

Flexor tendon repair

Suture principles

- ◆ Repair strength proportional to number of core sutures
 - ◆ Initially two strands
 - ◆ Now four strands in most repairs
- ◆ Thicker sutures stronger →
- ◆ Suture material
 - ◆ FiberWire > Ticron > Nylon

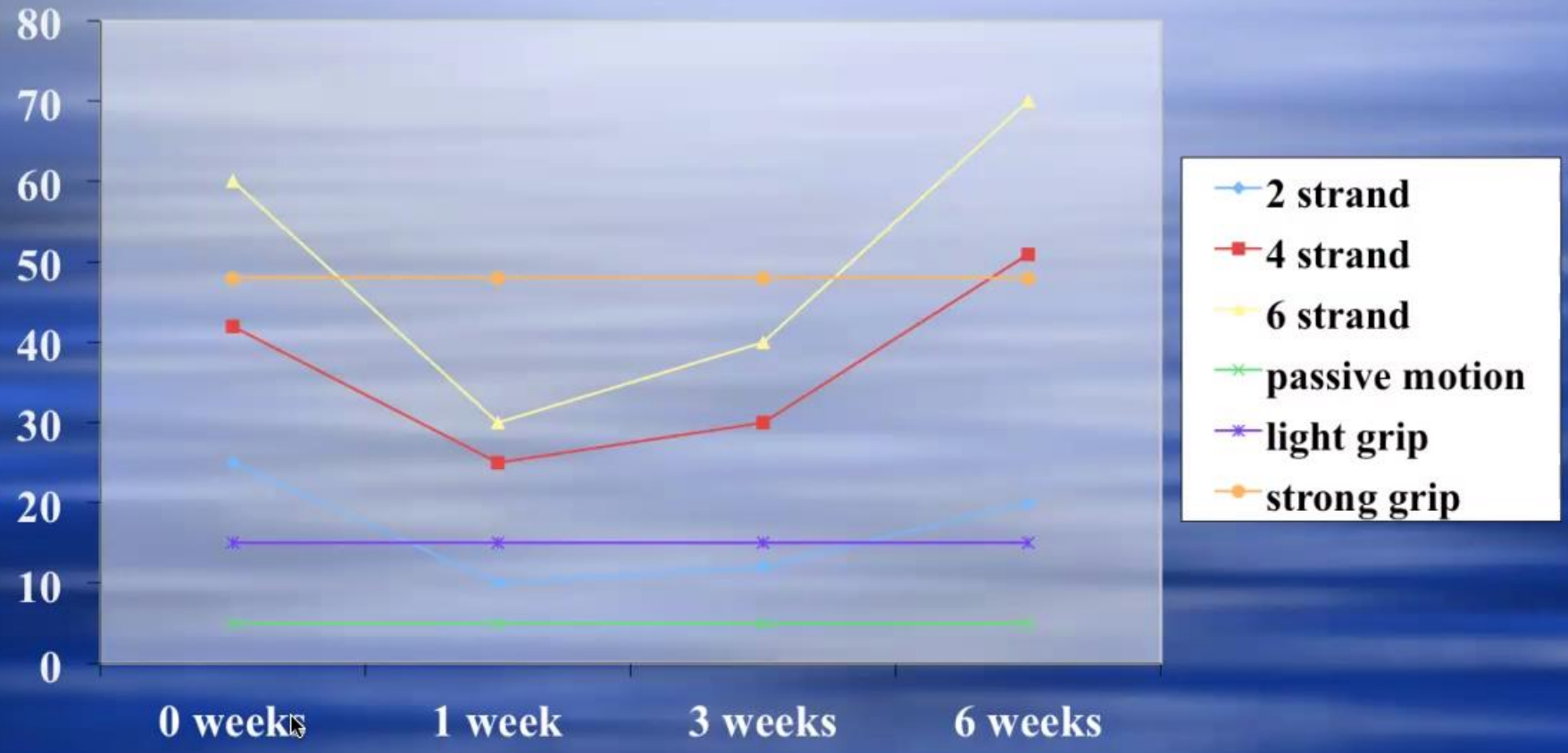
Taras et al 2001, JHS 26A: 1100

- ◆ Cadaver FDP models
- ◆ 4/0 66% stronger than 5/0
- ◆ 3/0 52% stronger than 4/0

