

# New help for two million 'Clawed Hands' sufferers

Tony Kochhar, has been accredited as one of the first specialists to offer this ground breaking treatment for Dupuytren's Contracture.

Dupuytren's contracture is a common condition usually affecting patients over the age of 40, both men and women.

It leads to progressive clawing of the hands which can be severely debilitating and painful. Until now, the only treatment has been a large operation to open up the hand and fingers and cut out/excise the contractures. This has significant risks and the recovery can take months. The contractures usually come back meaning even more risky and lengthy surgery.

The condition reportedly\* affects 1 in 5 men over the age of 60 and 1 in 5 women over the age of 80. It famously affected former Premier Margaret Thatcher and President Ronald Regan, along with a number of other famous people such as Broadcaster Sir John Tusa, Actor David McCallum and Playwright Samuel Becket.

Xiapex (known in the USA as Xiaflex) is a drug that is injected into the contractures and breaks them down. With this new treatment, there is no need for surgery and this series of injections results in a faster, easier recovery without the risks and pain of large operations.

*“This breakthrough marks a real advance in the treatment of this condition. In the past, treatment was limited to complex surgery, only for the clawing to return over time. This non-surgical technique deals eliminates the need for surgery in most cases and patients can have quicker recovery with less risks and better outcomes.”*



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## Introduction

Dupuytren's contracture is a fairly common disorder of the fingers. It most often affects the ring or little finger, sometimes both, and often in both hands. Although the exact cause is unknown, it occurs most often in middle-aged, white men and is genetic in nature, meaning it runs in families. This condition is seven times more common in men than women. It is more common in men of Scandinavian, Irish, or Eastern European ancestry. Interestingly, the spread of the disease seems to follow the same pattern as the spread of Viking culture in ancient times. The disorder may occur suddenly but more commonly progresses slowly over a period of years. The disease usually doesn't cause symptoms until after the age of 40.

This guide will help you understand how Dupuytren's contracture develops how the disorder progresses, and how you can measure its progression what treatments are available.

## Anatomy

**What part of the hand is affected?** The palm side of the hand contains many nerves, tendons, muscles, ligaments, and bones. This combination allows us to move the hand in many ways. The bones give our hand structure and form joints. Bones are attached to bones by ligaments. Muscles allow us to bend and straighten our joints. Muscles are attached to bones by tendons. Nerves stimulate the muscles to bend and straighten. Blood vessels carry needed oxygen, nutrients, and fuel to the muscles to allow them to work normally and heal when injured. Tendons and ligaments are connective tissue.

Another type of connective tissue, called fascia, surrounds and separates the tendons and muscles of the hand. Lying just under the palm is the palmar fascia, a thin sheet of connective tissue shaped somewhat like a triangle. This fascia covers the tendons of the palm of the hand and holds them in place. It also prevents the fingers from bending too far backward when pressure is placed against them. The fascia separates into thin bands of tissue at the fingers. These bands continue into the fingers where they wrap around the joints and bones. Dupuytren's contracture forms when the palmar fascia tightens, causing the fingers to bend.

The condition commonly first shows up as a thick nodule (knob) or a short cord in the palm of the hand, just below the ring finger. More nodules form, and the tissues thicken and shorten until the finger cannot be fully straightened. Dupuytren's contracture usually affects only the ring and little finger. The contracture spreads to the joints of the finger, which can become permanently immobilized.

## Causes

**Why do I have this problem?** No one knows exactly what causes Dupuytren's contracture. The condition is rare in young people but becomes more common with age. When it appears at an

early age, it usually progresses rapidly and is often very severe. The condition tends to progress more quickly in men than in women.

People who smoke have a greater risk of having Dupuytren's contracture. Heavy smokers who abuse alcohol are even more at risk. Recently, scientists have found a connection with the disease among people who have diabetes. It has not been determined whether or not work tasks can put a person at risk or speed the progression of the disease.

## Symptoms

### What does Dupuytren's contracture feel like?

Normally, we are able to control when we bend our fingers and how much. How much we flex our fingers determines how small an object we can hold and how tightly we can hold it. People lose this control as the disorder develops and the palmar fascia contracts, or tightens. This contracture is like extra scar tissue just under the skin. As the disorder progresses, the bending of the finger becomes more and more severe, which limits the motion of the finger.

