

What is a leech?

There are many species of leech found throughout the world but the medicinal leech, known as *Hirudo medicinalis*, is the leech used in some hospitals today. This is a blood-sucking leech found in fresh-water ponds and lakes in Britain.

When and why are leeches used?

Leeches are used in modern plastic and reconstructive surgery, such as skin flaps or tissue reconstruction, to improve the blood circulation when surgically joining veins.

Each leech is used on only one patient and only whilst staying in the hospital.

How do they work?

In surgical procedures involving the joining of severed body parts, re-attaching veins to one another may prove very difficult as veins have thin walls.

As a consequence, there may be problems in getting the blood to flow in the re-attached veins. For example, blood flowing to a re-attached thumb may become congested (the blood builds up in a vein, similar to the effect of standing on a hose pipe). If it does, this may result in the loss of the re-attached body part.

The leech will bite onto the area needing help with circulation and stay attached using its two suckers. Once attached, a leech will secrete a number of substances in its saliva:

- one dilates the blood vessels to increase blood flow
- one prevents the blood from clotting
- one acts as a local anaesthetic

These three substances cause the bite to continue to bleed after the leech has detached.

The continuous oozing of blood from the wound relieves the congestion in the veins. Nurses will clean the bite, gently removing any small clots, helping the blood to flow freely and thus improving the blood circulation. Heparin is an anticoagulant. It is used to stop blood clots forming within the blood vessels and gauze soaked in this may also be applied to the area.

Will it hurt?

No, a leech bite will not hurt. The leech produces its own anaesthetic, making the bite pain-free. In fact, it is common for people to find themselves with a leech attached if they have been in a pond or lake and not have even realised it was there.

The leech will stay attached for 30-60 minutes, after which it will just drop off. It is important not to pull off an attached leech, as its suckers and teeth may be left behind!

Additional treatment

If you undergo leech treatment, it will be necessary for you to start a course of antibiotics on the first day the leech is applied and continue for 48 hours after the last leech is removed. This is intended to prevent any infection occurring in the bite area. If you have any allergies, particularly to antibiotics, please ensure that you tell your hospital doctor.

Benefits

- The use of leeches can save re-attached body parts from having to be removed again after surgery.
- Treatment with leeches nearly doubles the chances that a transplanted flap of tissue will survive.
- No medicines in use today can have the same effect as a leech

Risks

- The leech may cause infection. An antibiotic is prescribed to patients before starting leech treatment to help prevent this occurring.
- Leeches may wander from the specified area needing leech treatment. To prevent this, a small square piece of gauze may be set up around the leech, confining it to the treatment area.
- As with all medicines, there is the potential for the antibiotic to cause side-effects. See the manufacturer's leaflet for further information.

Alternatives

Your doctor should have discussed the alternatives to leech treatment with you. If you are unsure, please speak to your doctor again.

Did you know...?

- A leech has 32 brains.
- A leech has 100 teeth in each of its three jaws.
- Leeches normally reach from one to two inches in length.
- The leech leaves a small upside down Y mark where it has bitten.

Further questions or concerns

For further help and information please contact a member of staff.

References:

www.biopharm-leeches.com

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Medicinal Leeches

Information for patients

