**What is a Laser?**

The acronym ‘[LASER](http://www.dermnetnz.org/procedures/lasers.html)’ stands for **L**ight Amplification by **S**timulated **E**mission of **R**adiation. A laser works by emitting a wavelength of high energy light, which when focused on a certain skin condition creates heat.

**What is Nd:YAG / Diode Laser?**

* Nd:YAG (neodymium-doped yttrium aluminium garnet) is a crystal that is used as a laser medium for solid-state lasers.
* Nd:YAG laser has a wave length of 1064 nm and has the capability to reach deeper layers of skin tissue than other types of lasers.

**How Does Nd:YAG / Diode Laser Work?**

Lasers work by emitting a wavelength of high energy light, which when focused on a certain skin condition will create heat and destroy cells and hair follicles. Laser technology works by targeting dark pigment. Therefore, it works best on pale skin and dark coarse hair. The lighter the skin and the darker and more coarse the hair, the better are the results.

**How Does Laser Hair Removal Work?**

Lasers designed for permanent hair reduction emit wavelengths of light that are absorbed by the pigment in the hair (melanin). If the surrounding skin is lighter than the color of the hair, the energy of the laser is concentrated in the hair shaft, effectively destroying it without affecting the skin or the follicle.

In addition to hair removal Nd:YAG / Diode laser can treat the following skin disorders;

**What Does The Laser Procedure Involve?**

* The patient must wear eye protection (an opaque covering or goggles) throughout the treatment session.
* Treatment consists of placing a hand piece against the surface of the skin and activating the laser. Many patients describe each pulse feeling like the snapping of a rubber band against the skin.
* Care should be taken in the first few days following treatment to avoid scrubbing the area, and/or use of abrasive skin cleansers.
* During the course of treatment patients should [protect the area from sun exposure](http://www.dermnetnz.org/treatments/sun-protection.html) to reduce the risk of [postinflammatory pigmentation](http://www.dermnetnz.org/colour/postinflammatory-pigmentation.html).

**Are there any side effects from Nd:YAG / Diode laser treatment?**

Side effects from Nd:YAG / Diode laser treatment are usually minor and may include:

* Pain during treatment (reduced by contact cooling and if necessary, topical anaesthetic)
* Redness, swelling and itching immediately after the procedure that may last a few days after treatment
* Rarely, skin pigment may absorb too much light energy and blistering can occur (this settles by itself)
* Changes in skin pigmentation. Sometimes the pigment cells (melanocytes) can be damaged, leaving darker (hyperpigmentation) or paler (hypopigmentation) patches of skin. Generally, cosmetic lasers will work better on people with lighter rather than darker skin tones
* Bruising affects up to 10% of patients. It usually fades on its own
* [Bacterial infection](http://www.dermnetnz.org/bacterial/wound-infection.html). [Antibiotics](http://www.dermnetnz.org/treatments/antibiotics.html) may be prescribed to treat or to prevent wound infection.

**What Are the Hair Growth Cycles?**

Hair growth in each hair follicle occurs in a cycle. There are three main phases of the hair growth cycle: anagen, catagen and telogen.

**Anagen** (active) is the growing phase or when the hair fiber is produced.

**Catagen** (club hair) is the period of controlled regression of the hair follicle. This phase is when the lower part of the hair stops growing, but does not shed, and the follicle is reabsorbed.

**Telogen** (tired) is the last of the hair growth cycle. In this resting phase, the old hair falls out in preparation for the development of a new anagen hair.

Normally this cycle of hair production will continue for the duration of the individual's life. However, various factors can influence, promote and inhibit hair production. Laser affects hairs when it’s in its anagen phase of growth. Thus, patients need multiple treatments in order to disable each batch of hair as it enters the anagen phase of growth.

### Nd YAG / Diode After care and FAQs

### Before Your YAG/DIODE Treatment

Please shave the area the morning of your treatment or within 10 hours of your appointment, (this does not need to be done for your initial consultation and patch test). You will be charged extra if this is to be done by the therapist at the time of treatment. If your hair's density is very sparse leave some hair visible so we may determine precisely where to treat.

Do not wax, shave, tweeze or bleach any of the areas to be treated at least one month prior to your treatment. It is also recommended to avoid any irritating medication or chemicals which may interfere with the YAG/DIODE treatment.

You must also avoid any sun exposure to the areas to be treated. This includes any solariums for about one month prior to any YAG/DIODE treatment. Using an SPF 30+ sunscreen will help to minimise any sun exposure prior to treatments

### After Your YAG/DIODE Treatment

Please keep the area treated away from any sun exposure, and use SPF 30+ sunscreen for at least 7 days after your treatment to allow your skin to heal and recover. Also minimise any bathing or washing with hot water, use warm water until your skins feeling of sunburn has disappeared. Most of the hairs that have been exposed to the YAG/DIODE will appear within 1 week of treatment. This means they have detached from the root and are being expelled. Once you have noticed this you can then gently exfoliate the hairs with a soft wet towel or non invasive exfoliating gloves. Please ensure you only do this once your skins redness has calmed down as this is a natural reaction and generally lasts only about 4 days to 1 week. If you have any irritation after your treatment this usually lasts for 24 hours. Please also be aware that no two skins are alike and reactions may vary from person to person.

