SURGERY

Dupuytren's Surgery

What does this involve?

The aims of Dupuytren's surgery are:

- To straighten out the affected fingers
- To avoid complications/ unwanted side effects
- To minimise the risk of the disease coming back

The options include:

- Fasciotomy - the cords of fibrous tissue are divided in the palm. This can be done with a small cut or the sharp point of a needle.

More recently injections to dissolve the cord have been tried. The injection is called Xiapex and contains the enzyme collagenase. Up to 3 injections are needed to weaken the cord before the finger is straightened manually

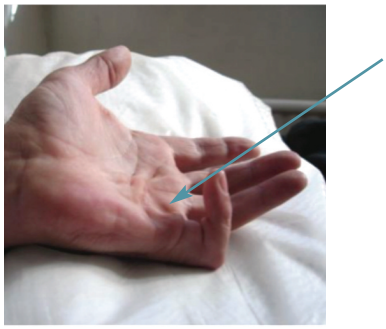
- Fasciectomy - removing as much of the fibrous cord as possible but preserving the skin
- Dermofasciectomy - removing the fibrous cord and some of the overlying skin. The skin is then replaced with a skin graft from elsewhere

When is this surgery needed?

Dupuytren's disease interferes with how your hand functions and is a nuisance but surgery is never absolutely required. The contracture tends to gradually increase over time. Some people have more aggressive disease than others. Some joints get stiffer than others if they are kept bent for a long time.

The type of operation to choose and when to go ahead with the operation is an entirely individual choice for you to make after a discussion with your surgeon. The decision is based around how you feel about the surgical risks, how much trouble you find your contracture, how aggressive your disease is and technical factors, such as how easy it is to straighten out each affected joint after the Dupuytren's tissue has been removed.

Dupuytren's cord pulling in the little finger



	Fasciotomy (cut)	*Fasciotomy (injection)*	*Fasciectomy*	*Dermofasciectomy*
Type of Operation	Day case, can be done in clinic	Day case, can be done in clinic	Day case, in theatre	Day case, in theatre
Length of Procedure	5 mins	5 mins, but may need repeat injections	About 45 mins per finger	About 1 hour per finger
Anaesthesia	Local	Local	Regional or General	Regional or General

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What are the main risks of these procedures?

Swelling, Stiffness and Scar pain

These problems are much less for fasciotomy than for a fasciectomy or dermofasciectomy. This said even the smaller procedures can be uncomfortable afterwards. Painkillers, elevation, early mobilisation and scar massage are useful. For fasciotomy most patients manage their own rehabilitation with advice. For the larger operations supervised hand therapy is always necessary to get the best possible results.

Occasionally patients are troubled by more swelling and stiffness than average, even with the minor procedures. In this case Complex Regional Pain Syndrome (CRPS) is sometimes the cause (see information sheet in 'Conditions we Treat'). CRPS has been reported in 2.6 – 3.2% of fasciectomy/dermofasciectomy patients and 0.5% of fasciotomy patients.

Wound Healing Problems

The fasciotomy by injections leave no scar but there can be bruising, local pain and itching near the injection site.

Up to 9% of fasciotomy patients having a small cut experience wound healing problems. Often these require no more than repeated dressings to clear up.

On average 2.5% of fasciectomy cases and 13% of dermofasciectomy cases experience wound healing problems. Usually these problems can be managed with dressings but rehabilitation maybe slowed down. Significant wound healing problems may require further surgery.

Infection

This has been reported in 0-2% of fasciotomy cases, 4.5% of fasciectomy cases and 18% of dermofasciectomy cases. Local wound infections can often be treated with oral antibiotics. Rarely deep seated infections may require re-admission to hospital, antibiotics into the vein and more surgery.

Nerve Injury

A small nerve runs down each side of each finger. These nerves are often intertwined with the Dupuytrens disease and have to be very carefully freed up to get out the fibrous cord.

Temporary alteration in nerve function (abnormal finger sensation) has been reported in 3% of fasciotomy patients, 22% of fasciectomy patients and 23% of dermofasciectomy patients.

Permanent loss of sensation to some extent has been reported in 2.3% of fasciotomy patients, 8.6% of fasciectomy patients and 46% of dermofasciectomy patients

Blood Vessel Injury

The arteries for the finger run with the nerves. Damage of these arteries is reported to occur in 5.5% of fasciectomy patients. The finger will usually look normal if only one artery is damaged. If both are damaged the blood supply will not be enough to keep the finger alive.

