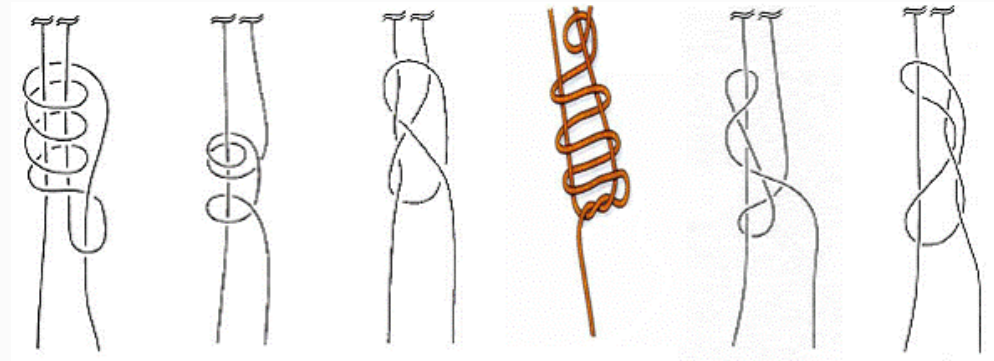
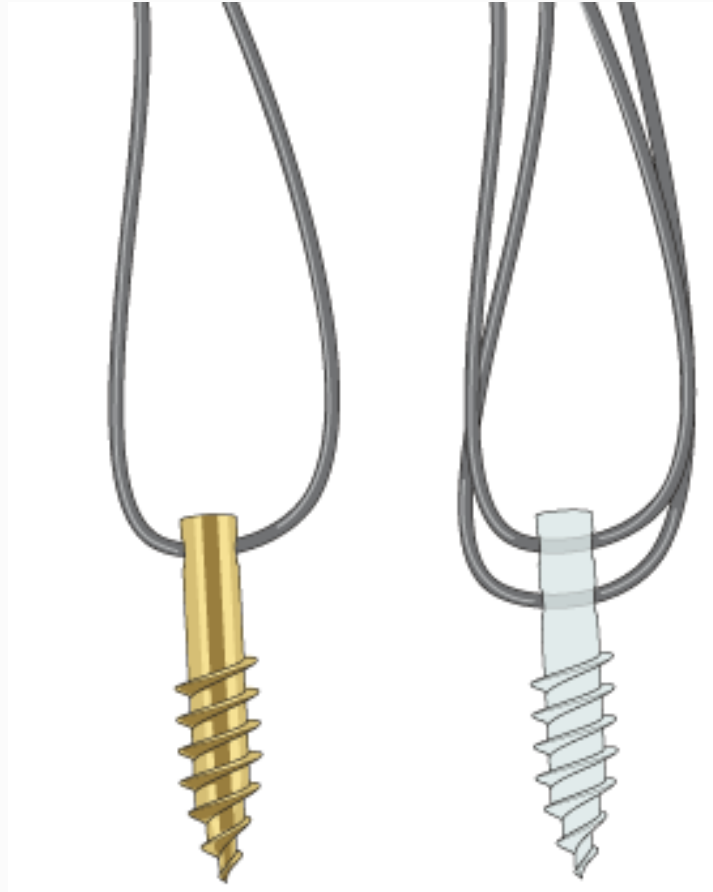