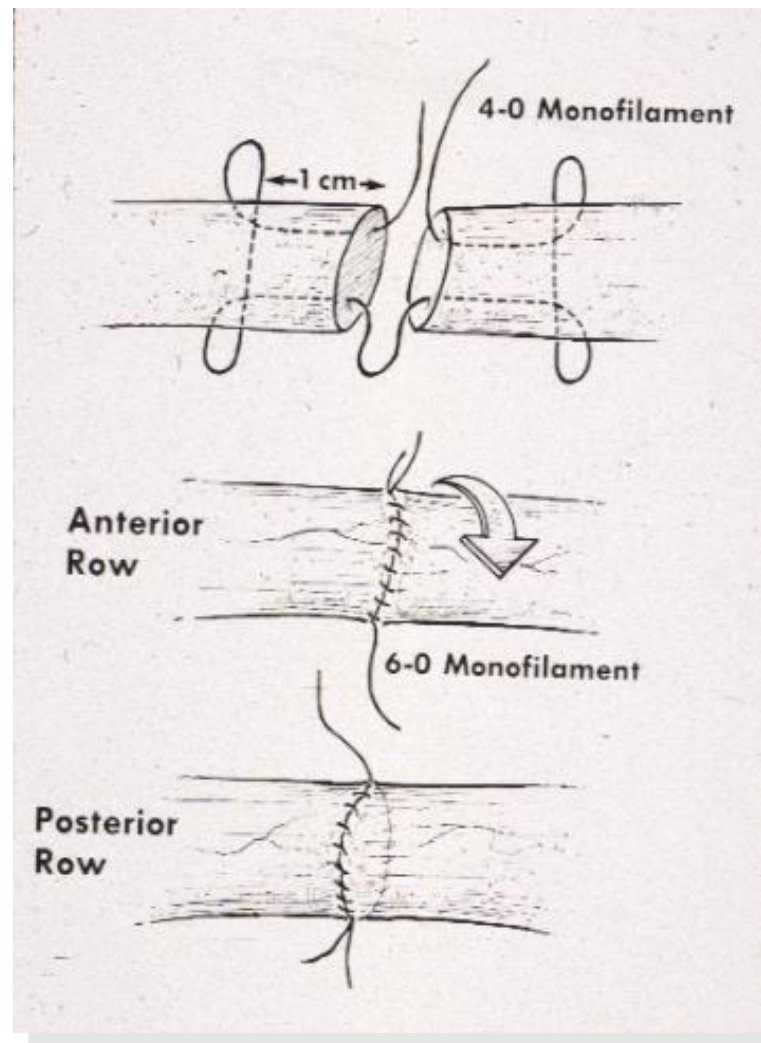
Barrie et al 2001, JHS 26A: 340

- ◆ 3/0 2-3x stronger than 4/0
- ◆ 4/0 more likely to fail by suture rupture

Comparison of Multiple Strands



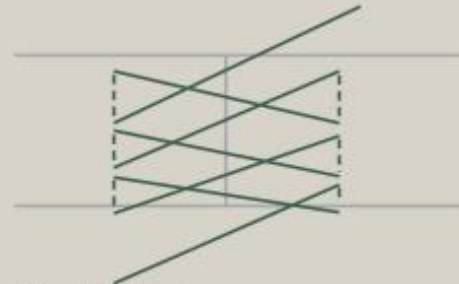
