

TENDON LENGTHENING

There are a number of reasons why a shortened tendon may pose a problem to your child. It can affect how a child walks or the way he uses his hands. A shortened tendon may cause a bone to grow abnormally. Shortened or contracted tendons are sometimes present at birth. The reason the tendon fails to grow to its proper length is unknown. A child who is born with normal tendons may develop shortening after a fracture or crush injury. After an injury the damaged tendon may not heal properly or may no longer grow properly. Cerebral palsy and similar conditions cause shortening of the tendons because the developing brain does not send proper messages to the growing muscle and tendon.

If the contracted or shortened tendon interferes with how a joint moves, then treatment to improve joint function is necessary. Treatment options include therapy, casting, or splinting. The goal is to increase the length of the muscle and tendon and thereby improve the range of motion of the joint. The age of the patient, severity of the shortening and underlying condition will influence the success of therapy in restoring range of motion. If the shortening is felt to be significant, then the parent, pediatric orthopedic surgeon, and therapist will consider the need for surgical lengthening of the tendon. The surgery is performed under general anesthesia in the operating room. Each child is assessed individually at the time of surgery to determine how much the tendon needs to be lengthened.

A common technique used is to make a “zig-zag” cut in the tendon and allow the two pieces to slide apart.

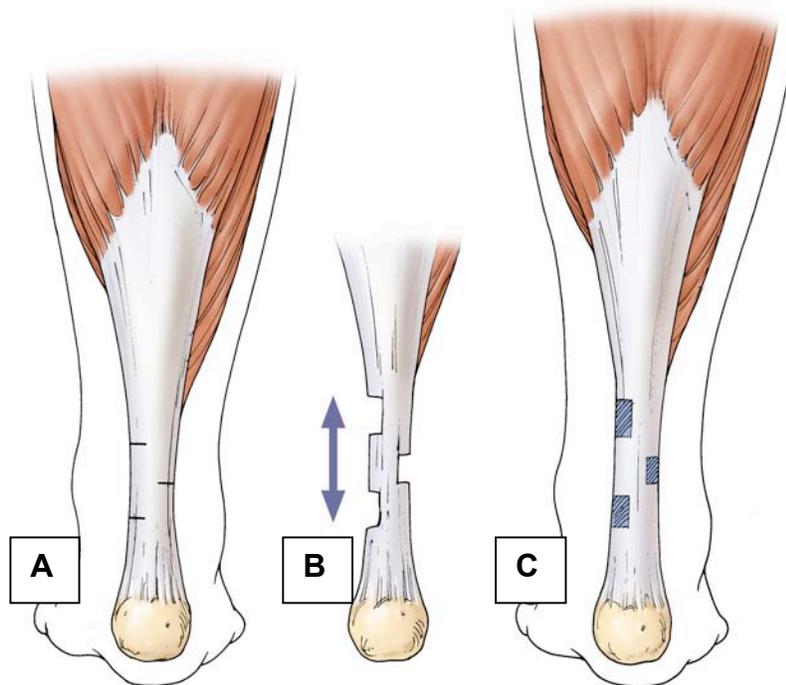


Figure A demonstrates the 3 cuts in the tendon.
 Figure B demonstrates the tendon being lengthened.
 Figure C demonstrates the healing of the lengthened tendon

The new length of the tendon is held in place by stitches in the tendon itself or by putting the child in a cast. The tendon healing process will take 4-8 weeks. After the tendon has healed, therapy will be needed to improve the range of motion, flexibility and strength of that area. Outpatient therapy and braces will be prescribed until the improvement has stabilized. Once active therapy is no longer necessary a home program of exercises to be done by the family is usually provided. Many patients with neurologic conditions need ongoing care by the pediatric orthopedic surgeon and physical therapist as long as they are still growing. Some may even need to undergo repeated lengthenings if the growth of their tendons does not keep up with their growth spurts.



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