Arthroscopic knot tying

M. N. Naderi ,MD
Fellowship in shoulder and
arthroscopic surgery





Each suture has 2 limbs

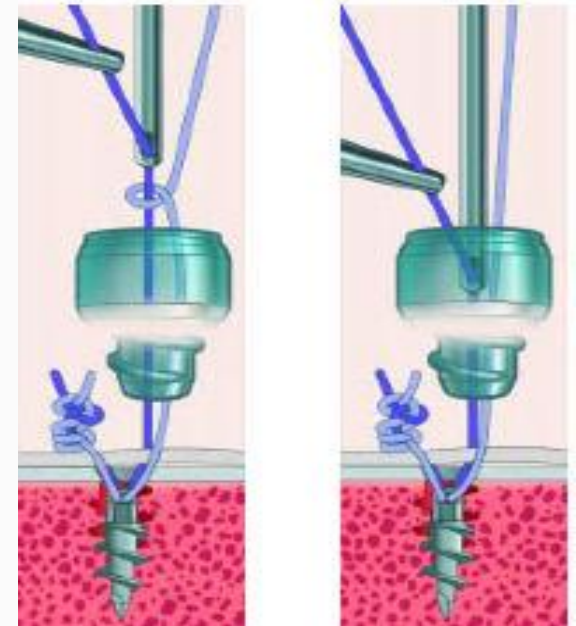
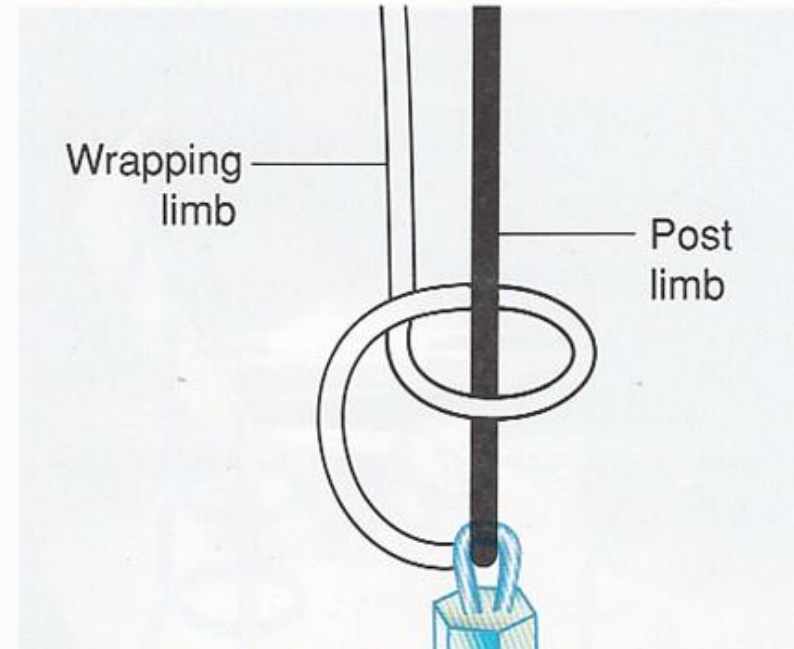
Limbs of suture

▶ Post limb

- the limb around which loops are being passed when building the knot

▶ Wrapping limb

- the suture being passed around the post limb



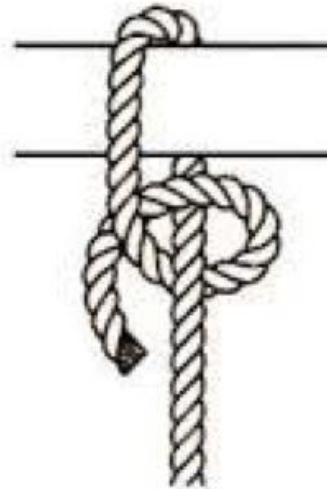
Limbs of suture

▶ Post limb

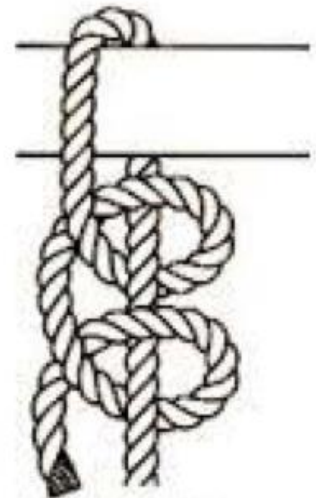
- the limb around which loops are being passed when building the knot

▶ Wrapping limb

- the suture being passed around the post limb



Half-Hitch



Two Half-Hitches

Limbs of suture

▶ Post limb

- the limb around which loops are being passed when building the knot

▶ Wrapping limb

- the suture being passed around the post limb



A.

B.

