

The background of the entire page is a close-up photograph of a baby's face. The baby has dark eyes and is looking slightly to the right. On the right side of the baby's face, near the eye, there is a prominent, raised, reddish-purple lesion, which is a haemangioma. The baby's mouth is slightly open, showing the tongue.

# Haemangiomas

Information for families

2<sup>nd</sup> edition

Great Ormond Street Hospital  
for Children NHS Trust

**This leaflet explains about haemangiomas and what to expect when your child comes to Great Ormond Street Children's Hospital for treatment. Although this leaflet focuses on the problems haemangiomas can develop, it is always important to remember that 80 per cent of haemangiomas do not develop any problems at all, and in those that do, the problems may not be severe.**

### **What is a haemangioma?**

A haemangioma is a collection of small blood vessels that form a lump under the skin. They are sometimes called 'strawberry marks' because the surface of a haemangioma looks a bit like the surface of a strawberry.

Haemangiomas can be superficial or deep. Some haemangiomas are a combination of the superficial and deep kinds, with a raised, red area on the surface of the skin, and a bluish swelling of abnormal blood vessels deeper in the skin.

## What causes haemangiomas?

There is now some scientific evidence to suggest that nearly three quarters of haemangiomas may be caused by placental tissue. If a tiny piece of tissue from the placenta embeds into the baby's developing tissue very early in pregnancy, this can start to grow on his or her skin after the baby is born, forming a haemangioma. We do not yet know fully what might cause the placental tissue to embed. Other theories have evolved, but more research is needed to confirm the causes of haemangiomas.

## How common are haemangiomas?

About one in every ten babies has a haemangioma. They are more common in girls, in premature babies, low birth weight babies and multiple births, such as twins, triplets and quadruplets. Haemangiomas are not inherited, but because they are quite common, families often report another relative who has had a haemangioma in childhood.

## What do haemangiomas look like?

Superficial haemangiomas are usually a raised, bright red area of skin, which feels quite warm because the abnormal blood vessels are close to the surface. A superficial haemangioma may appear initially as a small area of pale skin on which a red spot develops.



Superficial haemangioma



Deep haemangioma

Deep haemangiomas may appear bluish in colour because the abnormal blood vessels are deeper in the skin. Sometimes they are not noticeable for the first few weeks, only appearing as a lump as the haemangioma grows; this is particularly true if the surface of the skin is not affected.

Haemangiomas are not usually present at birth but develop a few days or weeks later. They often grow rapidly in the first three months, increasing in size and sometimes in redness. It is unusual for haemangiomas to grow after six to ten months of age, when most haemangiomas tend to have a 'rest period' and then begin to shrink.

### **Where do haemangiomas occur?**

Most children only develop one haemangioma, but occasionally, a child has multiple haemangiomas in various parts of the body. This seems to happen most often in twins or other multiple births.

Haemangiomas can appear anywhere on the body. The majority of haemangiomas appear on the head or neck, particularly on the cheek, lips or upper eyelid. Haemangiomas can also appear on the organs inside the body. This is most common when a child has multiple haemangiomas. The organ most commonly affected is the liver, but occasionally the airway, heart and brain may also be involved. Babies with multiple haemangiomas should have an ultrasound scan to confirm this or rule it out.

### **How are haemangiomas diagnosed?**

Superficial haemangiomas are clearly noticeable and quite different to other types of birthmark so no special diagnostic tests are usually needed.

A child with a haemangioma near the eye, or a deep haemangioma, or one affecting the internal organs may require ultrasound and/or MRI scans to confirm the diagnosis, location, and also to check the depth of the affected blood vessels.

## Looking after your child's haemangioma

In most cases, haemangiomas just need looking after carefully.

As the blood vessels in a haemangioma are so near the surface of the skin, they can bleed if they are knocked or scratched. It is important to keep both your nails and your children's nails cut short and buffed smooth, so that they don't catch the surface of the haemangioma.

If the haemangioma starts to bleed, apply pressure over it with a clean handkerchief, cloth or tissue for at least five minutes. If blood soaks through the handkerchief, cloth or tissue, put another one on top and keep up the pressure. Do not take it off to have a look as this could start the bleeding again. If the bleeding continues, even after pressing down on the haemangioma for five minutes, go to your nearest NHS Walk-In Centre or Accident and Emergency department. The team at GOSH can usually be contacted for advice if needed.

The surface of the haemangioma is delicate and can be very dry, so avoid using bubble bath, rinse any

soap or shampoo off carefully and pat the area gently afterwards. A thin layer of Vaseline® put gently over the top of the haemangioma can stop it drying out.

The nappy area is naturally warm and moist, so put a layer of Vaseline® or other water resistant cream over the haemangioma at each nappy change. Baby wipes can be irritating, so a better alternative is to use damp cotton wool especially when you are out with your baby.

Haemangiomas need protection from the sun because it can make them swell up for a while and look redder. Use a high factor sun cream on all areas of exposed skin, use a hat to protect your child's face and/or an umbrella over the buggy or pushchair.

