

Vascular birthmarks

Information for parents

Great Ormond Street Hospital
For Children NHS Trust
and the Institute of Child Health

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What is a vascular birthmark?

Vascular birthmarks are made up of blood vessels squashed up together in the skin. They can be flat or raised, pink, red or even bluish in colour. They are quite common. About 3 in every 100 babies are born with them.

What causes birthmarks?

As yet we do not know the exact reason why babies get vascular birthmarks. Most are not inherited, and are not caused by anything you did or ate while you were pregnant.

What are the different types of vascular birthmarks?

There are many different types of vascular birthmarks. The most common types are haemangiomas and port wine stains. There are other types of vascular birthmarks, but some are quite rare. Your doctor will explain to you if your baby has a rare type of birthmark.

What should I do if my baby has a vascular birthmark?

If your child has a vascular birthmark, your GP or local paediatrician will discuss this with you. For some vascular birthmarks, you may be referred for laser treatment and further management. For rare types, you may need to see a specialist at a specialised centre.

Port wine stains

What is a port wine stain?

A port wine stain is a common type of vascular birthmark, which remains flat but darkens with age. It is made up of a collection of small blood vessels called capillaries that are abnormal. Unlike haemangiomas it is present at birth.

What else can a port wine stain be called?

Port wine stains are also called naevus flammeus. This term may also be used to describe a stork mark usually present on the forehead, upper eyelids and sometimes on the nape of the neck. Stork marks disappear within 2 years of life.

What causes port wine stains?

We do not know exactly what causes a port wine stain. Most are not inherited and are not due to anything you have done or eaten during pregnancy.

How common are port wine stains?

About 3 in every 1000 children born have a port wine stain birthmark. They are more common in females than males, incidence being 2:1 female: male ratio.

What do port wine stains look like?

Port wine stains are flat, dark pink, red or purple in colour. Over time, they may become thicker and have raised bumps or ridges. Without treatment, port wine stains are permanent for life.

Where do port wine stains occur?

You child can have a port wine stain anywhere on the body, one side or on both sides. However, they most commonly affect the face.

How are port wine stains diagnosed?

Port wine stains are diagnosed visually. If your child has a port wine stain, your doctor should refer you to one of the specialist centres for laser treatment. Whilst it is useful to see port wine stains soon after birth, children are not usually treated before they are six months' old.

How are port wine stains treated?

Until a decade ago, the only help that could be given was to cover the port wine stain with heavy make-up. In recent years, the 'pulsed dye' and 'scleroplus' lasers have been developed with excellent results and minimal side effects. Your child should only be treated with a laser at a specialist centre that is used to dealing with children.

Are there any complications of port wine stains?

Port wine stains, especially if they are on the face, can affect children, parents and their extended families, emotionally, psychologically and socially.

If your child has a port wine stain around the eye, there is an increased risk of glaucoma. Glaucoma is raised pressure within the eye, which can lead to blindness if it is not treated. This happens in about one quarter of all children with a port wine stain around the eye. The ophthalmologist should examine your child's eyes to check for glaucoma. Your child should continue to have his or her eyes checked for glaucoma every year.

If the port wine stain is around the part of the head or scalp then it can be associated with deeper blood vessel abnormality affecting the brain and its function. This is known as Sturge -Weber -Syndrome. If your child has a port wine stain and presents with an epileptic fit then he should be reviewed by a neurologist. It is possible your child may need to go on the anti convulsant therapy.

Occasionally, the tissue around a port wine stain may enlarge, for example around the lip, which can be called 'soft tissue hypertrophy'.

If your child has a large port wine stain on the arm or leg, your doctor will check it regularly to see that there are no problems. An extensive port wine stain with associated extra growth of that limb is referred to as Klippel Trenaunay Syndrome.

Port wine stains can sometimes develop small blood vessel 'blebs' or blood blisters called papules. These can then develop into pyogenic granulomas. These bleed easily, and therefore they need to be removed.

What should I expect from laser treatment?

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If your child's port wine stain is treated with the laser, you should see a significant improvement in its appearance, although it may not disappear completely. However, if your child's birthmark is quite superficial, it is possible to achieve 95 to 98% clearance.

How many laser treatments will my child require?

It depends on the size, the depth and sometimes the colour of the port wine stain. Most children require between 4 and 6 treatments in order to achieve maximum clearance. The procedures are scheduled for every 4 months.

Are there any other options for treating port wine stains?