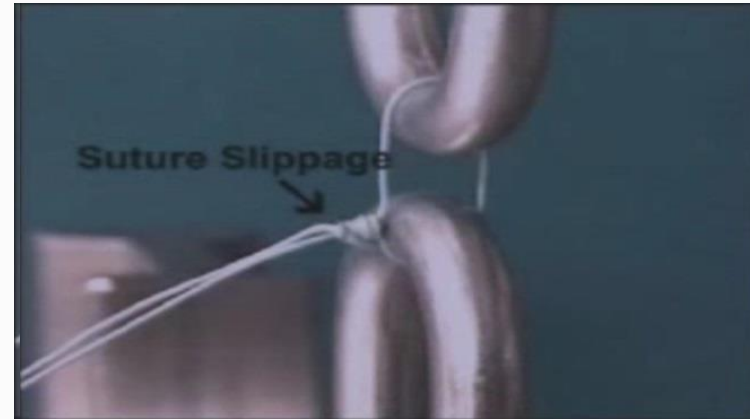
A. Under-over

B. Over-under

Security of suture

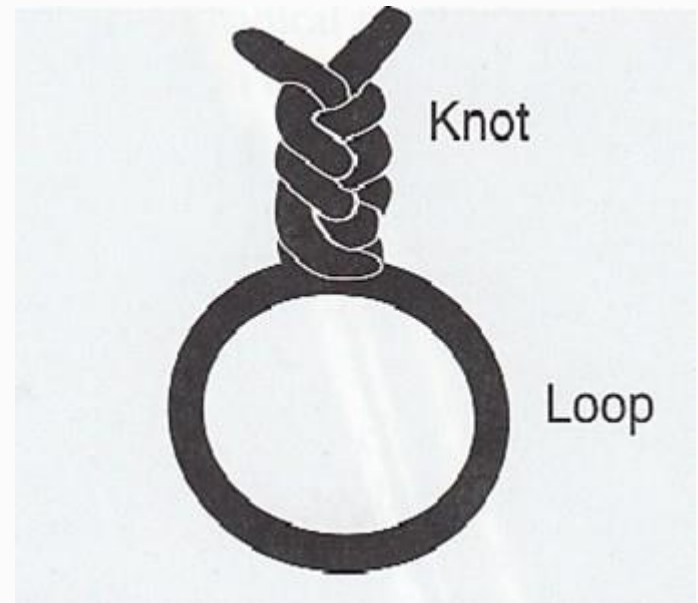
▶ Knot security

- the ability of the overall knot to resist slippage



▶ Loop security

- the ability of a knot to maintain tightness in the initial knot loop that approximates the tissue



