

Port Wine Stains

What is a port wine stain?

A port wine stain is a birthmark of blood vessels under the surface of the skin and affects around one person in 3000. It is seen as a red or purple flat area of skin and can occur on any part of the body. It is present at birth and persists throughout life.

Why do they occur?

Port wine stains occur as a result of an abnormality in the formation of the blood vessels in the skin during the development of the baby in the womb. It is not something that the child has inherited from either parent, nor is it caused by anything related to the mother in pregnancy. *No parents should feel responsible for these blemishes.*

Do port wine stains change with age?

Yes. In babies and young children port wine stains are flat and pink. With increasing age, they become more purple, thickened and may develop small surface lumps.

Are there any associated problems?

Most port wine stains have no associated medical problems.

Individuals with a port wine stain adjacent to the eye should be seen by an eye specialist. Occasionally a port wine stain near the eye may be associated with *glaucoma*. This is potentially serious if missed and requires early detection and treatment.

A port wine stain over the scalp and / or forehead may rarely be associated with a deeper blood vessel malformation affecting the brain, sometimes referred to as the Sturge-Weber syndrome. This can be detected on a CT scan of the brain and affected children are referred to a neurologist for further advice and management.

An extensive port wine stain on any arm or leg can be associated with enlargement of the limb, known as the Klippel-Trenaunay-Weber syndrome. This is thought to be due to the increased blood flow. If the leg is affected, it is important that the length of the leg is measured regularly and if there is any significant discrepancy between the two legs, expert advice is needed. Thus it is recommended that the child is seen in the Vascular Birthmarks Clinic on a regular basis for review.

Psychological effects

Port wine stains can cause a lot of misery because they occur so often on visible areas, such as the face. The stigma of this can make life very uncomfortable for children at school and, indeed, at all ages of life. Cruel comments in childhood can leave psychological scars which may persist into adult life. These feelings can be alleviated by a positive attitude in close friends and family. The Vascular Birthmarks Clinic has a Social Worker with whom these psychological issues can be discussed.

TREATMENT OF PORT WINE STAINS

Is treatment available and successful?

Yes. There was no really effective treatment for port wine stains until the introduction of the *Pulsed Dye Laser*.

How does the laser work?

Lasers produce a very powerful beam of light which can target specific tissues within the body. The yellow beam of the *Pulsed Dye Laser* is preferentially absorbed by haemoglobin in red blood cells within the port wine stain, producing thermal damage to the targets blood vessels. The precision of the beam and the short exposure time (a fraction of a second) means that while the blood vessels in the birth mark are treated, the surrounding tissue is hardly affected. There is therefore negligible risk of scarring.

Which patients benefit from this form of treatment?

The majority of patients with a port wine stain will benefit from *Pulsed Dye Laser* treatment. The response varies from making the port wine stain paler and less conspicuous to complete clearance in some patients. Occasionally there is no response. Experience to date has shown that the *Pulsed Dye Laser* is a safe and effective treatment of port wine stains in children, with some evidence that younger children (3 months to 6 years) tend to have a better response than adults. This may be related to the pink colour, the relative smaller size of the birthmark, the depth within the skin and the smaller blood vessels.

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Please consult with your doctor or health professional to make sure this information is correct for your child.
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Where can this treatment be obtained?

Sydney Children's Hospital and Westmead Children's Hospital are dedicated paediatric facilities in NSW to offer Laser treatment for port wine stains.

What does the treatment entail?

Laser therapy is done as a "day only" procedure. Most children require a general anaesthetic although older children may tolerate the treatment awake. After an initial assessment a test patch is performed with the laser and the results assessed 6-8 weeks later. This helps determine the energy dose required. A plan is then made for a course of treatment. The number of treatment sessions needed depends on the size of the birthmark. Preference is given to face lesions.

What happens after treatment?

Immediately after treatment, the laser areas look like small bruises and the skin can be slightly swollen. This settles in 7-10 days and the treated area will fade in colour over the next 2 months. For this reason treatments are scheduled about 2-3 months apart. The amount of improvement will vary and several treatments are usually needed. The exact number will depend on the size of the area to be treated and the individual response to treatment.

Cosmetic Camouflage

This can be helpful to older children and adults. Advice is available from specialist centres.

Further Information

Please contact the Vascular Birthmarks Clinic if you have other questions or you wish to make an appointment for your child to be assessed at the Vascular Birthmarks Clinic.

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