Laser treatment is now the treatment of choice for port wine stain birthmarks. However, if you are not keen for this procedure, you may want to consider camouflage cover mark for your child. We only recommend this for special occasions, not for every day use. Cosmetic camouflage is offered by the Hospital, and is carried out by Sister Jane Linward. It is also available from the Red Cross.

Haemangiomas

What is a haemangioma?

The word haemangioma comes from the Latin words *haemangio* meaning blood vessel and *oma* meaning growth of cells.

A haemangioma is a collection of small blood vessels (capillaries) that produces a mark in the skin. Haemangiomas that are on the surface of the skin are called capillary haemangiomas. Cavernous haemangiomas are similar to capillary haemangiomas but they are deeper and bluish in colour in the skin.

What else can a haemangioma be called?

Capillary haemangiomas can sometimes be called strawberry marks. This is because they are raised red areas and look like a strawberry.

How common are haemangiomas?

Approximately 1 in every 20 babies born will have a haemangioma. They tend to be more common in girls than boys and more common in premature babies.

What do haemangiomas look like?

Capillary haemangiomas are raised and bright red, because the abnormal blood vessels are close to the surface. They are not usually present at birth but develop a few days to weeks later. At first, they usually resemble a small area of pale skin followed by a red spot.

They grow rapidly in the first three months, increasing in size and may intensify in colour. After this the haemangioma tends to have a rest period, when the rate at which it grows slows down, so it changes very little. It is unusual if the haemangioma continues to grow after six months.

The next stage is when the haemangioma shrinks. The haemangiomas usually disappear completely leaving little or no mark on the skin. Most haemangiomas disappear by the child's fifth to seventh birthday. Unfortunately, there is no way to predict how quickly a haemangioma will shrink and fade.

Cavernous haemangiomas may appear bluish in colour because the abnormal blood vessels are deeper in the skin.

Most haemangiomas disappear on their own, usually by the time the child goes to school, but others may not disappear completely. If they are large, haemangiomas may distort the skin around them and even if they disappear completely, may leave a mark on the skin. In this situation, some minor plastic surgery may be necessary.

Where do haemangiomas occur?

Haemangiomas may appear anywhere on the body. Most children have a haemangioma on their head or neck, but they can develop anywhere on the skin or even rarely in the internal organs. A child can also have more than one haemangioma. The doctor will examine your child by ultrasound if he or she thinks there is a chance of there being any haemangiomas in the internal organs.

Haemangiomas may need to be treated soon after birth if they interfere with feeding, breathing or other body functions. If a haemangioma grows on your child's eyelid, it will need to be treated within the first few weeks of life, otherwise it may interfere with the development of his or her vision.

Can haemangiomas be prevented?

There is no known way of preventing haemangiomas, although there are several research programmes looking at the cause of haemangiomas.

How are haemangiomas diagnosed?

Capillary haemangiomas or strawberry marks are obvious and sometimes recognised by parents. In the case of deep cavernous haemangiomas, your baby may require an ultrasound to confirm the diagnosis and check the depth in the skin. Occasionally haemangiomas may be associated with other rare syndromes. Your doctor will carry out other tests to see if this is the case and may organise a CT or an MRI scan if indicated.

How are haemangiomas treated?

In around 80% of cases, your child's haemangioma will need no treatment. However, in about 20% of cases, there may be complications that need treatment. Each case is different, so the doctor will decide which treatment or combination of treatment is best suited to your child. The treatment may consist of one or a combination of laser treatment, or drugs such as steroids. In some rarer cases alpha interferon may be indicated.

Are there any complications of haemangiomas?

You may be concerned that your child's haemangioma will bleed. They tend to bleed after injury and in some cases due to rapid growth. If bleeding starts, apply pressure to the haemangioma until it stops bleeding. If you are concerned, get medical attention.

Occasionally a haemangioma that is growing may form an open sore or ulcer. These ulcers can be painful and may become infected. If your child's haemangioma becomes sore, it is important to see your doctor. You should keep the ulcer clean and covered with a dressing. Ulcers usually heal in one or two weeks, otherwise laser treatment should be considered.

If your baby has a haemangioma near the eye, the nose or the mouth or in the nappy area, this can cause special problems. Your doctor will examine the haemangioma and decide if your baby needs more treatment, in which case you will be referred to the Hospital. Complicated haemangiomas need to be referred to a specialist centre for further management.

Support Group for Vascular Birthmarks

The **Birthmark** Support Group

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