Dupuytren’s Disease

By Daniel Firestone, M.D.

People with northern European ancestors are more likely to have the inherited Dupuytren’s disease gene. The gene responsible for Dupuytren’s disease can also cause thickening on the top of the fingers called knuckle-pads as well as thickened nodules and cords on the sole of the foot which is called Ledderhose disease.

What Causes Dupuytren’s Disease?

As mentioned above, there is a genetic component to Dupuytren’s disease but the factors that determine the onset and progression of the disease are not well known. Research into the cause of Dupuytren’s disease has shown that it may be associated with certain biochemical factors within the involved fascia. This research has determined that the most common risk factors for developing Dupuytren’s disease or at least contributing to its onset are smoking, use of alcohol, diabetes, and possibly epilepsy. There is no proven evidence that hand injuries or specific occupational exposures lead to a higher risk of developing Dupuytren’s disease.

How Can You Tell If You Have It?

The easiest way to determine if you have Dupuytren’s disease is to examine your hands. You should look for the classic findings of nodules and pits within the palm. The nodules are generally firm and adherent to the skin, often they can be confused with a thick callous. Second, look for tight cords running from the palm to the finger, most commonly found at the ring and small finger. These cords are responsible for the progressive deformity and tight contracture that over time draws the finger towards the palm.

As the cords progress, people often notice that they cannot easily place their hand in their pocket or shake hands without the involved fingers getting in the way. As the disease progresses, it becomes difficult to place the hand flat on the table or solid surface. Dupuytren’s disease is typically not painful; a nodule that remains chronically painful is unlikely to be Dupuytren’s disease. Progression of the disease is not as easy to predict, however, people who experience Dupuytren’s disease early in life are usually more severely affected and often show progression into severe symptoms.

Treatment Options for Dupuytren’s Disease

Most mild cases of Dupuytren’s disease can be managed with observation. A mild case is one where only a nodule or an early cord is present and hand function is not affected. The tabletop test, where you attempt to place your affected hand flat on the table or hard surface, is an easy way to determine whether you need treatment by a hand specialist. If you are able to place your hand and fingers completely flat on the table, in spite of the presence of nodules and/or cords, and there is no remaining deformity, then you have passed the test and should continue to treat the disease with observation. If you have been considering speaking with a hand specialist about your hand and its limitations secondary to Dupuytren’s disease, try the tabletop test. If you cannot place your hand flat, you should consider speaking with a hand surgeon to discuss the possible treatments. Various treatment options are available to straighten the finger(s). Traditionally, the treatment has involved careful surgical removal of the diseased tissue through zig-zag shaped incisions in the palm and affected fingers. Currently, there are two other less invasive options to use for correction. One is called needle aponeurotomy. A hand surgeon performs needle aponeurotomy while the patient is under local anesthesia. The surgeon corrects the Dupuytren’s deformity by carefully cutting through the cords with the sharp cutting tip of a sterile needle.

The second option is a collagenase injection, currently marketed under the trade name Xiaflex. Collagenase is an enzyme type of medicine that a hand surgeon injects directly into the cord. It works by breaking down the collagen within the cord. This method of treatment is seeing increased popularity among people with Dupuytren’s disease; especially for those whose previous treatment on the opposite hand had been the traditional open method. Straightening of the finger after the collagenase injection occurs the day after the medicine is injected. The patient returns to their hand surgeon and the surgeon gently manipulates the patient’s hand after use of local anesthesia; this breaks apart the cord that had become weakened by the enzyme. Your hand surgeon will help you determine which method of treatment is best for you.
Frequently Asked Questions and Considerations

Q. If I have a Dupuytren’s nodule in my hand, should I get it removed before it progresses to a cord and contracture?
A. No, nodules do not always progress to cords and contractures. Sometimes the trauma caused by surgical removal of a nodule can even stimulate progression of the surrounding tissues.

Q. Should I wait for my hand to get so bad that it cannot even be opened before seeing a hand surgeon?
A. No, correcting finger contractures caused by Dupuytren’s disease is most easily accomplished during the milder stages of the disease. It is typically easier and more dependable to correct contractures at the base of the finger. Remember to try the tabletop test. Complete correction and straightening of the finger sometimes cannot be accomplished, especially at the middle and end joints in the finger.

Q. One of my friends had to have a skin graft during surgery. Why was the skin graft needed?
A. When performing the traditional open method of correction, skin grafts are sometimes required to cover open areas created when the fingers are straightened after removal of the affected tissue.

Q. What are some of the risks involved with the procedures to correct the Dupuytren’s contractures?
A. The cords often spiral around the nerves in your palm and fingers that provide feeling to the fingertips. Your hand surgeon takes care to protect the nerves during treatment. There is also a risk for recurrence after treatment. Your hand surgeon will discuss the specific risks of the individual treatments with you.

Q. Will I need any therapy after surgery?
A. Yes, all treatment methods rely on splinting and hand therapy after surgery to achieve and maintain the best outcome.

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