Without treatment, the contracture can become so severe that you cannot straighten your finger, and eventually you may not be able to use your hand effectively. Because our fingers are slightly bent when our hand is relaxed, many people put up with the contracture for a long time. Patients with this condition usually seek medical advice for cosmetic reasons or the loss of use of their hand. At times, the nodules can be very painful. For this reason many patients are worried that something serious is wrong with their hand.

## Diagnosis

How do doctors identify the problem? Your doctor will ask you the history of your problem, such as how long you have had it, whether you've noticed it getting worse, and whether it has kept you from doing your daily activities. The doctor will then examine your hand and finger.

Your doctor can tell if you have a Dupuytren's contracture by looking at and feeling the palm of your hand and your fingers. Usually, special tests are unnecessary. Abnormal fascia will feel thick. Cords and small nodules in the fascia may be felt as small knots or thick bands under the skin. These nodules usually form first in the palm of the hand. As the disorder progresses, nodules form along the finger. These nodules can be felt through the skin, and you may have felt them yourself. Depending on the stage of the disorder, your finger may have started to contract, or bend.

The amount you are able to bend your finger is called flexion. The amount you are able to straighten the finger is called extension. Both are measured in degrees. Normally, the fingers will straighten out completely. This is considered zero degrees of flexion (no contracture). As the contracture causes your finger to bend more and more, you will lose the ability to completely straighten out the affected finger. How much of the

ability to straighten out your finger you have lost is also measured in degrees.

Measurements taken at later follow-up visits will tell how well treatments are working or how fast the disorder is progressing. The progression of the disorder is unpredictable. Some patients have no problems for years, and then suddenly nodules will begin to grow and their finger will begin to contract.

The tabletop test may also be done. The tabletop test will show if you can flatten your palm and fingers on a flat surface. You can follow the progression of the disorder by doing the tabletop test yourself. Your doctor will tell you what to look for and when you should return for a follow-up visit.

## Treatment options

Many sufferers do not require treatment, as it causes minimal functional disability. However, treatment is indicated if function of the hand is severely affected, or is progressing towards such a stage. There are numerous surgical and non-surgical options that can be discussed with your specialist.

## Xiapex®

This is composed of two distinct collagenases (enzymes that breakdown collagen) that are isolated and purified from the bacterium *Clostridium histolyticum*. This was developed as a treatment option for Dupuytren's disease in those with a palpable cord. The injection of Xiapex® results in selective breakdown of collagen (seen in cords of thickened tissue that are seen in Dupuytren's contracture) at the site of injection and thus disrupt the cords that cause contracture.

Other tissues of the hand are composed of collagen as well, and thus are susceptible to the actions of these collagenases, making it necessary

for the treating physician to understand the mechanism of action and appropriate administration procedure for Xiapex®. Of importance, the supporting structures of nerves, arteries and veins are composed primarily of type IV collagen, which is resistant to the action of Xiapex®.

## Procedure (see illustration below)

Treatment with Xiapex® consists of an injection into the thickened cord, followed the day after by a finger extension procedure to disrupt the Dupuytren's cord. In some cases satisfactory outcome can be achieved after a single injection, however some patients may require more than one treatment cycle. Up to a maximum of three injection cycles may be performed to the same cord at four-week intervals, to disrupt the cord.

Despite successful disruption of a cord, there can be recurrence of the contracture.

## Contraindications

Xiapex® is absolutely contraindicated in patients with previous hypersensitivity to collagenase or any of the other product excipients.

Xiapex® must be used with caution in patients with coagulation disorders or those taking anticoagulants. Its use in patients who have received anticoagulants (with the exception of up to 150mg acetylsalicylic acid daily) within seven days prior to receiving an injection of Xiapex® is not recommended.

Caution should be used with administration in patients receiving concomitant fluoroquinolone antibiotics, or in those who have received tetracycline antibiotics within fourteen days.

The use of Xiapex® is not recommended in pregnancy.

## Risks and Complications

### Adverse reactions associated with XIAPEX

Adverse reaction	XIAPEX (n=1082)
Peripheral oedema	76.7%
Contusion	54.2%
Injection site pain	40.6%
Pain in extremity	35.8%
Injection site haemorrhage	34.0%
Tenderness	28.5%
Injection site swelling	24.5%
Echymosis	17.9%
Pruritus	12.5%
Skin lesion	10.9%
Lymphadenopathy	10.9%
Blood blister	9.0%
Axillary pain	6.7%
Injection site pruritus	5.3%
Haematoma	5.2%

## Adverse reactions

Local adverse reactions include; local swelling, bruising, and pain around the injection site. These reactions should resolve within two weeks after injection.

