

Swan Neck Deformity

Normal positioning and movement in the finger occurs from balanced actions in a number of important structures. The ligaments work to support the joints in the fingers. Muscles work to move and hold onto the fingers. Tendons control fine movement in each one of the finger joints. Injury can end up disturbing the delicate balance in all of these structures, which ends up altering normal alignment and functioning in the finger. The result is a crooked finger, which is known as a swan neck deformity.

Swan Neck Deformity Anatomy

The anatomy within the hand is quite complex, fascinating and intricate. Its integrity is imperative for individuals to be able to go through life on a regular basis and engage in normal activities. Hands can be affected by any number of disorders, but often from a traumatic injury.

Multiple small joints work together to allow movement in the hand. This provides you with the fine movement needed for threading a needle or tying a shoelace. When your joints are affected by osteoarthritis, regular daily activities prove to be quite difficult. The condition can occur in multiple areas of the hand. Conditions that loosen the PIP joint and let it hyperextend can end up producing this deformity. Rheumatoid arthritis is the most common of all diseases causing the PIP joint to become affected.

To summarise, the distal finger joint (DIP) goes into flexion, and the proximal finger joint (PIP) goes into extension.

What Causes a Swan Neck Deformity?

1. Rheumatoid arthritis.
2. Tendon rupture following trauma.
3. Joint laxity.
4. Neurological or brain injuries.

How to Treat a Swan Neck Deformity:

1. Rehabilitation

A physical or occupational therapist will be able to address the imbalance found in the swan neck deformity. A series of stretching, massage and mobilization are all useful in trying to restore finger function and alignment.

2. Splint

A specialized splint can help to keep the joint in alignment, protect it from hyperextending and allowing it to bend. Some of the newer styles resemble a jewelry ring. They are available in sterling silver, stainless steel or gold. This particular approach tends to work the best for mild cases of the deformity where the joint is supple.

3. Surgery

After six weeks of using the splint and exercise routine, a surgeon will often make the determination to undergo hand surgery to correct the deformity. Surgery is the only method available to alter the imbalance that caused the deformity in the first place.

Various types of surgery are available to treat the condition, such as:

- Soft tissue repair – In this case, the balance cannot be restored to a normal limit using splinting, so surgery rebalances and reconstructs the structures surrounding the PIP joint.
- PIP joint arthroplasty – The deformity sometimes requires the PIP joint to be replaced, which is known as arthroplasty.
- Finger joint fusion – If arthritis produces a mallet deformity, the DIP joint might have to be fused to correct the problem.

Tips:

- If you notice that your finger is developing a deformity, you want to contact your doctor shortly after.
- Early treatment will often lead to the best possible outcome.
- After treatment, follow the program given by the therapist to avoid injuries in the future.
- Participate in a regular exercise program to help strengthen the fingers.
- Make sure to wear your splint as advised.