You might find it difficult to adjust to your child's appearance, particularly if people are staring or making comments. Our leaflet *Bringing up a child whose face looks different* contains lots of ideas and suggestions from the Birthmark team and parents of children with birthmarks.

## When might my child's haemangioma need treatment?

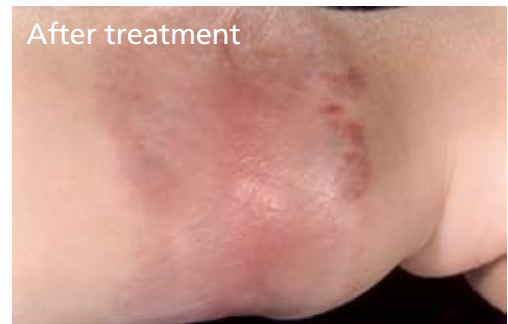
Most haemangiomas do not require any treatment, but there are circumstances when treatment might be needed. If you are concerned about any of these, please contact The Birthmark Unit.

### ■ Ulcerated haemangiomas

Occasionally, haemangiomas can form an open sore or ulcer, which is painful. Ulcers can become infected, so a visit to your doctor is important, as infected ulcerated areas may need treatment with antibiotics.

Haemangiomas that are around the mouth, in the nappy area or in natural folds of skin, like the armpit, ear and neck, are most likely to become ulcerated. This is often due to the friction of the two surfaces of skin rubbing together.

A child with a haemangioma around the mouth can suck or chew the lip/ haemangioma, and feeding, either by breast or bottle, can irritate the area further.



The nappy can rub haemangiomas in the nappy area, and contact with faeces (poo) or urine makes the ulcer more painful. Wherever the haemangioma is located, an ulcer is painful, more likely to bleed, and more likely to become infected. In the long term, an ulcerated area is more likely to leave a scar than a non-ulcerated area of haemangioma.

If your child's haemangioma develops an ulcer, it will need special attention until it heals. Keep the area clean by washing it twice a day, preferably in a bath or by pouring water over the area, and leave it to dry naturally. Once the area is dry, cover the whole haemangioma with a non-sticky dressing. These are available on prescription from your GP. Some areas of the body are more difficult to apply dressings to than others. For help, advice and guidelines, please contact the Birthmark Unit.

#### ■ Haemangiomas near the eye

Haemangiomas near the eye can have long-term effects on a child's vision, so need to be checked by a specialist eye doctor (ophthalmologist). The haemangioma can press on the eyeball, causing it to go slightly out of shape, affecting how images are focused on the retina, which in turn alters the messages sent to the brain from the eye.

If the haemangioma gets in the way of a child's field of vision, a condition called 'lazy eye' (amblyopia) can develop because the brain will filter out the image from the lazy eye and



Same child at ages one and five years

relies instead on the image produced on the retina from the 'good' eye. Over time, the lazy eye loses the ability to see accurately. It is treated by forcing the brain to use the lazy eye instead of relying on the 'good eye'. This is usually done by covering up the good eye or blurring its vision with eye drops. This forces the brain to use the lazy eye and over time, the vision usually improves.

Haemangiomas that are blocking vision may need treatment with steroid medicines, given either as a liquid by mouth or in certain cases, as an injection directly into the haemangioma.

### ■ Haemangiomas on the lips

Haemangiomas on the lips often become ulcerated (see above right), and because ulcers are so painful, the child may not want to feed. Giving your child pain relief, before feeding can help. It can also help to put some Vaseline® on the teat of the bottle (or around your nipple

if you are breast feeding) will reduce friction and make feeding less painful.

Due to their location, it is impossible to put a dressing on an ulcerated lip, and a child's drooling means lip ulcers often take a long time to heal. Treating the ulcer with a laser can often speed up healing and reduce the pain as well, so feeding will improve.

#### Before treatment



#### After treatment



## ■ Haemangiomas obstructing the airway

Haemangiomas on the child's jaw, chin or neck can sometimes affect his or her airway, leading to breathing difficulties. The first sign of this is stridor, when the child makes a rasping sound with each breath. If the haemangioma grows, it can obstruct the airway. In some children, laser treatment of the airway haemangioma during a microlaryngobronchoscopy (MLB) improves the breathing problems, but occasionally a child may need to have a tracheostomy (artificial opening into the windpipe) to improve their breathing.

For more information, please see our leaflets *Microlaryngoscopy and bronchoscopy (MLB)* and *Living with a tracheostomy*.

## Treatment options

There are lots of treatment options available; which option is suggested depends on the size and location of your child's haemangioma.

### ■ Pain relief

Haemangiomas are painful when they are ulcerated, so your child may need regular pain relief. Pain medicines such as paracetamol are enough if your child does not seem to be in too much pain. If the ulcerated area is large and/or around the lip or nappy area, stronger pain medicines such as a codeine or morphine might be needed before feeding or nappy changing. Your GP will advise on pain relief medicines. If your child's haemangioma is ulcerated and covered in a dressing, pain relief will be needed each time the dressing is changed.