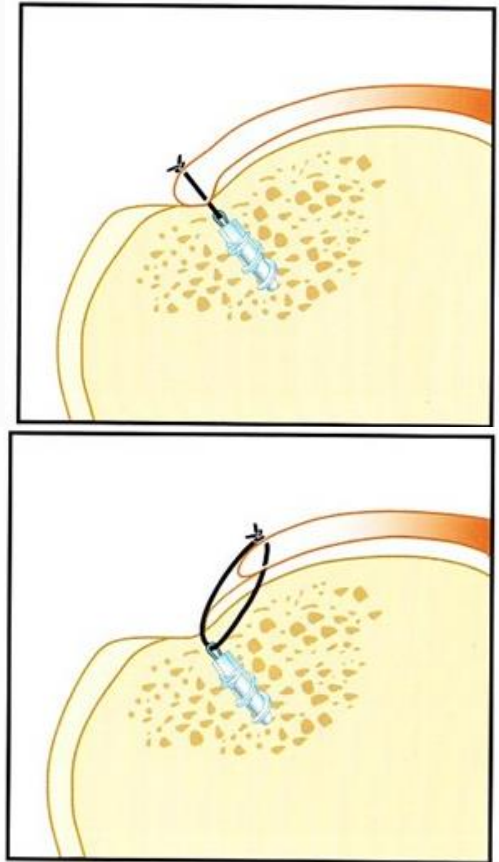
Security of suture

▶ Knot security

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Security of suture

▶ Knot security

- the ability of the overall knot to resist slippage

▶ Loop security

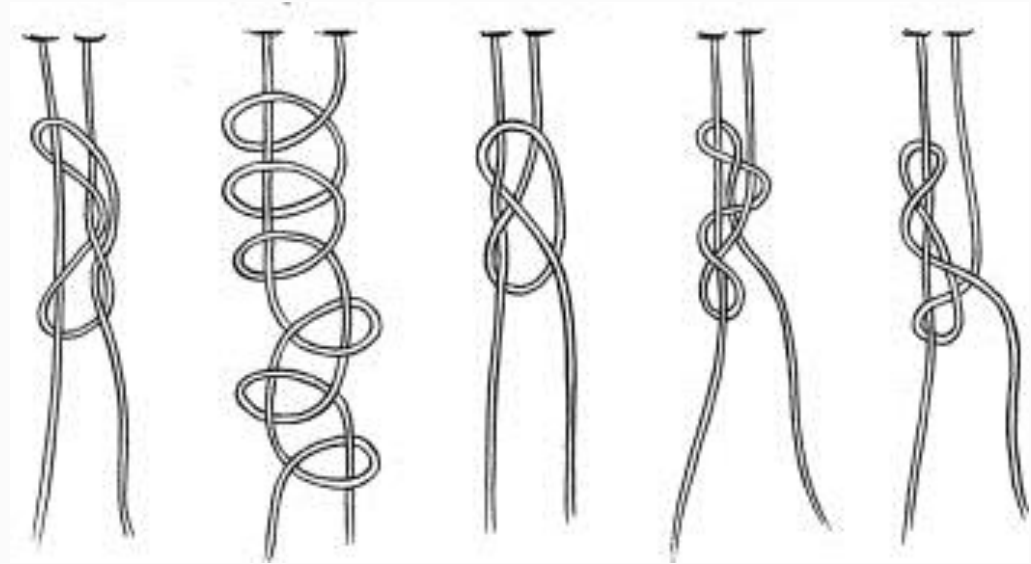
- the ability of a knot to maintain tightness in the initial knot loop that approximates the tissue