Modified Kessler



ADELAIDE SUTURE

Epitendinous and core sutures

a. Epitendinous sutures



Silverskiöld suture

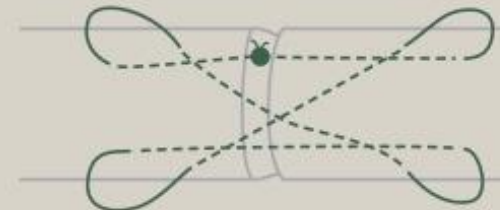


Simple running suture

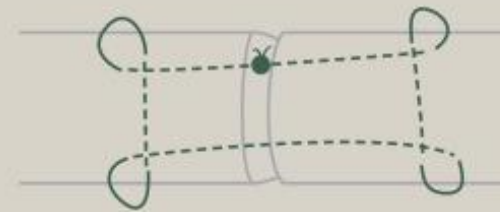
b. Core sutures



Adelaide suture



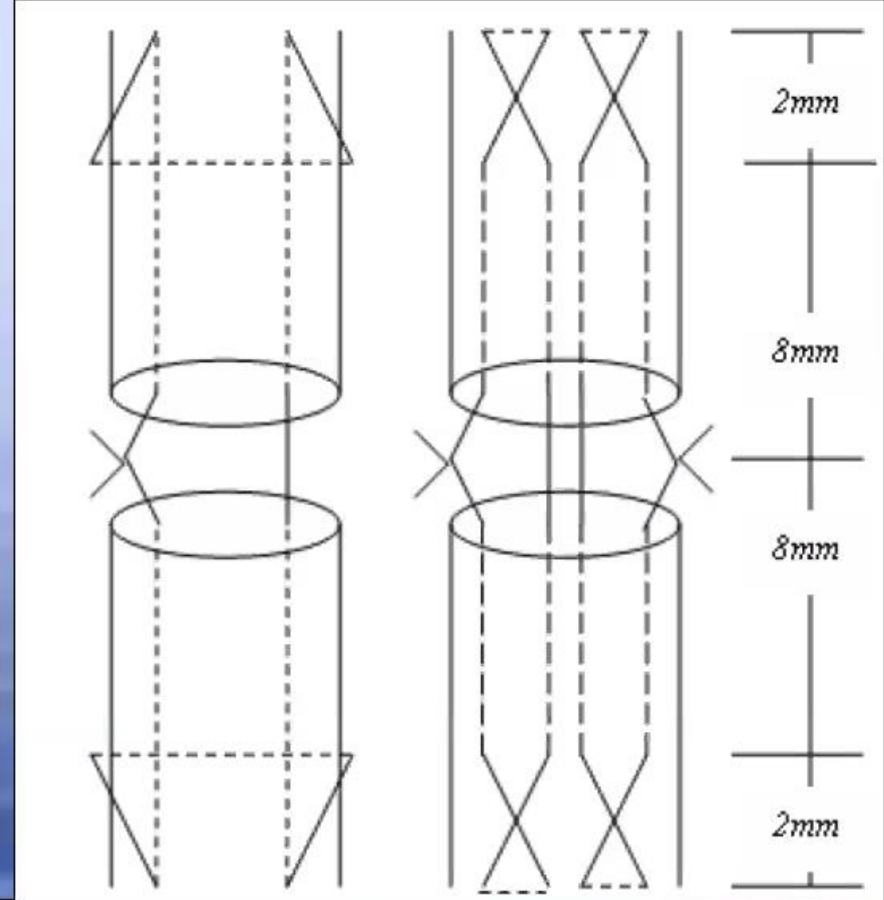
Cruciate suture



Kessler suture

Adelaide stitch

- ◆ Modification of Savage
- ◆ My preference if possible



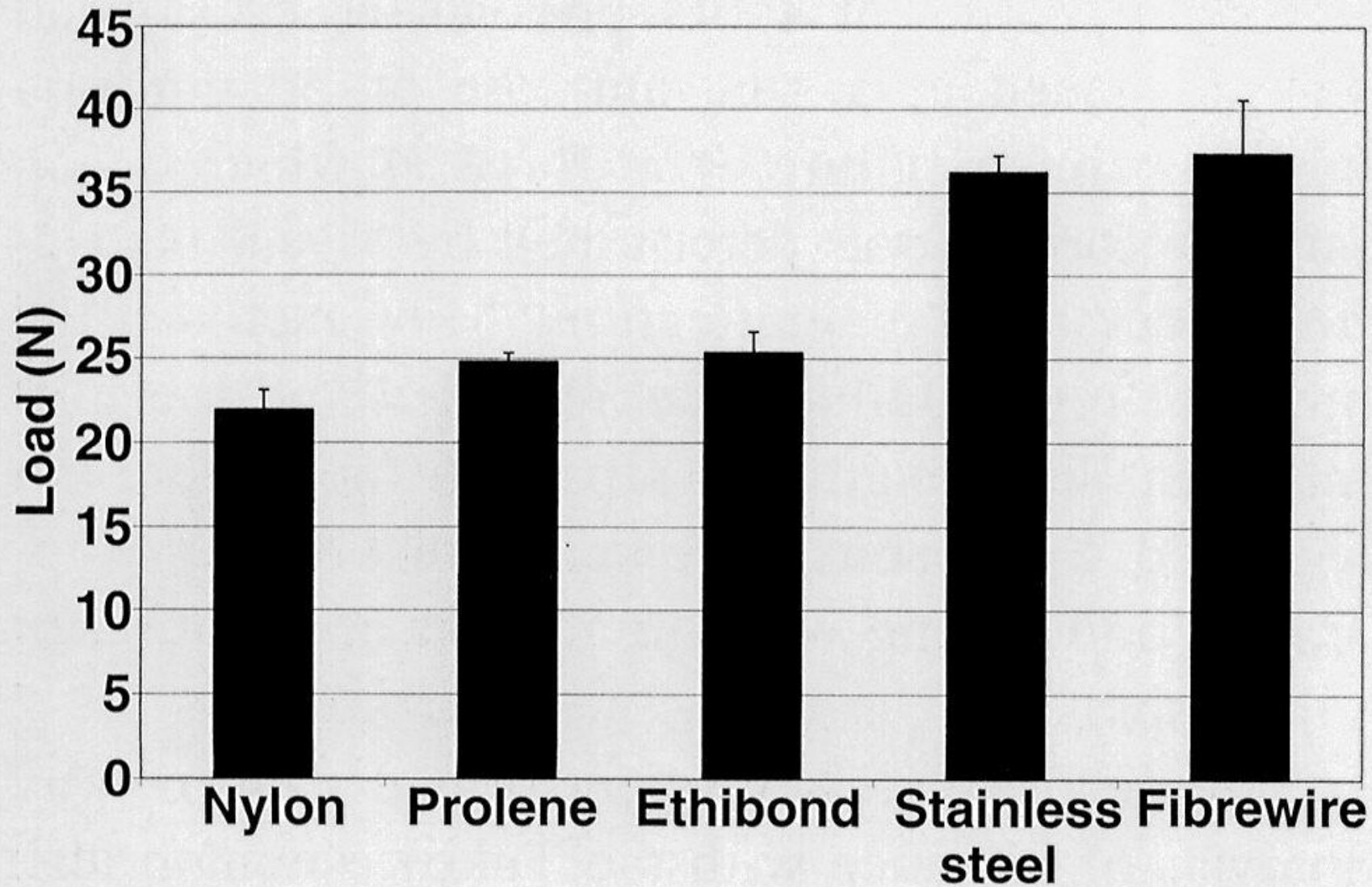
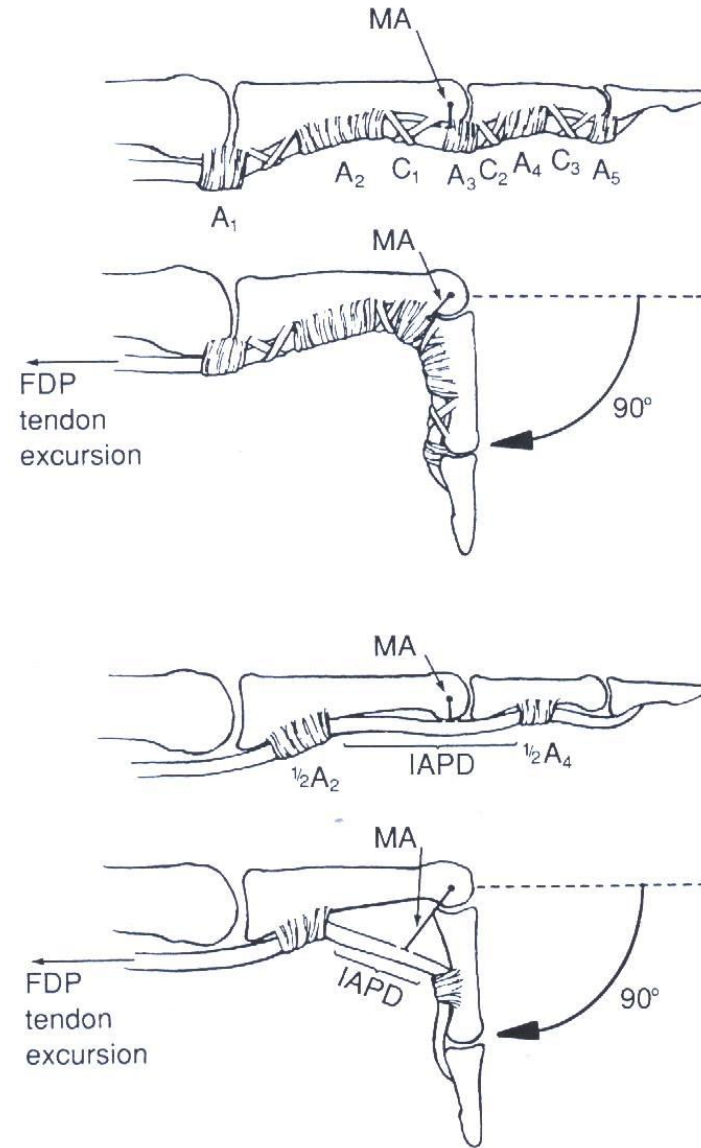
