



The Leeds
Teaching Hospitals
NHS Trust

Laser Treatment

Information for patients



What is a LASER?

A LASER is a concentrated beam of light of a specific colour. LASERs can be used to selectively target structures within the skin, depending on their colour / chemical properties,

What does LASER treatment involve?

Before the start of treatment, you will be asked to sign a consent form. The risks, benefits and practicalities of treatment will be explained to you, as well as an agreement reached between practitioner and patient as to which areas are suitable for treatment.

LASER treatments are delivered in the departmental treatment rooms. They involve a number of 'pulses' of laser light being applied to the skin from a hand-held device attached to the laser machine. The number of pulses required depends on the size of the area treated.

Before your first full treatment, you will need a baseline photograph which is usually arranged at your initial consultation. You will then undergo a test patch so that we can assess the reaction of your skin and see if the treatment will be effective. At this appointment, you will have further photographs to be taken of the test area to help us to assess the response at your subsequent visits.

All patient photographs are kept in a protected electronic system as part of your electronic medical records (to be viewed only by the staff involved with your care). Following a successful test area, you may require several treatments to get the best possible result. Some patients need to be treated over several months / years and larger areas may need to be treated in stages.

Further test areas may be required throughout your treatment course.

Your LASER treatment will be carried out by specialist practitioners or by doctors with specific training in skin LASER treatments.

Will the treatment be painful?

Each LASER pulse causes a brief stinging sensation and after treatment, the area may continue to sting / feel warm for a few hours.

Although LASER treatment is often uncomfortable, most people tolerate the treatment well. There are various methods of cooling the skin before the start of treatment, which helps to protect the epidermis (top layer of skin) and make the treatment more comfortable.

If you find the treatment particularly painful, your practitioner can advise you about suitable analgesia (pain relief).

We do not routinely offer anaesthetic cream for patients undergoing vascular LASER treatment or LASER hair reduction, as this is not usually required and may reduce the effectiveness of the treatment. You may be offered local anaesthetic cream for pigment LASER treatments or fractional ablative LASER treatments.

A small proportion of our patients (e.g. young children or those undergoing extensive treatments) will undergo their LASER treatment under general anaesthetic.

Because LASER light is very powerful, your eyes need to be protected by wearing goggles during treatment. If the eyes are not adequately protected, LASER light can cause permanent damage resulting in loss of vision.

For treatment near or around the eye, it may be necessary for you to have an internal protective contact lens inserted using local anaesthetic drops. The contact lens would be removed immediately after your treatment and an eye patch would then be applied to be kept in place, 4 hours following treatment. This is to reduce the risk of injury to the eye as your blink reflex would be temporarily disrupted from the anaesthetic drops. If your treatment involves an internal contact lens, we advise that you **do not drive until it is safe to remove the eye patch.**

In order to comply with LASER Safety Rules, you cannot be accompanied by friends or relatives in the treatment room unless there are extenuating circumstances.

What are the risks / side-effects of laser treatment?

The response to laser treatment is very variable and it is difficult to predict the exact outcome for each patient. You would expect to have some discomfort for the first few hours as well as redness and swelling for a few days. Some lasers result in bruising. Uncommonly, an adverse reaction such as a blister or scab can occur. There may be a temporary loss / gain of pigment in the treated area which may last for several months or, rarely, be permanent.

Your laser treatment may have to be delayed if you experience increased pigmentation in the area.

LASER treatment may trigger a cold sore in patients who have a history of cold sores previously and the herpes virus can infect the laser treatment site. If the skin is broken following treatment, there is a small risk of secondary bacterial infection which would present as spreading redness and pain around the treatment site.

Scarring following any LASER treatment is very uncommon (unless undergoing focal ablative laser treatment, for which scarring is more common). If scarring does occur, it is most commonly a slight depression in the skin or textural change. This can often return to normal in time. A thickened, lumpy red itchy / painful scar can develop but is unusual.

A lack of adverse reactions or scarring after a test or any treatment does not exclude this risk with any subsequent treatment.

Which laser will be used for my treatment?

1. Vascular LASER - Pulsed Dye Laser (PDL), KTP, Long Pulsed NdYAG

Vascular LASERS target red-coloured haemoglobin in blood running through the vessels just below the surface of the skin. The high energy produced by the LASER heats up the blood vessel which then results in either vessel rupture or clotting within the vessel such that the visibility of the vessel is reduced.

Treatment with a vascular LASER will often result in swelling and redness of the skin for 3 - 5 days afterwards. For **pulsed dye LASER treatment specifically, you would expect to have dark purple bruising (purpura) in the treated area which lasts for 10 - 14 days.**

2. LASER treatment to Pigmented lesions

Pigment LASERS target natural skin pigment (melanin), ink or debris in the skin. They work by breaking up pigment by vibration. The fragmented pigment is then gradually cleared by the body over several weeks.

After treatment with a pigment LASER, you would expect to see a white 'frosting' over the surface of the treated area and surrounding purple bruising. The surrounding skin is likely to be red and swollen. The initial colour changes should settle after 10 - 14 days. Less commonly colour changes following pigment laser treatment can last for several months or more.