Six finger knot pusher



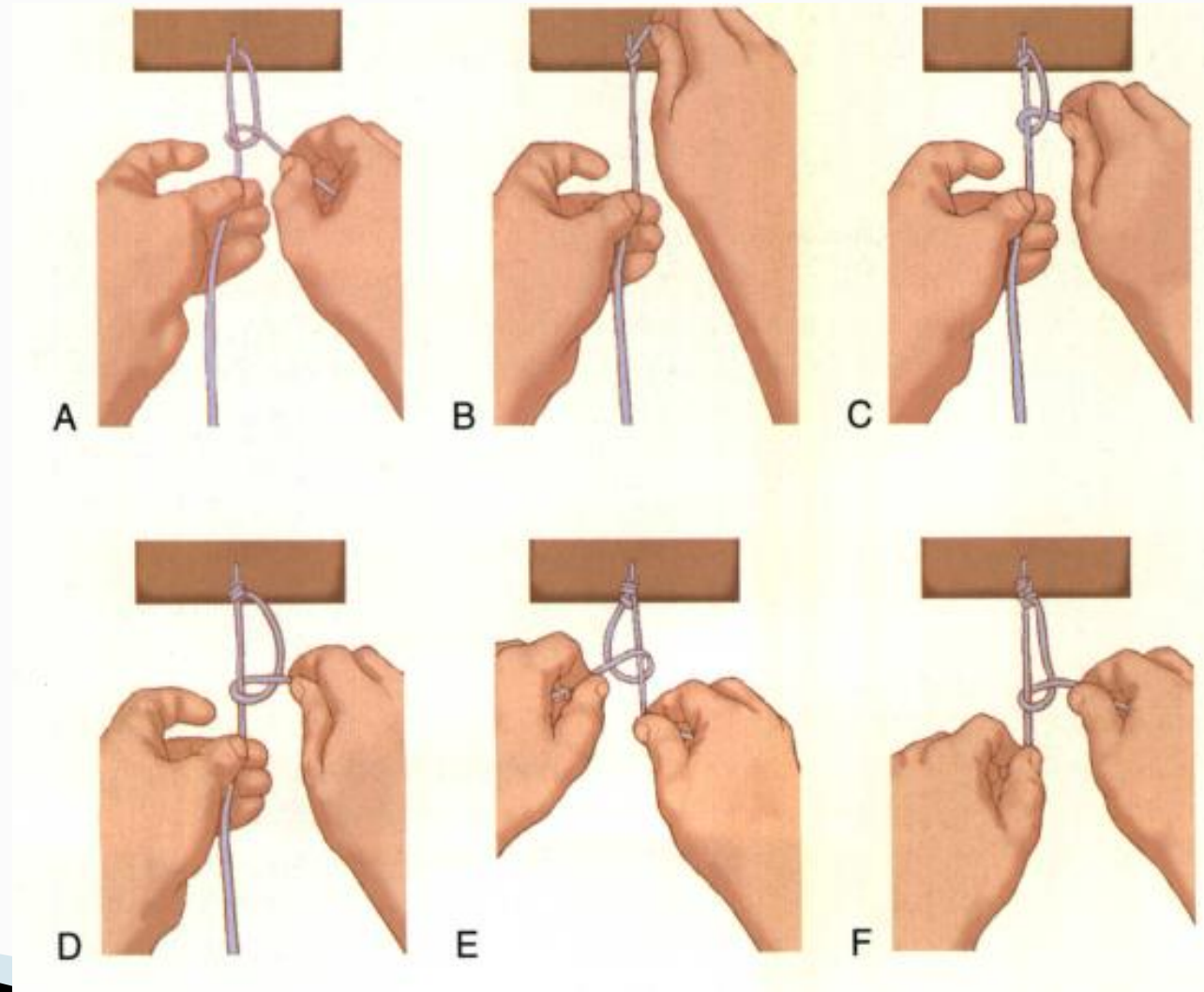
Arthroscopic knots

- ▶ Nonsliding
- ▶ Sliding
 - sliding-locking
 - sliding-non locking



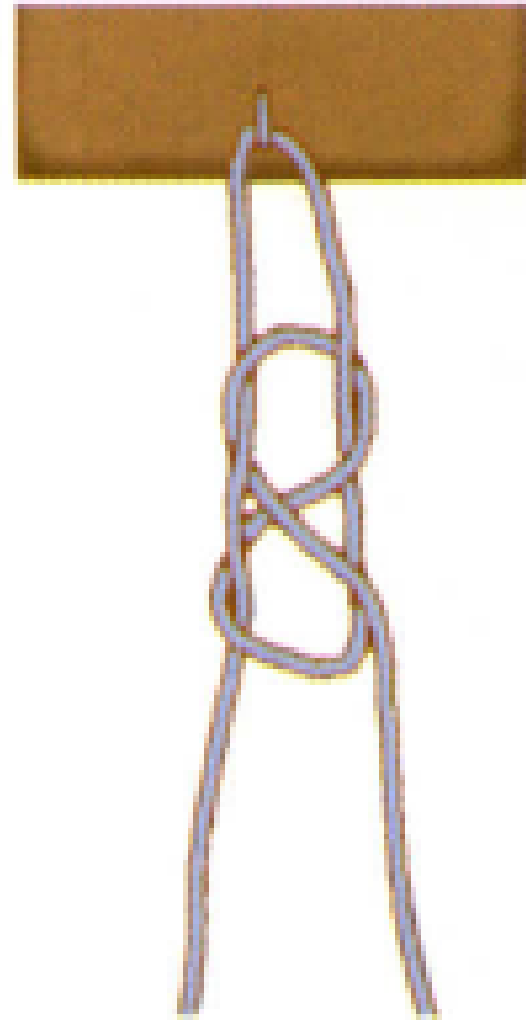
Arthroscopic knots

- ▶ Nonsliding
 - **Revo knot**



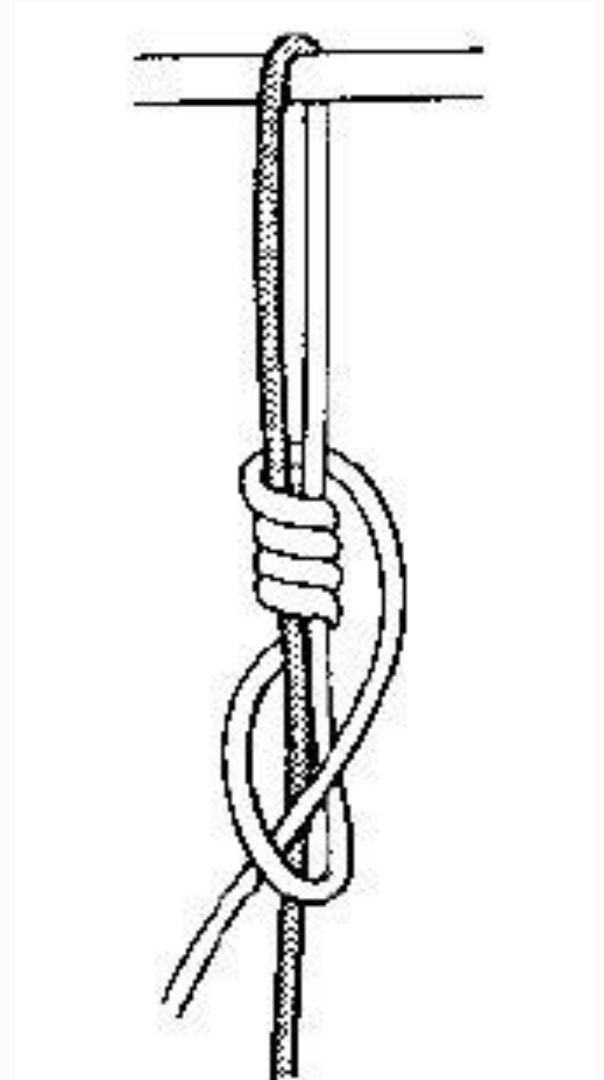
Arthroscopic knots

- ▶ Nonsliding
- ▶ Sliding
 - Sliding non-locking