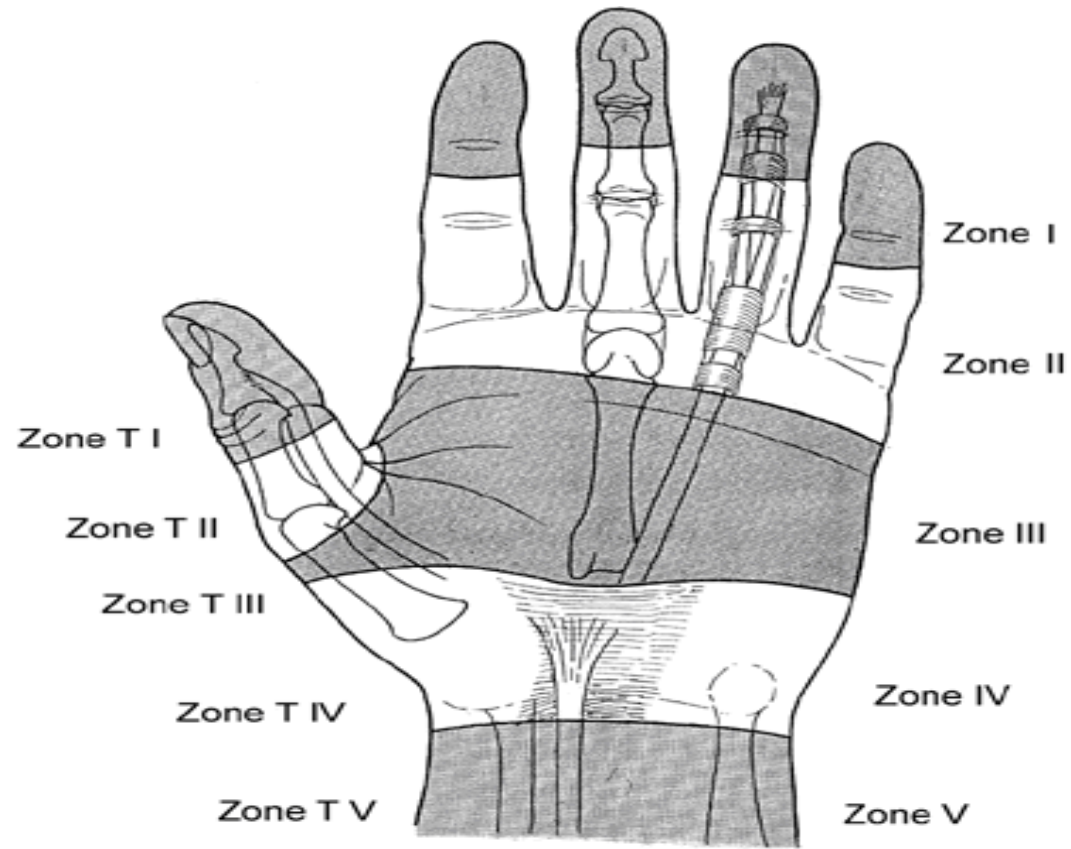


Figure 2. Mean ultimate load for the 5 different 4-0 suture materials. Error bars represent the SD.

PULLEY PRESERVATION AND BOWSTRINGING



Flexor Tendon Zones



Questions?