing)
- Therapy may be helpful - especially early when the cast is removed.
- The second post-operative visit is at 6 weeks after surgery.
- Often a CT scan is obtained at 3 months to make sure there is healing.
  - o If there is healing, therapy may be advanced to weight bearing.

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- If the fracture had poor healing characteristics, the CT scan may be moved back to 4 or 5 months.
- To help healing for certain cases, a bone stimulator may be used.

**Outcomes**

- Benefits of surgery:
  - Earlier time to fracture healing.
  - Anatomic reduction of fracture – restores native anatomy.
  - Quicker return to heavy labor.
- Grip strength (95%), healing (95%), full motion, and return to labor at 8 weeks.

**Complications**

- Risk damage to neurovascular structures, infection, tendon injury (extensor), wound complications, and need for revision surgery, and arthritis.
  - Osteonecrosis is a particular concern when there is a proximal pole fracture.
  - Non-healing fracture in 5-10% of scaphoid fractures.



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