 - **Tennessee slider**
 - Duncan loop
 - Easy knot



Arthroscopic knots

- ▶ Nonsliding
- ▶ Sliding
 - Sliding non-locking
 - Tennessee slider
 - **Duncan loop**
 - Easy knot



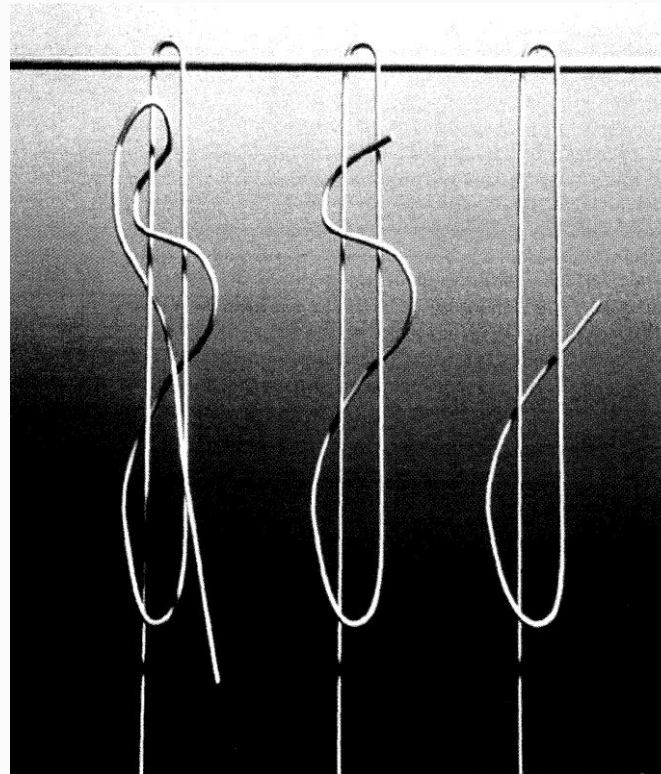
Arthroscopic knots

- ▶ Nonsliding
- ▶ Sliding
 - Sliding non-locking
 - Tennessee slider
 - Duncan loop
 - **Easy knot**