Apart from a direct injury by the surgery straightening out a very bent finger can stretch an artery enough to stop it working. It is sometimes not possible therefore to completely correct a very bent finger without compromising its blood supply.

Without enough blood getting through the finger will become cold and blue. You should urgently re-attend your surgical centre or local Accident and Emergency department if you feel the blood supply to your operated finger(s) is poor.

Incomplete correction of the deformity

A perfectly straight finger has been reported in 29 – 73% of fasciotomy cases.

A perfectly straight metacarpophalangeal joint (MCPJ, the joint nearest the palm) was reported was reported in 73-83% of fasciectomy cases.

A perfectly straight proximal interphalangeal joint (PIPJ, the next joint along the finger) was reported in 16-49% of fasciectomy cases.

A 'satisfactory' result is achieved in:

- 97% of cases with mild disease (finger bent 0 - 45° initially)
- 82% of cases with moderate disease (finger bent 45 - 90° initially)
- 74% of cases with significant disease (finger bent 90 - 135° initially)
- 59% of cases with severe disease (finger bent 135 - 180° initially)

The initial bend is calculated by adding up the bend at the MCPJ and the PIPJ.

Patients are worse after the surgery in

- 0.8% of fasciotomy patients
- 3.3% of fasciectomy patients
- 4.5% of dermofasciectomy patients

In one study 1.9% of patients eventually underwent an amputation of the little finger after fasciectomy.

Recurrence of the disease

Dupuytren's can recur after surgery (come back). The percentage of patients with a recurrence gradually increases with time. 3.5 years after surgery the average recurrence rates are:

- 58% for fasciotomy
- 30% for fasciectomy
- 10% for dermofasciectomy

Tendon Rupture

One or two cases of this complication have been reported for the injections but not for any of the formal surgical procedures.

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ext 7506 or 7848

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Post Operative Course – Fasciotomy - Injections

Day 1

- Injection into the Dupuytrens cord in clinic

Day 2

- Return to clinic to have the finger straightened manually
- Local massage of the area and finger stretching exercises demonstrated. Hand therapy if necessary
- Take painkillers as necessary

4 weeks

- Injection can be repeated if there remains room for improvement in the position of the finger
- Similar follow up protocol
- 3 injections, at 4 week intervals can be carried out, if necessary, into each cord

Post Operative Course – Fasciotomy – Needle/cut

Day 1

- Dupuytrens cord divided in clinic after infiltration of area with local anaesthetic
- Finger straightened manually
- Light dressing applied to the hand – to be changed regularly
- Finger stretching exercised demonstrated
- Take painkillers as necessary

Two weeks

- Wound check to be arranged
- Local massage to start when wound sealed
- Hand therapy if necessary

Post Operative Course – Fasciectomy/Dermofasciectomy

Day 1 – 7

- A dressing and padded bandage with a plaster cast incorporated is applied after the operation
- Keep the dressings clean and dry
- Keep the arm strictly elevated in a sling or on pillows to reduce swelling
- You can start movements of any immobilised joints immediately
- Take painkillers before the anaesthetic wears off and as necessary thereafter

10 – 14 Days

- An appointment will be made for you to see the Hand Therapist. They will make you a removable splint and start your rehabilitation.
- For a dermofasciectomy the dressings will not be disturbed until at least 5 days after the surgery to allow the skin graft to start to heal.
- The stitches will be removed.

Six to Eight Weeks

- Further review in clinic with your surgeon
- Most people are back to using the hand for normal light activities by this stage but you may still find scar massage helpful.

Three Months

- Contact sports and heavy loading can usually be undertaken again by this stage

Plaster Cast Information

Contact your surgical centre if:

- Your fingers become blue, swollen or numb and tingling with a plaster cast in place
- You see any discharge, wetness or detect any unpleasant smells from around your cast
- The cast becomes cracked, soft, loose or uncomfortable.

Outside normal working hours you may need to attend your local Accident and Emergency Department for help with these issues.

Driving

You may drive when you feel confident to control the car, even in an emergency. This maybe in just 2 or 3 days for the injections but could be 6 to 8 weeks for the bigger operations. This will depend on your progress and should be discussed with your therapist.

Time off Work

This will vary depending on the nature of your job and the procedure you have performed. You can discuss your individual requirements with your surgeon.

Sick notes can be provided on the day of your operation, at your clinic visits and by your own.

These notes are intended as a guide and some of the details may vary depending on your individual circumstance and at the discretion of your surgeon.

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