

## Trigger Thumb

Trigger thumb refers to a thumb that clicks, catches, or locks as the tip of the thumb moves from a flexed (bent) to extended (straight) position. At times, the thumb may become "locked" in a flexed position. Medically known as stenosing tenosynovitis, trigger thumb can become debilitating in its most severe form because a child will not be able to move his or her thumb. Treatments for trigger thumb depend on the severity of the condition and range from observation and rest of the affected hand to tendon surgery. Children develop trigger thumb more often than do adults, and symptoms can begin appearing before a child reaches 12 months of age.

### **Description**

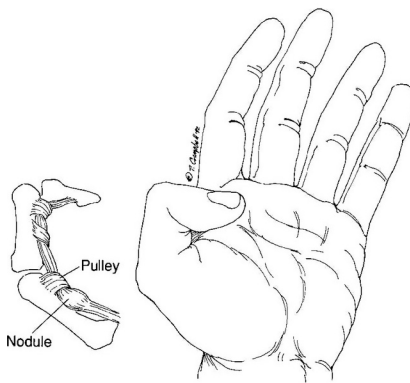
A child with a trigger thumb has an opposable digit that locks into position when bent to a 90-degree angle. Usually, the child can release his or her thumb with a concentrated effort or by shaking the hand with the affected thumb. Without treatment, the condition can progress until the child cannot move the trigger thumb from its locked position. Often a palpable nodule, or bump, is felt at the base of the thumb in the palm.



The exact incidence of this condition is unknown. It is estimated that trigger thumbs comprise approximately 2% of all hand problems in growing children. In approximately 30% of patients, there is bilateral involvement.

### **Cause**

Trigger thumbs are caused by a size mismatch between the flexor tendon of the thumb and the A1 pulley, a fibrous band under which the tendon normally glides. This mismatch can happen because of repetitive strain, direct injury or can be present from birth. When the A1 pulley is too tight to allow for easy tendon gliding, the tendon can become swollen and inflamed, ultimately leading to triggering or inability to fully extend the thumb. Trigger thumbs occur sporadically and are not associated with other hereditary or congenital disorders. Trigger develops as the sheath around the tendon that controls the movement of the thumb narrows.



### **Conservative Treatments**

Trigger thumbs may spontaneously resolve in a small percentage of patients, but the chances of this decrease with increasing age. The non-surgical approaches include observation, splinting the thumb, and rest with activity modification for a specified period. Gentle range of motion exercises may be helpful for children with mild cases of trigger thumb.

### **Surgical Treatments**

If the child's thumb remains locked in a flexed position the recommended treatment is a surgical procedure. The procedure involves a small incision at the base of the thumb to release the A1 pulley overlying the flexor tendon. Patients are typically in a bulky soft bandage for 7-10 days. The risk of recurrent triggering following surgery is very small. We typically recommend having the surgery done before the age of 4-5 years. After age 5 there is an increased risk of joint deformity and decreased range of motion.