Arthroscopic knots

- ▶ Nonsliding
- ▶ Sliding
 - Sliding locking
 - **SMC**
 - Weston
 - Nicky knot



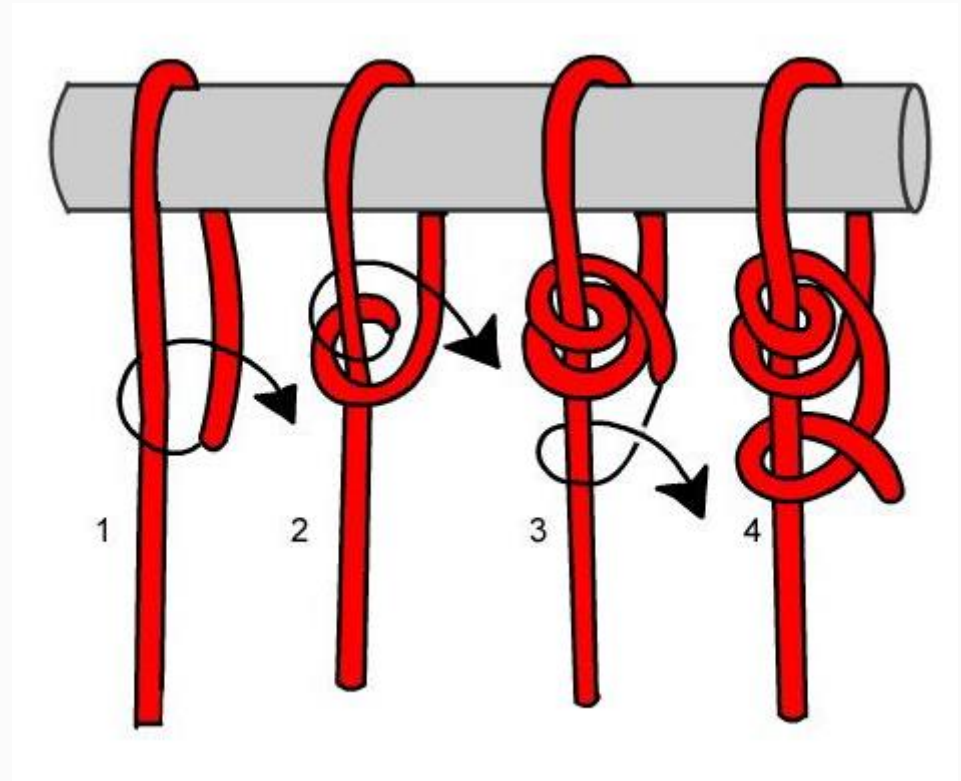
Arthroscopic knots

- ▶ Nonsliding
- ▶ Sliding
 - Sliding locking
 - SMC
 - **Weston**
 - Nicky knot



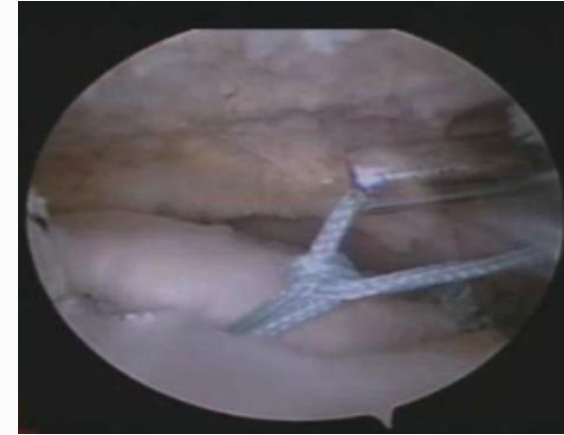
Arthroscopic knots

- ▶ Nonsliding
- ▶ Sliding
 - Sliding locking
 - SMC
 - Weston
 - **Nicky knot**



Techniques in suture technique

Seat each knot fully under arthroscopic visualization prior to passing subsequent throws



