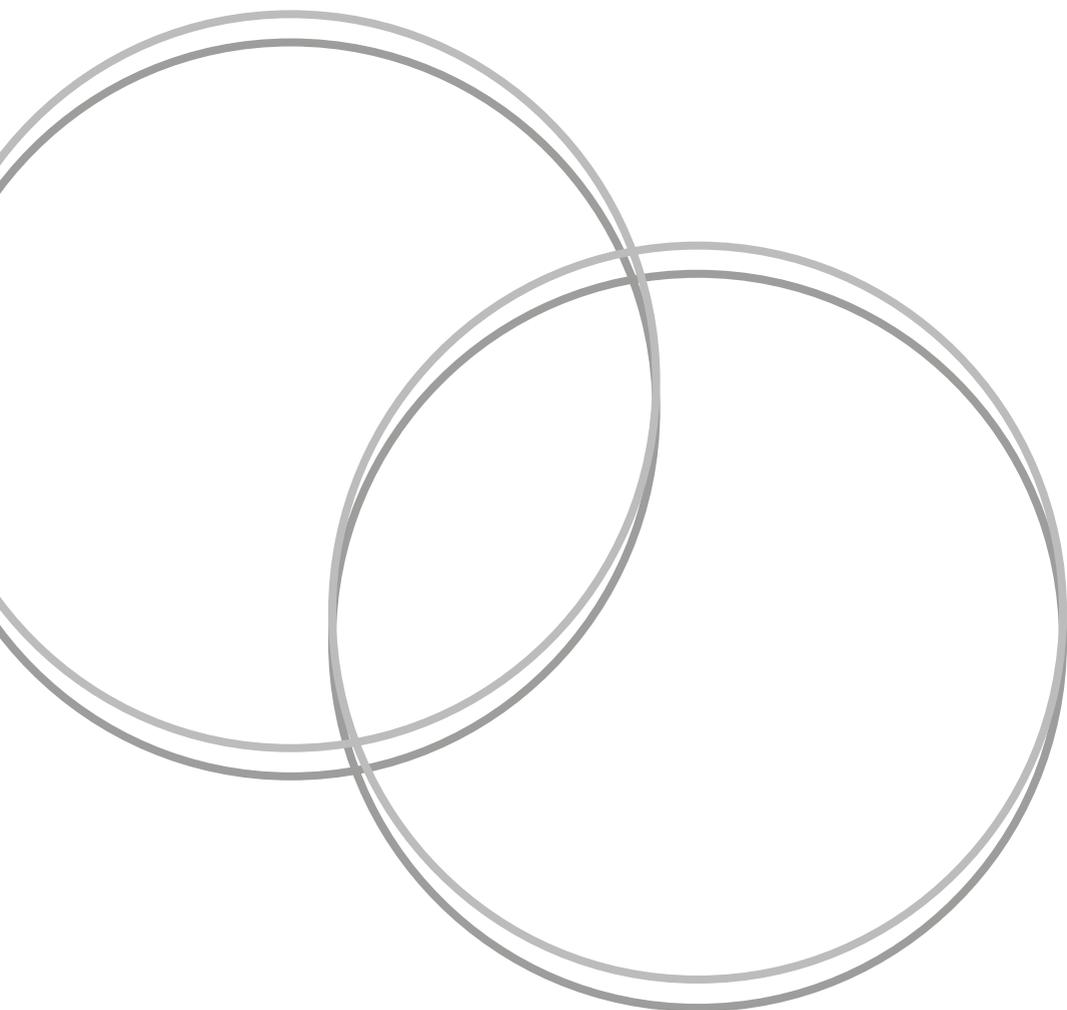




Oxford University Hospitals  
NHS Foundation Trust

# Leech Therapy

Information for patients



This leaflet has been written to help answer some of the questions you may have about leech therapy. It explains the benefits, risks and alternatives. If you have any questions or concerns, please speak to the doctor or nurse caring for you.

## **What are leeches and why should I have leech therapy?**

In nature, leeches attach to animals and suck out small amounts of blood as food. Leeches used for medical purposes are known as 'Hirudo medicinalis'. They are specially farmed for medical use.

