

Scaphoid Screw

Surgical Technique TriMed Scaphoid Screw System





K-wire Insertion

- Access the proximal pole fragment using a percutaneous technique or limited incision approach in the vicinity of Lister's tubercle over the radiocarpal joint.
- Reduce the fracture.
- Confirm K-wire placement with C-arm on multiple views.



Screw Measurement

- Measure K-wire length with Wire Gauge.
- Subtract 4-6mm to account for fracture compression and to avoid articular penetration.
- Once length is determined, advance K-wire out through distal pole and exit the skin palmarly.* The wrist must remain flexed to avoid bending of K-wire. Secure tip with Pin Clamp.

* This avoids inadvertent removal of K-wire during drilling and simplifies removal if K-wire breaks.



Site Preparation

- Drill through full scaphoid length over K-wire. This ensures the screw will be fully seated.
- Check position of the tip of the drill bit with C-arm.
- Countersink hole to depth needed to recess the screw head within the cortical bone.



Screw Insertion

- Select Scaphoid Screw with the desired short or long thread length* and insert screw. Ensure threads completely cross the fracture line.
- Complete insertion until head is completely recessed below subchondral surface.

*Use Screw Selection tip on next page as reference.



Final Fixation

- Confirm position and depth with C-arm. Ensure leading screw threads have passed the fracture line and the head is buried within cortical bone.
- Remove K-wire.

TIPS

Screw Selection

- Short Thread Interposition Grafting
- Long Thread Proximal Pole Fracture







Fracture Stabilization

• Prior to drilling, a second wire inserted parallel to K-wire provides rotational stability.

Reduction Confirmation

- Advance a double-ended 1.1mm K-wire out through skin distally.
- Withdraw K-wire from distal side until proximal tip lies within the bone as shown in image to the right. Confirm position and reduction on C-arm. Assess articular congruency through multiple ranges of motion.
- Once reduction is confirmed, reverse K-wire back out proximally through skin.





Secure K-wire

• A Pin Clamp secured to the end of the K-wire will avoid inadvertent withdrawal of the wire during drilling.









K-wire Insertion

- Expose distal pole using a limited incision or percutaneous technique.
- Reduce the fracture.
- Confirm K-wire placement with C-arm on multiple views.

Screw Measurement

- Measure K-wire length with Wire Gauge.
- Subtract 4-6mm to account for fracture compression and to avoid articular penetration.
- Once length is determined, advance K-wire out through proximal pole and exit the skin dorsally.* Secure tip with Pin Clamp.

* This avoids inadvertent removal of K-wire during drilling and simplifies removal if the K-wire breaks.

Site Preparation

- Drill through full scaphoid length over K-wire. This ensures the screw will be fully seated.
- Check position of the tip of the drill bit with C-arm.
- Countersink hole to depth needed to recess the screw head within the cortical bone.





Screw Insertion

- Select Scaphoid Screw with desired short or long thread length* and insert the screw. Ensure threads completely cross the fracture line.
- Complete insertion until head is completely recessed below subchondral surface.

*Use Screw Selection tip on next page as reference.

Final Fixation

- Confirm position and depth with C-arm. Ensure leading screw threads have passed the fracture line and the head is buried within cortical bone.
- Remove K-wire.

TIPS

Screw Selection

- Short Thread Interposition Grafting
- Long Thread Distal Pole Fracture







Fracture Stabilization

• Prior to drilling, a second wire inserted parallel to K-wire provides rotational stability.

Distal Pole Visualization

• Use Scaphoid Elevator to lift and mobilize the scaphoid tubercle away from the trapezium.



Secure K-wire

• A Pin Clamp secured to the end of the K-wire will avoid inadvertent withdrawal of the wire during drilling.





All implants made from surgical grade titanium





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The presently issued U.S. patents are: 6,077,266; 6,113,603; 7,037,308; 7,044,951; 7,195,633; 7,540,874; 7,942,877; 8,177,822; 8,821,508; 8,906,070; 9,089,376; 9,283,010; 9,220,546; 9,237,911; 9,402,665; 9,636,157; 9,861,402. See trimedortho.com for all listed patents.

The technique presented is one suggested surgical technique. The decision to use a specific implant and the surgical technique must be based on sound medical judgment by the surgeon that takes into consideration factors such as the circumstances and configuration of the injury.