

Low Level Laser and Hair Loss

What is low level laser therapy?

Low level laser therapy (LLLT) is a technology using a specific wavelength of red light known to penetrate through the skin layers to the hair follicle and have a biological effect on hair follicle activity and subsequent hair fibre growth. It is thought to increase blood flow around the follicles and have a positive effect on growth factors.

Does it work?

The technology has been around for more than 10 years now. It is commercially successful for the companies that produce the devices, some of which offer money back guarantees, and therefore patients must gain benefit from the devices. There are quite a large number of peer reviewed articles showing benefit and a number of these are well constructed trials comparing the actual device with a similar looking device without the specific lasers, a sham device. There have also been summary reviews and laser comes out favourably, and in some studies, superior to minoxidil. The reality is that many patients are using LLLT, minoxidil and other treatments, so appreciating which is having the effect is often difficult.

Do I need to go to a clinic or can I buy a device for home use?

There are clinics that offer courses of treatments and have long treatment packages (eg twice weekly for a year), but the majority of patients buy home use devices. The “up front” costs are quickly recouped compared to a salon price and even high end lasers work out cheaper than Minoxidil after several years of use. The running costs are very cheap.

I've seen a wide variation in the number of lasers, shape of devices and cost – what sort of device is most likely to work?

This is a difficult one to answer and the reality is that the science is behind the commercial companies and we don't really know. Most experts extrapolate our understanding of other wavelengths of light (eg UV for psoriasis) and therefore favour higher energy devices, which are usually the devices with more lasers. I favour devices with more than 240 lasers in cap shape, but the cost of manufacture is related to how many lasers and therefore these are more expensive. The risk of buying cheaper devices with less lasers is that they may not work, or not work so well, and therefore the investment could be wasted.

Be aware of cheap devices on ebay, many originating from the far east. Some analysis has shown that the wavelengths and energy are not always what the manufacturers state. I tend to recommend sticking to the big brands, eg Hairmax, Lasercap, Capillus but some are less easy to get hold of in the UK. Hairmax do have a UK distribution and their top device, the Regrow MD 272 is one of the most affordable “pro” level devices.



How do I know if it is working?

I would recommend taking a series of photographs from the front, top, back and sides and use these to monitor progress. You should try and keep lighting, colouring, hair length and as many other factors the same – not an easy task! The more scientific way is to have videotrichoscopy performed. This involves taking a series of photographs from 20-40x magnification with polarizing light and these images are then sent off to Tricholab for manual analysis at a small additional cost. Ideally this should be carried out at the start of treatment and then after a period of time, eg 6-12 months.

How long do I need to continue using it?

Like Minoxidil, Finasteride and other treatments for pattern hair loss, these devices are supposed to be used long term or as long as you want to maintain hair thickness. Most are used on alternative days and can be worn whilst doing something else, eg watching TV.

Is this technology used for any other conditions?

LLLT is thought to have anti-inflammatory effects. There have been several very small scientific papers advocating their use for scarring hair loss conditions, such as Lichen Planopilaris. They have also been used in Frontal Fibrosing Alopecia. When used for these conditions, most devices are used once daily