In medicine, particularly plastic and reconstructive surgery, leeches may be used to help improve blood flow in an area of tissue or a skin flap that has poor blood circulation. Leeches do this by removing clotted blood (congested blood) from delicate areas, such as underneath a flap of skin or on a finger or toe. Removing the blood from the area reduces the tension, which can improve the blood flow in the small blood vessels. This helps to prevent the tissues from dying.

## How does this work?

When the leech attaches to an area it releases three important substances. These pass into the area, whilst the leech draws the clotted blood away. These substances are:

- a natural local anaesthetic (to reduce the pain)
- a local vasodilator (to improve the blood supply in that area)
- hirudin and calin (natural anticoagulants, which prevent further clotting).

The amount of time the leech attaches to the affected area can vary from between 15 to 60 minutes. However, one of the main advantages of leech therapy is that the blood drainage continues after the leech drops off. This means the blood can continue to flow from the site overfilled with blood, to improve the circulation for up to 10 hours after treatment. This provides valuable time for the body part or appendage (such as a finger or toe) to re-establish its own circulation.

## What are the risks of leech therapy?

There are some risks associated with using leech therapy. These include:

- **Infection**

There is a small risk of infection from the leech. Although they are specially farmed for medical use, they contain bacteria in their gut which helps them digest blood. To help prevent the risk of an infection (which could affect the success of your surgery), your doctor will give you an antibiotic whilst you are having leech therapy. Please tell your medical team if you are allergic to any antibiotics or other medicines.

- **Bleeding**

The area where the leech was attached may continue to ooze blood for several hours after the leech has dropped off. This will be monitored and your blood levels checked to make sure you do not become anaemic (when your blood lacks red blood cells).

## Are there any alternatives?

We use leech therapy to try to prevent the need for another operation. If nothing is done, your blood may clot and prevent blood flow to the tissues or skin flap. This may lead to some or all of the tissue dying and could result in your skin flap or finger or toe being removed at a later stage.

## **Consent**

Before you have leech therapy, the medical team will talk through the treatment, including any risks or side effects. They will then ask you to sign a consent form. This confirms that you are happy for the treatment to go ahead and you understand what is involved.

## **During the treatment**

You will be asked to avoid drinking any drinks containing caffeine (such as tea, coffee and cola). You will also need avoid or minimise the use of nicotine-containing products (such as cigarettes or nicotine patches) during the course of your hospital stay. This is important, as caffeine and nicotine cause blood vessels to narrow, which may affect the success of your treatment.

## **What happens during leech therapy?**

The nurse will explain the procedure for applying the leech therapy. They will continue to monitor you whilst the therapy is applied and during the course of treatment.

The area to be treated will be cleaned before the application of the leech. How many leeches are used and how often they need to be applied will depend on how severely your tissue is congested.

The nurses will guide the leeches to the affected area, where they will attach. We may need to cover the leeches with a dressing, to make sure they stay in the correct position during the procedure. You will be asked to remain in one position while the leech therapy is taking place. This helps to prevent the therapy being disrupted.

To check if the leech therapy is working, the nurse will monitor the colour of your skin and the amount of oozing around the site of attachment to check on blood loss (normally there is a small amount, which helps to reduce the congestion).

The leech will be attached for between 30 to 60 minutes. Once the leech has finished feeding, it may fall off or be removed. Each leech is used only once and is humanely disposed of.

When the leech has finished, the nurse will clean away the dried blood to keep the bleeding going. If the colour of the tissue is returning to normal (a healthy pink colour) then the circulation has improved.

It is important not to stop leeching too soon, as it may take three to five days for the new blood vessels to grow and be able to maintain a good blood supply.

## **Will I feel any pain?**

No. The leech produces an anaesthetic, which makes the attaching painless.

## **How to contact us**

If you have any concerns or questions about your leech therapy, please talk to your clinical team, your plastic surgeon, plastic clinical nurse specialist, nurse team or pharmacy team. You can also ask to speak to the ward nurse manager.

### **Specialist Surgery Inpatients (SSIP) Ward**

Telephone: **01865 231 232**  
(24 hours a day)

## Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

Author: Jane Edwards, Tissue Viability Team

Guidance for this documentation has been taken with permission from  
[www.guysandstthomas.nhs.uk/resources/patient-information/surgery/Plastic-surgery/leech-therapy.pdf](http://www.guysandstthomas.nhs.uk/resources/patient-information/surgery/Plastic-surgery/leech-therapy.pdf)

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