

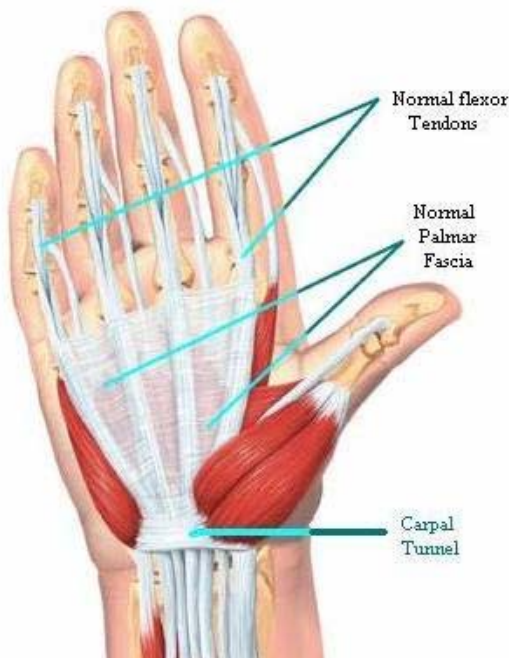
## Dupuytren's Disease:

### Definition:

Dupuytren's disease is characterized by progressive thickening of the normal palmar fascia of the hand which results in the development of cords which tend to contract over time. The contracted tissue results in permanent flexion deformities of the affected fingers, most often the ring and/or small fingers.

### Etiology:

The cause of palmar fascial thickening, also known as fibrosis, exact cause of this thickening is unknown, however genetics, trauma and immune disorders may play a role in its development. Prior hand trauma may aggravate the condition but in itself is not considered the cause of Dupuytren's disease.



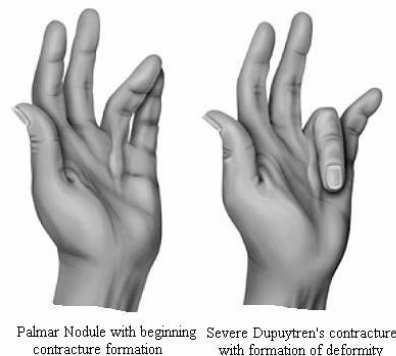
### Prevalence:

The incidence of Dupuytren's disease is highly influenced by gender, ethnicity and other comorbid conditions (i.e. diabetes, epilepsy, HIV, hypercholesterolemia) and habits (i.e. alcohol consumption and tobacco use). The disease occurs more often in patients over the age of 50. Males are 8-9 times more likely to have the disease than females. In addition, the disease is more common in

individuals with a northern European background, i.e. Scandinavian's, Irish and Scottish.

### Presentation:

The disease may present initially as a thickening, or nodule, in the hand. This nodule can become bothersome to patients when pressure is applied to the area during activities such as gripping of a golf club. As the disease progresses the palmar fascia continues to thicken and resulting in formation of cords causing dimpling and pitting of the palmar skin eventually resulting in a contracture of the involved finger or fingers. When contractures form the patients will more often complain about the inability to hold objects, get the finger out of the way when shaking hands and poking themselves in the eye during daily cares.



### Clinical indication for surgery:

While Dupuytren's disease can be bothersome it is not some dreaded, life threatening disease. Surgery is often indicated when the contracture or pain resulting from the palmar fascial thickening starts to affect a patient's quality of life. At present surgery is the only treatment for Dupuytren's disease. Patients need to be made aware that surgery, on rare occasions, may exacerbate their condition. On average surgery for Dupuytren's disease is considered when the metacarpal phalangeal joint reaches a contracture of 15-30 degrees or the proximal interphalangeal joint progresses to a 15 degree contracture. Surgical intervention is also an option when contracture is minimal but the condition affects patient's quality of life.

**Surgical procedure:**

The surgical procedure decided upon by your surgeon depends highly on the degree of involvement and/or deformity, patient age and presence of recurrent disease. The surgical management for Dupuytren's disease consists, broadly, of percutaneous release, known as an aponeurotomy or open incision and fasciectomy and in rare cases amputation. Percutaneous approach is often done under local anesthesia with the use of a needle or through small incisions and use of a scalpel to release the cords. Recurrence is high with this percutaneous technique but major complications are rare.

The open fasciectomy approach is a more invasive and involved procedure but has a lower incidence of recurrence. A small incision is made in the hand and nerves and vessels are identified and retracted out of the surgical field. The disease tissue is identified and as much is removed as possible. Wounds are closed, when possible with use of sutures. In rare circumstances skin grafts or flap closure may be needed to cover defects in skin coverage. In some cases, the wounds are left open and allowed to close naturally over a period that may take up to 6 weeks.

As with any surgery there are risks. Risks include but are not limited to infection or damage to surrounding nerves/vessels. To limit these risks the surgery is performed under the use of high powered magnification and in a sterile environment. In addition to surgical risks postoperative stiffness, development of hypertrophic scars, skin necrosis and development of chronic regional pain syndrome are possible.

**Recurrence:**

As noted earlier, surgery is not a cure, there is no known cure for Dupuytren's disease. The recurrence rate for Dupuytren's disease after surgery is about 50% and may occur in the same location as the surgery or elsewhere in the hand. Success rates are higher for release of contractures at the metacarpal phalangeal joint than the proximal interphalangeal joint.

**Postoperative care:**

Postoperative rehabilitation is critical to success rates after surgical intervention for Dupuytren's disease. Rehabilitation involves but is not limited to; massage, splinting and daily exercises.