### ■ Antibiotics

Antibiotics are recommended when an infection of an ulcerated haemangioma is suspected. These are usually given in the form of a cream or ointment to put directly on the ulcerated area, but widespread infection may need antibiotics in the form of tablets or a liquid as well. Occasionally, a child might need intravenous (into a vein) antibiotics and a stay in hospital.

### ■ Steroids

Steroids may be needed when the haemangioma is near the eye, lips, or nappy area to limit further growth. They are usually given as tablets or a liquid, and need to be given exactly according to instructions. When the haemangioma has shrunk enough, the dosage is gradually reduced, as it can be dangerous to stop steroids suddenly. For more information, please see our leaflet *Short-term steroid treatment*.

### ■ Laser treatment

In our unit, laser treatment is sometimes used in the treatment of haemangiomas. It can be useful if used early in the development of flat haemangiomas, as it reduces the redness and also reduces the risk of ulceration. Laser treatment is also helpful if an ulcer has already developed, as it reduces the pain of the ulcer, makes it heal faster and reduces the risk of infection. Your child's haemangioma will need extra special care after laser treatment, as explained in *After your child has had skin laser treatment*.

After laser treatment



Haemangioma healing



Scar tissue after haemangioma has resolved



## ■ Immunosuppressive medicines

A medicine called vincristine is occasionally used to treat specific types of haemangioma in infancy. This medicine is usually used to treat certain forms of cancer and leukaemia, but the doses used to treat these specific haemangiomas are much smaller. It is usually given alongside steroid medicines, particularly if they have not reduced the swelling.

## ■ Embolisation

Embolisation is a procedure to 'block off' certain blood vessels by injecting them with a 'glue-like' substance or beads that stop the blood flowing through them. Generally, this is only used when haemangiomas are very troublesome and other treatments have had little effect

## ■ Surgery

Sometimes, surgery is an option for removing haemangiomas. The surgeon removes the haemangioma tissue and joins the healthy skin together. There will always be a scar with this sort of operation, but it varies depending on the location and size of the haemangioma. Sometimes, it is better to wait until the haemangioma has resolved completely, and see whether surgery is needed at that point.

Before surgery



After surgery



## What are the long-term effects of a haemangioma?

Most haemangiomas will have disappeared completely by the age of five to seven years. Large haemangiomas may continue to get smaller until your child is about eight to ten years old.

Depending on the size and location of the haemangioma, there may be little sign it ever existed. Occasionally the affected area of skin might be a bit lighter in colour than the rest of your child's skin. Thread veins are also common; these are tiny red veins on the surface of the skin. These are easily treated with a laser later on in childhood.

Large haemangiomas may distort the surrounding skin and even when they disappear, leave behind an area of stretched skin that looks puckered or wrinkled. This can often be improved with plastic surgery. Some children may have an uneven skin texture once the haemangioma has resolved. Some children may have some leftover fatty tissue. This can be removed by a plastic surgeon. Haemangiomas affecting the ear or nose can leave some distortion behind, which can usually be improved using plastic surgery. Some children will need to have ear reconstruction later on if the ear is very distorted. For more information, please see our *Ear reconstruction* leaflet.

Ulcerated haemangioma



Reducing



Reduced



## Conclusion

Vascular birthmark research is an area of medicine that is continually advancing. Studies have already given us improved options for treating haemangiomas and continue to tell us more about how and why they develop. We hope that this leaflet has been helpful in giving you more information about your child's haemangioma. If you have any comments about it, please contact the Birthmark Unit.

### Where to get further information

#### ■ At Great Ormond Street Hospital

##### **Birthmark Unit**

Great Ormond Street Hospital

London WC1N 3JH

Tel: 020 7829 8668

In an emergency please telephone 020 7405 9200 asking them to bleep a member of Birthmark Unit staff.

#### ■ Support groups

##### **Birthmark Support Group**

BM The Birthmark Support Group

London

WC1N 3XX

Tel: 0845 045 4700

Email: [info@birthmarksupportgroup.org.uk](mailto:info@birthmarksupportgroup.org.uk)

Website: [www.birthmarksupportgroup.org.uk](http://www.birthmarksupportgroup.org.uk)

##### **Changing Faces**

The Squire Centre

33-37 University Street

London WC1E 6JN

Tel: 0845 4500 275

Email: [info@changingfaces.co.uk](mailto:info@changingfaces.co.uk)

Website: [www.changingfaces.co.uk](http://www.changingfaces.co.uk)

Notes

## Notes

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Compiled by the Birthmark Unit with assistance from parents of children with haemangiomas in collaboration with the Child and Family Information Group.

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[www.goshfamilies.nhs.uk](http://www.goshfamilies.nhs.uk)   [www.childrenfirst.nhs.uk](http://www.childrenfirst.nhs.uk)