

Treatment for Dupuytren's Disease

What is Dupuytren's disease?

Dupuytren's disease is a condition where the layer just beneath the skin, in the palm and fingers, thickens causing lumps (nodules), dints (pits) and cord like structures in the hand.

It does not affect the tendons which move the finger. It restricts the straightening by tightening up the palm side of the finger and hand.

The speed of progression of the disease and severity is very variable however when it progresses the tightening of the disease leads to the fingers curling into the palm. This most commonly affects the little and ring fingers.

The decision to have treatment for the disease is up to you and will usually depend on the level of inconvenience the condition causes.

This leaflet will provide you with further information to aid your decision making and your surgeon will answer any queries you have which are not answered in this leaflet.

There is more than one way this surgery is carried out and if you research the internet you will find a lot of information about it, some of which may not be relevant to you. The website of the British Hand Society (www.bssh.ac.uk) is a useful resource.



Dupuytren's Contracture affecting the ring and small fingers.



Severe contracture

What causes Dupuytren's disease?

The cause of the disease is not fully understood. The condition usually runs in families and is much more common in men than women. The disease has been associated with diabetes, alcohol use, liver disease and smoking however most patients have no clear cause for their contractures.

What are the benefits of treatment?

The aim of treatment is to allow straightening of the fingers. If the finger is very curled it may not always be possible to achieve a fully straight finger with treatment. If a surgical option is chosen then the lumps (nodules) are also removed from the hand. No treatments are available cure the disease and there is always a chance of the condition recurring.

What treatment options are there?

Treatment comes in 3 main forms.

1. Needle fasciotomy – this uses a needle to cut the cord to release the finger. The procedure is very simple and leaves very little scar. It is more commonly used in the palm than the fingers. This treatment has a much higher chance of the disease recurring than other treatment options but has a very



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quick recovery.

2. Fasciectomy – this is the surgical release of the finger where you will go to theatre and have the Dupuytren's cut out of the hand, the skin is then stitched and a bandage, and sometimes a plaster cast is also applied.
3. Dermofasciectomy – this is a surgical removal of the Dupuytren's in which a skin graft taken from your arm or hip. This graft is stitched into the palm to replace poor quality skin or fill the gap in skin left when a very bent finger is operated on.

After most procedures for Dupuytren's you will see the hand therapists to help move your fingers and provide you with a splint to wear at night time in the post-operative period.

Collagenase injections are no longer available. This was for commercial reasons and nothing to do with safety or the NHS. There is no current plans to relaunch this product as present.

What happens if I don't get my Dupuytren's treated?

Dupuytren's does not get better by itself. The rate at which it worsens is very unpredictable. Although you do not have to have treatment you should be aware that the more curled up your fingers are the less likely it is to get them fully straight after treatment. In very severe diseases some patients may choose to have their finger amputated.

What happens on the day of surgery?

Remove any rings before you come to hospital and if you are unwell or have any cuts on your hand or arm then please inform us before the day as this may require your operation to be delayed.

You must starve for your surgery if you have:

A general anaesthetic where you go to sleep, if you want any sedation or if you are having an

axillary block (this is where you are awake but have a numbing injection in your armpit and the whole arm is numb for 12 hours). You must not eat, drink or chew gum for 6 hours before you come to hospital. Up to 2 hours before you can drink clear water only.

If you are having a local anaesthetic where the injection is in your hand and just part of your hand goes numb. You can eat and drink and do not need to starve for surgery. If you are unsure, please contact us to confirm.

On the day of surgery you will come to the Admissions and Day Case Unit (ADCU) and be seen by the nurse who will check your details, medications and past medical conditions and put a wrist band with your details on the arm we are NOT operating on (If we are operating on both hands this band is put on your ankle).

If you are having a general or axillary block anaesthetic you will be seen by the anaesthetist who will check your current health, ask specific questions about medications and when you have last eaten or drank. They will discuss the details of the anaesthetic including the process, risks and answer any questions you have. They may then mark your arm with an 'A' if you are having an axillary block.

You will then be seen by one of the surgical team who will go over your procedure, consent form and answer any questions about the surgery or recovery. They will then draw a mark on the arm you are having an operation on.

