

Pulsed Dye Laser Treatment

Information and advice for patients

Birmingham Regional Skin Laser Centre

What is pulsed dye laser treatment?

The pulsed dye laser is used for the treatment of vascular lesions such as Port Wine Stains, Facial Red Veins, some complicated Haemangiomas, Spider Naevi, Hypertrophic Keloid scars and many others.

Some birthmarks are due to extra pigment in the skin. Others are due to excess of blood vessels that are bunched together or do not grow normally. Some vascular lesions such as facial red veins can become extensive over time due to exposure to the sun and hormonal changes during pregnancy.

Even though most vascular lesions and birthmarks do not cause physical harm, they may make you or your child feel shy or self-conscious. Each person is different and reacts differently. What bothers one person may not bother another. Parents of a child with a birthmark can reduce the impact that it has on their child's life by understanding and accepting that the birthmark is normal.

How does the laser work?

The laser energy is delivered in a series of extremely brief pulses, which over a series of treatments break down the red colouring of the skin.

- The laser sends a short beam of light to the skin through a fibre optic cable.
- On the end of the cable is a hand piece device that looks like a pen. This is gently placed on the skin and a button is pressed by the doctor/nurse.
- This sends a shot of light to the skin in a series of extremely brief pulses.
- The light from the laser is absorbed by the redness in the blood vessels.
- As the light is absorbed it causes the blood vessels to heat up.
- The heat destroys/damages the blood vessels causing the skin to bruise.
- This bruise will fade in 7-14 days.
- Over a number of treatments you may notice the overall appearance and redness of the skin has lightened.

What are the benefits?

The benefit of the treatment is that it may remove or lighten the colour of the birthmark or blemish being treated. It may also improve the texture.

This treatment also has psychological benefits as it can help patients to feel more confident and less self conscious.

However, the outcome of the treatment is different for every individual.

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What are the risks and side-effects?

Skin reaction

Most patients will experience a temporary reaction to the treatment such as bruising, whitening or crusting of the treated area. However, this shows that the laser therapy is effectively breaking down the unwanted colour in the skin. The reaction will disappear, along with some or all of the colouring of the unwanted birthmark or blemish.

Increased sensitivity to sunlight

After laser treatment, your skin is very prone to sunburn for up to 6 months so it is important that you use sun protection throughout your treatment.

Pigmentation changes

There is a small risk of lightening (Hypopigmentation) or darkening (Hyperpigmentation) of the skin. This is rare but more likely to happen if you have Afro Caribbean or Asian skin type or the area to be treated is tanned.

- Hypopigmentation (pigment loss) – this is rare but can be permanent.
- Hyperpigmentation usually fades but may take up to 6 months and sometimes longer. This has been a complication in 14-17 out of 100 patients.

Scarring

1-5 in 100 people will have some scarring after treatment. It almost never occurs on the face but can occur around the ankles in patients with varicose veins.

What are the alternatives?

There might be other treatment options such as drug therapy, make-up and/or support groups and counselling that can help. It may be possible to conceal or camouflage the mark with special covering creams or make-up. You can go to the Red Cross website for advice on skin camouflage creams and services.

Preparation before having pulsed dye laser treatment

- Please note laser treatment cannot be carried out on any patient who has a suntan; the tan must be allowed to fade before a laser procedure is undertaken.
- Throughout your treatment we would advise that you protect your skin with sun block, factor 30 or above.
- It is necessary to remove make up, perfume and topical anaesthetic creams from the treatment site. Skin wipes will be available in the laser room for your use.
- You may also be asked to remove jewellery around the treatment site.

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The treatment

The first stage of the treatment process involves a test patch, which is carried out on the treatment site. If the results are satisfactory, and there are no concerns with your test patch you will be seen after 8 weeks, where a larger area will be treated.

- You will be asked to remove any make up, perfumed products, jewellery or piercings around the treatment site.
- For your safety and the practitioners' safety you will both be required to wear goggles throughout the treatment. Please do not remove your goggles during your treatment.
- The doctor/nurse will carry out your laser treatment.
- A hand piece device is attached to the laser, this is gently pressed on the skin and a button is pressed.
- The laser will deliver brief pulses of light. When this laser light hits your skin it feels like a rubber band hitting the skin.
- A cooling device is attached to the laser which prepares the skin for treatment by cooling the skin. You will feel a cool spray just before the laser delivers brief pulses of light.
- When safe to do so the doctor/ nurse will inform you to take off your goggles.
- Aloe vera gel is then applied to the skin, to cool and soothe the treated area.

The number of treatment sessions you need and the amount of time each session lasts will depend on the problem. The medical practitioner who sees you for your first treatment will give an estimate of the number of sessions you may need.

Will it hurt?

Some people may find pulsed dye laser treatment uncomfortable but most patients do not find it too painful. We can arrange for you to be treated with a local anaesthetic cream to numb the area.

Some children find the procedure too painful even with a local anaesthetic and may need their treatment under a general anaesthetic, especially if a large area is being treated.

After having pulsed dye laser treatment

1. You will notice the area becomes bruised. The bruising usually lasts for 7-14 days but on average is gone within 10 days. The bruised area often darkens for 1-2 days after treatment and these reactions are normal and nothing to be alarmed about.
2. It is important not to pick at the treated skin even if some crusting develops in the treated area.

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3. The skin is best just left open to the air. We recommend the use of Aloe Vera Gel which cools, soothes and promotes skin recovery. This can be used as frequently as necessary and it is helpful to bring it to your treatment sessions for your use. The gel is available from most chemists and health food stores.
4. A minority of patients suffer pain or discomfort after treatment and this can be relieved with ice packs and aloe vera gel. If pain persists simple analgesics, such as Paracetamol, may be helpful.
5. In some cases, usually in people with darker skin types, brown pigmentation can occur in the skin and this clears more slowly over several months.
6. It is unusual for the skin to break after treatment.
7. Sun block with a protection factor of 30 or over, should always be used for up to 6 months after laser treatment as, if exposed to sunlight, the treated skin is likely to go brown and this increased tanning in the area may take 3-4 months to settle.
8. Make-up may be applied over the treated area and the skin may be washed, as long as this is done gently.
9. In the 24 hours after your treatment avoid hot baths and showers, saunas and swimming.
10. Do not apply harsh/perfumed products on the treated area.

Check your skin

You should observe your skin for any loss or increase in skin pigment and any scarring. If you experience any of these reactions you need to report them to your doctor or nurse for your safety. It will not necessarily mean that you will have to discontinue treatment.

Your next appointment

Your next appointment will be booked by the receptionist on the day of your appointment; otherwise it will be sent through the post.

As long as the preparation and after care advice is followed, no further follow-up care is required. You will not need to visit your doctor unless we advise you to do so.

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How to contact us

If you have any concerns or questions please contact:

Birmingham Regional Skin Laser Centre

0121 507 6637/6639

Monday – Friday, 9am – 4pm (except bank holidays)

Out of hours - If your concern or question is regarding your treatment please contact us during our opening hours.

If you experience any adverse reactions from your laser treatment, which cannot wait until our opening hours please seek medical advice from your GP.

Further information

For more information about our hospitals and the services we offer please see our website: www.swbh.nhs.uk

Sources of information used in this leaflet

Candela - User Guide and Manual

If you would like to suggest any amendments or improvements to this leaflet please contact the communications department on 0121 507 5420 or email: swb-tr.swbh-gm-patient-information@nhs.net



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A Teaching Trust of The University of Birmingham
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