



**University
Hospitals Sussex**
NHS Foundation Trust

Leech therapy for a congested free flap

Plastic surgery

Patient information

What is this information about?

This information is about medicinal leech therapy for a congested free flap.

It explains:

- why leech therapy may be used
- how leeches can help blood flow in the flap
- what may happen during treatment
- how your flap and your health will be checked
- the possible risks of leech therapy
- what support is available if you feel worried
- who to contact if you need help.

Why have I been given this information?

You have been given this information because your free flap has a healthy blood supply going into it, but the blood is not draining away as well as it should. This is called venous congestion.

Without treatment, trapped blood can reduce the oxygen reaching the flap tissue. This can increase the risk that part or all of the flap could fail.

Leech therapy can act as a short-term way to help blood drain from the flap until new veins begin to work well enough.

What is a free flap?

A free flap is a piece of your own tissue that has been moved from one part of your body to another.

It may include skin, fat, muscle and blood vessels. During the operation (surgery), the tissue is detached from where it came from and moved to the area that needs to be repaired or rebuilt.

The surgeon then reconnects the small blood vessels so blood can flow into and out of the flap.

In this information, 'flap' means the free flap that your team is treating and checking.

What is leech therapy?

Medicinal leeches are specially bred for medical use. They are used to help improve blood flow in a congested free flap.

They work in 2 ways:

- by removing a small amount of trapped blood from the flap
- by releasing natural substances in their saliva that:
 - help stop clotting
 - widen small blood vessels
 - and encourage blood to keep flowing.

This helps relieve pressure within the flap while your body develops new veins to drain the tissue naturally.

What are the benefits of leech therapy?

Leeches attach to the flap and release substances that help open up blood vessels. These are called vasodilators. They also release substances that thin the blood and help stop it clotting. These are called anti-coagulants.

This may help the flap by:

- improving drainage of congested blood
- reducing pressure within the flap
- helping oxygen-rich blood continue to reach the tissue
- helping reduce the formation of small blood clots
- giving the flap the best possible chance of survival while new veins develop.

What should I expect during treatment?

Your surgical team will decide how many leeches are needed and how often they are applied. Some people need treatment for several days until the veins in the flap drain blood away as they should.

Your flap will be checked often throughout treatment.

The leeches come in a special liquid that keeps them alive.

When it is time to apply a leech, 1 leech is removed from the liquid and placed on your flap. The leech will then attach itself.

Your nurse or surgeon will keep checking both the leech and the flap while the leech is attached.

Your team will make sure you have all the information you need and have given your full consent before any leeches are applied.

Giving your consent means that you understand what leech therapy involves and sign a form that says you agree to have it. Do ask if there is anything further about leech therapy that you would like to know before you give your consent.

How will my flap be checked?

Nurses and doctors will regularly check the flap for:

- colour
- temperature
- texture
- swelling
- capillary refill. This is the time it takes for blood to return to the tiny blood vessels (capillaries) in your skin after it is pressed.

- bleeding after the leech is removed
- Doppler signal. We use ultrasound to listen to and measure the amount and direction of your bloodflow.

We also check your blood pressure, heart rate, temperature, pain levels and breathing rate (your 'vital signs').

What side effects or complications can there be with leech therapy?

Bleeding

The leeches take a small amount of blood. It is usual for the bite sites to keep bleeding after a leech has detached. This ongoing bleeding is part of the treatment and helps relieve congestion. Your team will check the amount of bleeding carefully.

Anaemia and the possible need for blood transfusion

Anaemia is one of the most common issues linked with leech therapy.

Because leech therapy removes blood, some people who have it get anaemia (they have a low blood count).

When leeches are used for a longer time, some patients lose enough blood during treatment to need a blood transfusion.

You will have regular blood tests during treatment and if the team think you need a transfusion they will talk with you about this.

Infection

Medicinal leeches are grown in a special facility for hospital use. Even so, they naturally contain bacteria called *Aeromonas* in their digestive system.

To reduce the chance that you may get an infection, people who have leech therapy are usually prescribed antibiotics throughout treatment.

Flap failure

Leech therapy improves the chance of saving a congested flap, but it does not always work. Sometimes, part or all of the flap may not survive despite treatment. If this happens, you may need a further operation (surgery).

Will the leech bite hurt?

The free flap does not have feeling in the area where the leech attaches. You will not feel pain when the leech attaches. The leech saliva also contains natural substances that help numb the area.

Will the leech stay on me?

No. Once the leech has taken enough blood, it naturally detaches. Your healthcare team will remove it safely and place it in the correct disposal pot.

The leech may stay attached to the flap for between 15 and 60 minutes.

How might I feel during treatment?

It is completely understandable to feel anxious or uneasy about having leeches applied. Many patients feel this way at first.

Your nursing and surgical team will explain each stage of treatment, answer your questions and support you throughout.

If you are worried, please tell a member of staff. You do not have to look at the leeches during treatment, and you will not feel them being applied. If you would prefer not to look, please tell your team so they can help with this.

Who can I contact if I need further help or support after I have read this information?

Contact the Plastic Surgery Team

In an emergency, phone 999.

If you need help out of hours, phone **111** or contact your GP surgery for advice.

Monday to Thursday 8.00am to 4.30pm

Friday 8.00am to 1.00pm

For clinical queries (for example if you are worried about your wound) uhsussex.plasticsteam@nhs.net

For non-clinical (admin) matters (for example if you are calling about a follow-up appointment)

01273 696955 Ext. 65956

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at the Alex or in Brighton & Hove

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