When it is time to go to theatre you will be asked to change into a theatre gown and walk with a member of the theatre team or porter to the theatre if able.

If you are having a local anaesthetic, you will go straight into theatre where you will have your details checked again by a theatre nurse, be asked to lie on the operating table and the team



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will do a final check to make sure your details are correct and everything is in order.

The surgeon will then inject anaesthetic into your hand and if required a tourniquet will be put on your arm. This is to stop the blood flow in the arm while the operation is taking place. It is a tight band around the top of your arm similar to having your blood pressure taken.

If you are having an axillary block or general anaesthetic you will go into the anaesthetic room instead, here your details will be checked again and the anaesthetist performs the anaesthetic.

If you are staying awake for your surgery there is the option to listen to music or watch a video on the tablet screens and headphones we have in theatre. Alternatively you can bring your own device to listen to music on but you must have headphones.

Once you have a general anaesthetic the next thing you know will be waking up in recovery after the surgery. If you have an axillary block, this will take 20-30 minutes to work and therefore you will spend this time waiting in the anaesthetic room. Both the anaesthetist and surgeon will check the arm is fully numb before surgery.

Surgery time varies from 20-120 mins depending on the complexity of the Dupuytren's disease and your surgeon will be able to tell you the rough operative time on the day of surgery.

You may go back to the ward straightaway or sometimes sent to the recovery for one hour if you have had a general anaesthetic.

Once you are back in the ward the nurses will make sure that you are sufficiently recovered from the operation before you are allowed home. You should have someone to take you home and be with you overnight after the operation.

Almost all patients will go home on the day of surgery. Very occasional, social or medical conditions require an overnight stay.

What should I do about my medication?

Let the doctor know about your medication in the clinic. For all procedures other than local anaesthetic procedures you will be seen in the preassessment clinic before surgery who will advise exactly what to do regarding any medications which you will need to reduce or stop.

What can I do to make the operation a success?

If you smoke it is best to stop or reduce as much as you can. If you are diabetic you will reduce your risk of infection and poor wound healing by keeping your blood sugars stable.

Please attend all dressing, doctor and hand therapy appointments after surgery and follow instructions on hand exercises to get the best function and recover following surgery.

What complications can happen?

Overall significant complications are rare in Dupuytren's surgery however the more severe the disease and the more procedures have taken place before on the finger, the increased likelihood of a complication.

The % values given cover a range from simple to complex cases.

There are risks with the anaesthesia and your anaesthetist will discuss them with you.

Pain – the more extensive the surgery the more pain may be experienced and this can occasional last longer than anticipated. We no longer provide Ibuprofen or Paracetamol as they are available over the counter. If we feel stronger pain killers will be required they will be given to you on the day to take home. Scars may be tender for a number of months in 17%



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of patients.

Chronic regional pain syndrome – This is a condition which is rare but can happen in 5-10% of patients with more extensive surgery. This condition is where there is increased pain and stiffness in the hand which may last many months and is treated with pain killers and physiotherapy.

Bleeding – Most wounds ooze a little and the dressing will usually soak this up and be fine until you are seen in a dressing clinic. Rarely (1-8%) there is increased bleeding which may soak the dressings. In this case please urgently contact the hospital and return for a change of dressing and review.

Infection – Infections occur in 2-7% of cases although it is extremely rare to need further surgery. A course of antibiotics will normally cure the infection. The wound will be reviewed in the dressing clinic after surgery to assess for any healing issues or any infection.

Nerve injury – This can be cutting or bruising of the nerve which leads to a temporary or permanent loss of sensation in half or all of the finger. Again, this is rare in a primary procedure but occurs more frequently the more operations have taken place on the finger. (Nerve injury 3-27%, tingling or numbness 14%). There is also a possibility of nerve injury if having an axillary block. Temporary tingling or numbness occur in 1 in 100 patients with permanent problems in 1 in 3000 patients.

Artery injury – This occurs in 2-31% of cases and, like nerve injury, increases the more surgeries take place. As there are 2 arteries in the finger it is very rare to lead to amputation of the finger but can lead to the finger being sensitive or painful or aching in cold weather (7% of cases).