Rarely treatment of pigmented lesions (mainly tattoo ink) can result in a phenomenon known as 'paradoxical darkening' of the pigment producing a dark brown / black colour. This can be reduced by subsequent treatments but may remain.

3. Ablative LASER treatment (Erbium YAG)

Ablative lasers are absorbed by water in skin structures resulting in 'vapourisation' of the target tissue. This means that treatment with ablative lasers is a more invasive and 'surgical' based treatment resulting in a break in the skin.

Focal ablative treatment

This treatment can be used to destroy discrete skin lesions and smooth out textural irregularities, as well as remodelling of larger areas of tissue. Such treatment requires a local anaesthetic injection or a general anaesthetic before the start of treatment.

As the treatment creates an open wound, a dressing will be applied for 24 - 48 hours and you will be advised to use mupirocin ointment or similar to keep the area clean and moist for several days. It is not uncommon to see some oozing / bleeding for a few hours after treatment. Frequently, focal ablative treatment results in scar tissue.

Fractional ablative treatment

This treatment splits the ErbiumYAG beam into a series of tiny LASER beams which are equally spaced apart. The laser creates a number of small vapourised channels in the skin which produce a mild heating effect. This has been shown to aid wound healing and the remodelling of scar tissue. Creation of the small channels also allows the delivery of topical treatments (e.g. steroid) deeper into the skin. Fractional treatments are most commonly used to treat thickened / inflamed scar tissue.

The treatment is frequently tolerated without anaesthetic but, if necessary, a topical anaesthetic cream (obtained from your GP) can be applied under a dressing for 1 hour before the start of treatment.

There will often be a small degree of oozing of blood from the ablated channels for a few hours after treatment and therefore, a dressing will be required for 24 - 48 hours after treatment.

What do I need to do to prepare for my LASER treatment?

To ensure that you receive the best possible results, following the advice for preparation before the start of treatment and aftercare is a vital part of the process. It is important that you read through the following information and let us know if you have any questions or queries.

- Please notify your Practitioner if your medical status changes.
- Please notify your Practitioner if you have a history of seizures or fainting.

Before and during a course of LASER Treatment

- Wear fragrance free SPF50 sun protection on a daily basis to ensure that your skin is not tanned. Please ensure the product has a 5 star rating.
- **We are unable to treat tanned skin.** This includes natural tan, sunbed use and fake tan. These must be avoided for a minimum of **6 weeks** before the start of, and during, treatment.
- Please notify the clinic in good time of any medications that you are taking. Taking certain prescription medications may affect your treatment.
- Ensure that treatment area is free from make-up, moisturiser and sun cream.

If you wish to wear make-up before your appointment, please attend the department 30 minutes early to allow you to remove it and allow your skin to settle before treatment (please bring your own products).

If the treated area is in a hair bearing area e.g. the beard area, please attend your appointment clean shaven.

This regime must be adhered to throughout the course of your treatment. Failure to follow the above advice is likely to mean that we will be unable to carry out your treatment when you attend.

After treatment

- The skin may be sensitive to injury in the first few days after treatment and should be treated delicately. Avoid any injury, rubbing and scratching.

- Avoid shaving the area for 5 days.
- Avoid strenuous exercise, swimming, saunas, steam rooms, hot baths or showers and fragranced products for 7 days.
- Avoid make-up and moisturiser and sun cream for 48 hours, following treatment to prevent any rubbing / friction to your skin.

The treated areas will be sensitive to sunlight after treatment. Fragrance free factor 50 sun block with five star UVA protection should be used for 6 months, following the end of your treatment. Strong sun exposure should be avoided wherever possible.

If any scabs or blisters develop, they should be left intact if possible and we request that you contact the department for further advice.

It is important that you comply with treatment guidelines to ensure there are no unnecessary delays.

Cancellation policy

The demand for LASER treatment funded by the NHS is extremely high and we are rarely without a waiting list. We therefore, value each and every appointment, and adhere to the local cancellation policy for elective treatments which is as follows:

After two consecutive cancellations or one non-attendance without informing the department, you will be discharged from the clinic and your G.P. will be informed.

Contacting us:

If you have any general enquiries or concerns about your **treatment** or **appointments**, we would be happy to discuss them with you.

Please call the **Laser Suite: (0113) 392 4307** during clinic hours, Monday - Thursday 8.00 am - 4.00 pm.

Treatment reactions only:

Laser Suite: **(0113) 392 4307**

Monday - Thursday 8.00 am - 1.00 pm,
Friday 8.00 am - 11.30 am.

Dr Urwin's Secretary: **(0113) 392 4371**

Friday 11.30 am - 4.00 pm.

If you cannot contact either of the above, **contact your GP** or **the NHS Helpline on 111**.



What did you think of your care?

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Your views matter



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Developed by: Leeds Laser Centre

Produced by: Medical Illustration Services

MID code: 20220128_007/MH

LN004728
Publication date
02/2022
Review date
02/2024