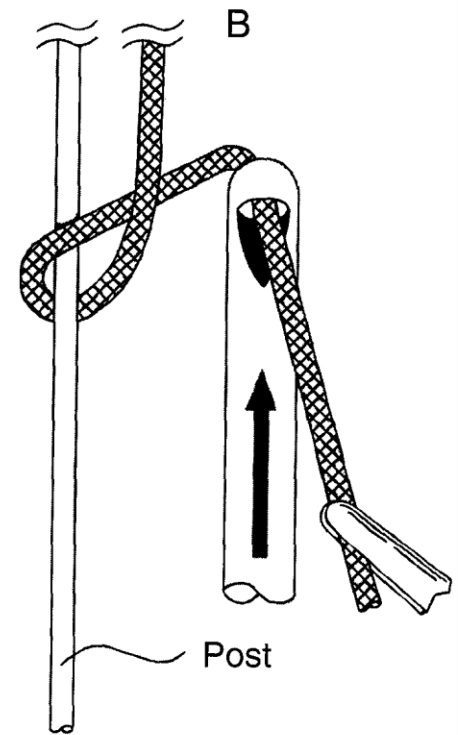
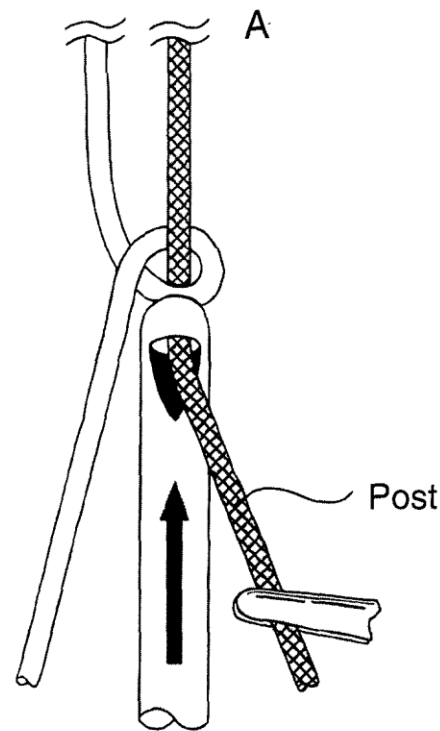
Sliding knots inherently provide better tissue loop tension, but inherently loosen more easily



Add half hitches to Knot

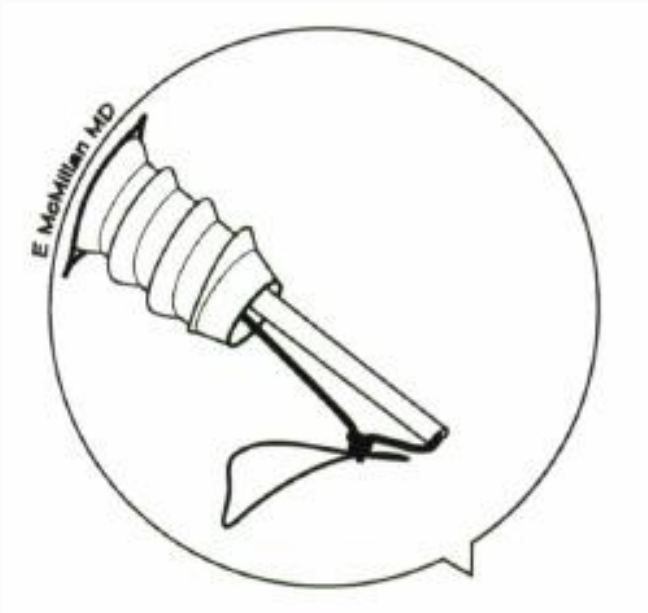
Techniques in suture technique

▶ Past point



Techniques in suture technique

- ▶ Past point



Selecting the right arthroscopic knot

- ▶ provide good tissue loop tension
- ▶ Good Knot security
- ▶ smallest bulk
- ▶ Surgeon ease of tying
 - Experience

Practice , practice , practice



Why sutures fail?

- ▶ surgical technique
- ▶ quality of the tissue
- ▶ quality of anchors & suture material



Thank you for attention