Tendon injury, tendon rupture and ligament injury, whilst rare, can occur.

Allergic reactions may also occur, and therefore patients require observation for at least thirty minutes following injection, before leaving the clinic. Signs of allergic reaction include; widespread redness or rash, swelling, tightness in the throat or difficulty breathing, repeated sneezing, dizziness and syncope. If you experience any of these signs you must consult a doctor immediately.

There is also a theoretical risk of reactions related to cross-reactivity with endogenous human matrix metalloproteinases (MMPs) although clinical evidence of this has not been observed.

## Where can I find more information?

Independent medical studies verifying the medical effectiveness of Xiapex include:

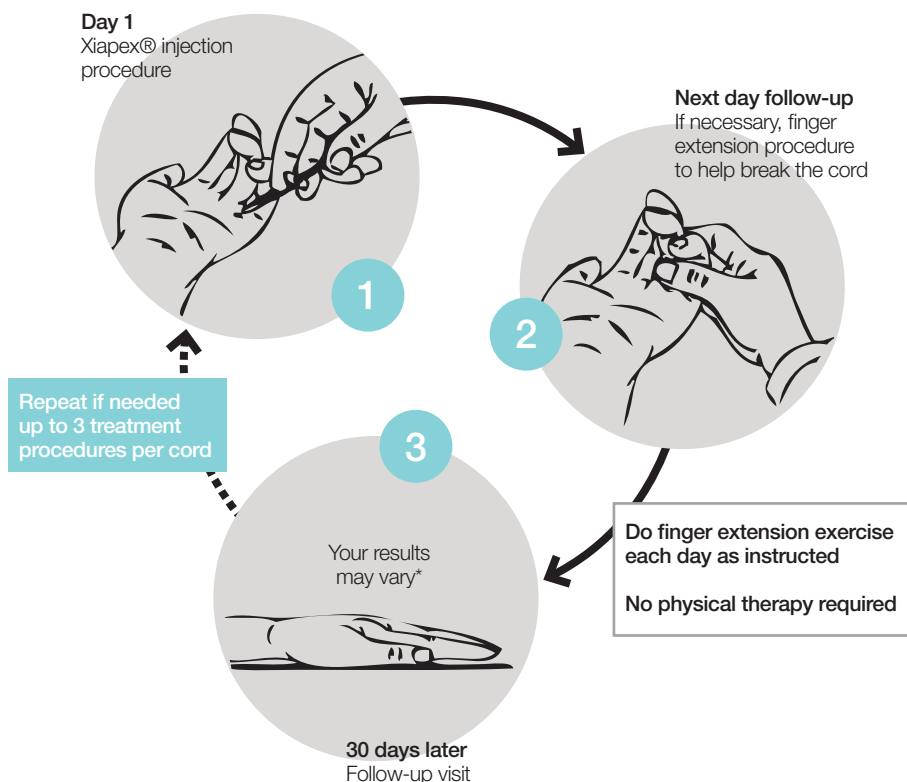
1. Badalamente MA and Hurst LC. *Efficacy and safety of injectable mixed collagenase subtypes in the treatment of Dupuytren's contracture.* American Journal of Hand Surgery 2007; 32(6): 767-774.
2. Hurst LC, Badalamente MA, Hentz VR, et al. *Injectable collagenase clostridium histolyticum for Dupuytren's contracture.* NEJM 2009; 361(10): 968-979.

## National Press articles:

[www.dailymail.co.uk/.../Flesh-eating-drug-relieves-misery-clawed-hands.html](http://www.dailymail.co.uk/.../Flesh-eating-drug-relieves-misery-clawed-hands.html)

[www.dailymail.co.uk/.../Joanna-Harris-battle-Dupuytren's-contraction.html](http://www.dailymail.co.uk/.../Joanna-Harris-battle-Dupuytren's-contraction.html)

## How Xiapex® is administered



\* In clinical studies, 44-66% of patients had a straight or near-straight hand after up to 3 injections (average number of injections needed was less than 2)