



PROPRANOLOL FOR HAEMANGIOMAS OF INFANCY

What are the aims of this leaflet?

To explain how propranolol is used to treat haemangiomas (commonly known as strawberry birth marks) in infants.

What is propranolol and how does it work?

Propranolol belongs to a group of drugs known as beta-blockers, which are used to treat high blood pressure and fast heart rate. They work by slowing the heart and narrowing blood vessels. The latter is helpful in haemangiomas, as it reduces the blood flow through them, fading the colour and making them softer. Also, the cells that cause the growth of the haemangioma are affected by propranolol so that the haemangioma starts to reduce in size.

What is infantile haemangioma?

Infantile haemangiomas consist of small, immature blood vessels, and usually appear in the first few days or weeks of life as one or several raised red areas on the surface of the skin, or as bluish swellings arising deeper in the skin. They occur in up to 10 % of babies and are more common in females, premature infants and multiple birth (twins).

Haemangiomas grow rapidly in the first 3 months of life and usually stop growing between 6 and 12 months of age. They shrink slowly over several years.

Most haemangiomas cause no problems and do not require treatment; however, they need to be treated if they develop in a site that interferes with a vital function such as breathing, feeding or vision. Occasionally haemangiomas, especially those in the nappy area, can ulcerate and bleed, which may be very painful and will require treatment.

Steroid treatment by mouth was used as a first line treatment in the past, however since 2008 propranolol has been found to be a much safer and more effective treatment for haemangiomas, and now steroids are very rarely required.

Will Propranolol cure my child's skin condition?

Propranolol helps to reduce the growth, size and [redness](#) of haemangiomas faster than would occur without treatment and can prevent disfigurement in the long-term, especially where haemangiomas occur in the face. Untreated haemangiomas also shrink and fade on their own over several years and can leave disfigurement behind.

How often and when should my child take propranolol?

Propranolol is usually started as soon as a haemangioma causes, or is thought likely to cause, a problem. It is given 2 or 3 times a day by mouth until the haemangioma is thought no longer likely to interfere with a vital function and will not show further growth when treatment is stopped. This is usually around one year of age, but sometimes treatment can be prolonged.

What dose should my child take?

Your child's dose is worked out depending on their weight, and may be increased depending on the response to treatment. This means your doctor will adjust the dose as your child grows. Propranolol for babies is normally supplied as a 5mg/5ml liquid (that is 1ml of liquid contains 1mg of propranolol).

Propranolol is also available in other strengths, so you should always check the strength with your pharmacist, before using the medication. Ideally, any other strength should be avoided to minimise any risk of the wrong dose being given to your child.

If you have any queries about your child's propranolol dose, please talk to your nurse, doctor or pharmacist.

How long will my child need to take propranolol before I see an effect?

Early effects on haemangiomas can often be seen in a matter of a few days, but treatment usually needs to continue until at least 12 -15 months of age to ensure that the haemangioma will not re-grow. Propranolol can be discontinued without the need for gradual dose reduction.

What are the side effects of propranolol?

Most infants do not experience any side effects from propranolol in the doses used for treating haemangiomas. However propranolol may rarely be associated with the following side effects:

- wheezing and coughing (bronchospasm).
- sleep disturbance.
- colder hands and feet, making them turn a slight blue colour (peripheral vasoconstriction).
- weakness and fatigue, showing as floppiness and lack of interest in surroundings. loose stool (diarrhoea) and vomiting
- slow heart rate (bradycardia).
- low blood pressure (hypotension). low blood sugar (hypoglycaemia).
- If you have any concerns about these side effects, please discuss them with your doctor, nurse or pharmacist.

What should I do to avoid low blood sugar levels in my baby?

Low blood sugar is more likely to occur when a baby is not eating normal amounts of food or has gone long periods without feeding. Give the propranolol with milk or feed to help avoid your child's sugar level from becoming too low. Avoid long periods without giving a feed. If your child is temporarily not feeding well due to an illness or vomiting, the dose of propranolol should be withheld.

How will my child be monitored for the side effects of propranolol treatment?

The majority of infants do not require any monitoring when starting propranolol. Patients younger than 4 weeks of age, pre-term infants, and those with feeding difficulties or other additional disorders need measurement of heart rate and blood pressure for 2 hours in hospital after the first dose, and if the dose is doubled or trebled. It is likely that assessment and monitoring requirements will change with increasing experience with the use of propranolol for haemangiomas.

Can my child have immunisations (vaccinations) whilst on propranolol?

Yes, all immunisations may proceed as normal.

Does propranolol affect future fertility, or future pregnancy in female infants?

No.

Can my child take other medicines at the same time as propranolol?

Some medicines may interact with propranolol so it is important to check with your doctor before giving other medicines.

If your child develops wheezing it may be necessary to withhold propranolol until the wheezing has stopped.

If it is thought that the wheezing requires treatment with inhalers or nebulisers, consider the use of ipratropium bromide rather than salbutamol. Propranolol may have an opposing effect on salbutamol.

Teething gels containing lignocaine should not be given to babies taking propranolol. Some pharmacies sell teething powders that do not contain lignocaine and are safe.

Where can I get more information about propranolol?

<https://www.dermnetnz.org/topics/infantile-haemangioma/>

<https://www.gosh.nhs.uk/medical-information-0/medicines-information/treating-haemangiomas-propranolol>

This leaflet has been produced in conjunction with the British Society for Paediatric Dermatology.



For details of source materials used please contact the Clinical Standards Unit (clinicalstandards@bad.org.uk).

This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists and the British Society of Paediatric Dermatology: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.

This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel

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