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Complex made Simple...clinically relevant education by Judy C. Colditz, OT/L, CHT, FAOTA

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# PROTECTING FLEXOR TENDON REPAIRS

As the popularity of early active motion protocols for flexor tendon repairs increases, therapists must be able to identify factors that influence resistance to active finger flexion. The therapy goal is to minimize the resistance the healing flexor tendon encounters.

Of the long list of factors influencing resistance, only some can be influenced by therapists. Surgeons, for example, influence the quality, strength, tension, and bulk of the tendon repair. Therapists have the most impact by controlling joint stiffness, edema, soft tissue adherence, and the influence of antagonist muscles and/or muscle tightness.

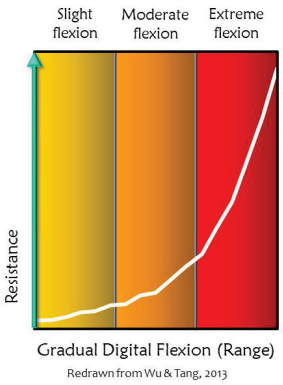


*Figure 1*

Foe zone 1 or 2 repairs, one of the most important and most easily influenced parameters to minimize resistance is to limit the range of finger flexion. This schematic graph with no values (Figure 1) illustrates the steep increase of resistance in the end range of finger flexion. (1)

One easy way to control the range of finger flexion has been suggested by Gwendolyn van Strien, a hand therapist in the Netherlands. (2) As seen in Figure 2, the patient places the fingers of the other hand (adducted) across the palm to create a touching goal. The first week's goal is to touch the fourth finger; the second week is the next finger and so on. As with all clinical suggestions, the progression into greater flexion or the restriction from greater flexion is determined by many factors, the primary of which is clinical progress.

To assure the patient includes DIP joint motion when flexing the finger, instruct the patient to be sure and "scratch" the dorsum of the finger with the fingernail of the injured finger.

1. Wu YF, Tang JB. Tendon healing, edema, and resistance to flexor tendon gliding: clinical implications. Hand Clin. 2013 May;29(2):167-78.
2. Pettengill KMS, van Strien G. State of the art of flexor tendon rehabilitation. In: Tang JB, Amadio PC, Guimberteau J, Chang J, eds. Tendon surgery of the hand. Philadelphia: Elsevier Saunders; 2012:405-14.

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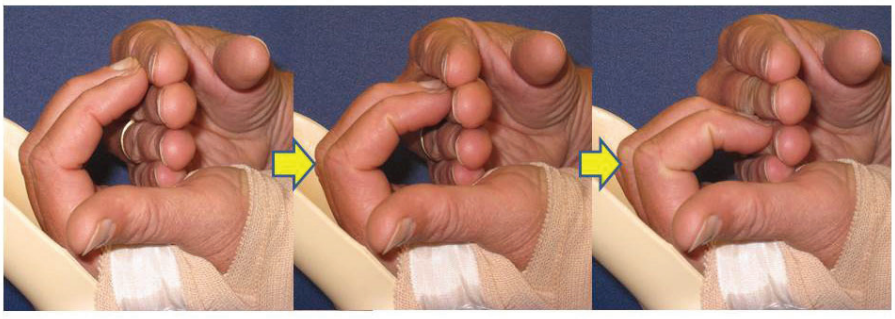


*Figure 2*

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