Stiffness – The stiffness will depend on whether

the surgery was extensive and in many severe contractures the finger is not able to be fully straightened with surgery. Stiffness 4-15%

Wound breakdown – Wounds can breakdown or have delayed healing in 5-23% of patients. This usually just delays recovery but can occasionally lead to some permanent stiffness.

Loss of skin graft – If you need a skin graft during surgery this may fail in 10-13% of patients. Usually the wound will then heal with just dressings, however occasional repeat surgery will be required. In 9% of patients the skin graft may contract causing some stiffness.

Scar thickening – In 10% of patients the scar is a little thickened and in 9% the scar can contract and feel tighter in the palm.

Tendon issues – In complex cases the tendon/rope that moves the finger may be cut (less than 1%) and in 3% of cases the tendon may become inflamed and sore for a few months making recovery slower.

Amputation of finger – This will only really occur in complex revision cases or as a planned procedure due to poor function or a very severe contracture (1-3%).

New problems - Occasionally surgery on the hand, if extensive, can cause other problems such as carpal tunnel syndrome (6%), trigger finger (5%) and a swan neck deformity (abnormal bending of the finger 7%).

Hair growth – In cases where a skin graft is taken, this often leads to hair growing on the graft site as it would normally do from where the skin was taken.

Recurrence of contracture - This varies depending on which finger joint was involved, how straight the finger was after surgery and the type of surgery that took place. In general after 5 years the recurrence rates are 85%



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for needle fasciotomy, 25% for fasciectomy and 10% for dermofasciectomy. However not all patients who recur need or want further intervention.

How quickly will I recover from the surgery?

Needle Fasciectomy – the wound will be reviewed at 1 week and usually by 2 weeks the hand is fully functional.

Fasciectomy – For open surgery the wound takes 2-3 weeks to heal and then it takes another 2-4 week to overcome the post-operative stiffness in most cases. In total, more severe cases can take 2-3 months to recover fully.

Dermofasciectomy – The skin graft is protected for 2 weeks with no movement to allow it to heal. Following this, the healing is similar to opened surgery. As grafts are usually used in more severe cases it is likely that recovery will take around 3 months.

In all these cases the flexibility and strength may improve after these timeframes but the majority of recovery and time to return to work is as detailed above.

During this recovery period you will see the doctor and the hand therapist in clinic. The hand therapist will make and adjust your hand splint if you need one and advise you on your progress and the exercises to undertake.

What happens after my surgery?

You will go home on the same day and return to a dressing clinic, usually within a week, to assess your wounds and remove the plaster if present. You will have a splint applied and start exercises with the hand therapist if required. The appointments after this will depend on your recovery at the initial review.

You can drive when your wounds are healed and you feel you can safely grip the steering

wheel in both hands to control the car.

You can shower or bath as normal once the wounds are healed, but prior to that you need to keep the hand dry.

Once fully recovered you will be discharged if no other fingers are causing issues. If you are part of a trial, additional appointments may be required however you will be clearly notified of this.

As Dupuytren's is not curable there is always a chance it may return in the finger operated or appear in other fingers or the other hand. If this is the case, you would need to see your GP to be rereferred.

Summary

Treatment for Dupuytren's will straighten your finger, often fully but the condition can be cured and may return. Treatment can improve your hands function. Treatment is usually safe but complications can happen. Being aware of the risks and benefits will help you make an informed decision about treatment and spot problems early if they occur.

Author: Mr Mark Brewster FRCS(Tr.&Orth.)

This leaflet is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

References

1. Denkler K. Surgical complications associated with fasciectomy for Dupuytren's disease: a 20-year review of the English literature. *Eplasty*. 2010 Jan 27;10:e15.
2. Krefter C, Marks M, Hensler S, Herren DB, Calcagni M. Complications after treating Dupuytren's disease. A systematic literature review. *Hand Surg Rehabil*. 2017 Oct;36(5):322-329.
3. Eberlin KR, Mudgal CS. Complications of Treatment for Dupuytren Disease. *Hand Clin*. 2018 Aug;34(3):387-394.