

# FACTSHEET

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## Leech therapy

### When is leech therapy needed?

Leeches are used sometimes after special types of surgery. Types of surgery can include re-attaching a body part, such as a finger and grafting soft tissues, like muscles. Sometimes, after surgery, the blood supply is damaged and blood can get into the body part, but cannot get out. The old blood stays in the body part. It stops the new blood from giving the body part oxygen and nutrients. The body part becomes swollen and purple. This is called **venous congestion**. If the old blood is left in the body part, the re-attached part will often die.

Modern leech therapy has been used since the 1960s. It has been proven to be helpful after re-attachment surgery. It helps with blood circulation for re-attached body parts and areas of transplanted skin and muscle (grafts).

### How does leech therapy work?

Leech saliva has many substances that stop blood from clotting and helps bleeding. Leeches are put on re-attached body parts or soft tissue grafts that have **venous congestion**.

### How it works

- The leech makes a small bite in the body part that has **venous congestion**
- It injects substances into the body part to stop the blood clotting in that area
- The leech consumes a small amount of blood and drops off after about half an hour
- The body part is left to bleed (drop by drop) to allow the old blood to escape through the leech bite

- New blood can then enter the body part

### How long does leech therapy last?

Sometimes the leech therapy is needed for up to a week. Each child is different. Depending on the injury, it can take 5 to 7 days for blood vessels to form or heal.

### Where do the leeches come from?

The leeches used are medical grade leeches. They are a particular species of leech called *Hirudo medicinalis*, grown in a medical leech farm. In NSW, they are provided by Liverpool Hospital.

### Are there any risks involved?

Yes. Leeches can cause infection. Leeches contain bacteria needed for digesting blood. There is a small risk the bacteria could get into the body part and cause an infection. Children having leech therapy must be on antibiotics that will kill the bacteria.

Some people are allergic to leech saliva.

Blood levels of children must be monitored while they are having leech therapy, and children may occasionally need a blood transfusion.

### Are there any difficulties with leech therapy?

Sometimes leeches do not want to attach to a body part. This can be because there are chemicals in the skin that the leeches do not like. The nurses and doctors will try to help the leech attach.

Sometimes, even with leech therapy, the re-attached body part or graft may not survive.

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## Does leech therapy hurt?

No. The re-attached part usually has no feeling, and the leech saliva has substances that prevent pain.

## Leeches look scary

The biggest problem people have with leech therapy is that the leeches are not nice to look at. A polystyrene cup or covering can be placed over the leech so your child cannot see it.

Many children and young people who have leech therapy are very interested in the leeches and it is a great story to tell all their friends at school.

## What happens to the leeches after the therapy?

Unfortunately the leeches contain human blood and cannot be used again. They are regarded as contaminated. When the therapy is finished, the leeches are put to sleep humanely.

### Remember:

- Leeches have been used for many years to improve blood circulation in re-attached fingers and grafts.
- Leeches look strange, but are interesting and can be helpful.

## References

Sartor C., Limouzin-Perotti F., Legre R., Casanova D., Bongrand M., Sambuc R. & Drancourt M. (2002). Nosocomial infections with aeromonas hydrophila from leeches. *Clinical Infectious Diseases*. Vol. 35 <http://cid.oxfordjournals.org/content/35/1/e1.full> accessed Dec 2014

Soengkar A, Kusumastuti N, Haryanti K & Adib A (2012) Microsurgery and Flap Medicinal Leech Therapy as an Alternative Treatment for Vein Problems after Free Flap Surgery: A Case Report *Jurnal Plastik Rekonstruksi* 1(6) 543-547.

Ward, C., Craw, L., Cherian, A., Delos-Reyes, M. & Joseph, S. (2008) Medicinal Leeches: Taking a Bite Out of Venous Congestion *Nursing2008* November 28-30.