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|  | Intense Pulse Light Systems are an effective way to remove unwanted hair. It is most effective when the hair colour and skin colour are different.  **How does it work?**  Our YAG/DIODE hair removal system produces a high intensity flash of filtered light from the applicator head, which is placed in contact with the skin.  The energy from the light is absorbed by the pigment melanin, which is the chromosomes that gives the hair its’ colour. The hair acts as a conductor of the light and effectively turns it into heat to raise the temperature of the surrounding cells to 70 degree centigrade or more. The heating denatures, or kills, the cells making them incapable of producing further hair growth.  **What colour of hair can be treated?** Other than white and grey hair, all hair colours can be permanently reduced through treatments. Dark hairs are most easily treated due to the high concentration of melanin that gives maximum absorption. In order to compensate for the lower levels of melanin found in fine hair, the operator can simply raise the fluence output from our system. The software allows the operator to adjust the treatment parameters for different hair and pigment types according to the client’s individual requirements.  **Does it hurt?** As the light energy is absorbed, the discomfort depends upon the concentration of melanin in the epidermis and the hairs combined. Consequently there will be more sensation in darker skin types and those with dense hair. No anaesthesia is required and most clients describe the pain as moderate and acceptable (“as if a hairbrush has been tapped against the skin”).  **Does the client need to shave prior to treatment?** As long hairs use up the energy and prevent all of it reaching the hair root, ideally hairs should only be 1 to 2 mm long when the patient comes in for the treatment. By avoiding any other form of epilation, plucking or waxing in the month leading up to the treatment, it ensures as many follicles as possible contain hair, and thus can be destroyed by the light. Additionally, bleaching should also be ceased in the weeks leading up to the termination.  **Why hairs “grow” after treatment?**  Unlike other light epilation treatments, hair is not vaporized by the EcoLight treatment. The heat kills the hair root, but the hair remains in the skin and sometimes become attached to the epidermis. Over the 1-3 weeks following the treatment, the hairs will fall out as the epidermis renews itself. During this period it will seem that the hairs are “growing.”  **How can you tell if the treatment has worked when the hairs are not removed immediately?** A few minutes after the treatment, there are various indications of the effectiveness of the treatment. These include: the colour of hair becoming charcoal, the hair expanding in size or a red ring around each follicle. These are good indications that sufficient heating of the follicles has taken place. However, this is not always seen and many patients have great results without the past treatment signs.  **What are the side effects?** The visible light completely is completely safe, and thus, no special precautions are needed apart from glasses for the brightness generated from the flash lamp. The skin of some patients becomes quite red immediately after treatment and very rarely small blisters as form excessive sun exposure can occur. However, most patients experience no skin reactions should disappear within hours to a few days. Unlike electrolysis the treatment is non-invasive.  **How many treatments are necessary?** Only hair in the growth phase can be treated. The number of hairs in the phase varies from 20% to 70% depending on the body. The length of the growth cycles also vary from 6 to 24 weeks depending on the body site. For most patients 3 to 5 treatments are sufficient to permanently reduce an area of hair up to 85%. After the first treatment, most patients get significant reduction in hair density as new hairs tend to become finer. It is important to know that the first treatment is believed to synchronize the anagen (growth) phase of the non-anagen hairs. This may cause what seems to be re-growth, but actually just sleeping hairs starting to grow at the same time (new growth). This in turn makes the following treatments more effective.  **How do I prepare for the treatment?** Patients should avoid tanning for 1 month prior to the treatment. Immediately after each treatment session, the skin is particularly sensitive to UV light and strong sunlight should be avoided for 4-5 days.  **Is it Permanent?** Most authorities would agree that using current laser and YAG/DIODE technology, it is possible to permanently remove hair up to 85-90%. Further, histology studies have found destroyed and denatured hair follicles cells in post treatment.  **Pre-treatment advice**   * You must make the therapist aware of any medical or dermatological conditions and changes during the course of the treatments. Including a change in any medication * You must not wax, bleach, pluck, or have electrolysis for at least 4 weeks prior to treatment. * You must not tan or use false tan on the treatment area for a minimum of 4 weeks prior to treatment. * Use a Sp Factor of no less than 25 on exposed areas as YAG/DIODE can NOT be applied on an active tan * You must shave the unwanted areas at least 36 hours prior the treatment * You must read and sign the consent form prior to treatment.   **After Care Treatment**   * Hairs are not vaporized, nor do they fall out immediately. Hairs will usually fall out within 1-3 weeks from treatment. * Hairs will appear to *grow* as they are slowly pushed out of the follicle by the epidermal growth. * Clients must not expose themselves to strong sunlight between treatments.  Including any form of Ultra Violet rays (Sun beds) * Sp Factor of no less than 25 is essential on exposed areas * Treatment repletion can range between 3-12 weeks depending on the body site and growth cycle of the hair. * If a slight heat reaction occurs apply a cold compress and apply an Aloe Vera gel or antiseptic cream * Only apply Makeup 30 minutes after the treatment with clean applicators.   **Cancellations and Late appointments**  Cancellations of an appointment must be made before 48 hours prior to the treatment or could incur a charge or the treatment will be lost if purchase as a part of a package.  If you are more than 15 min late we have the right to refuse the treatment and it could be lost if purchased as part of a package. (Please try your best to be on time or call us if you are running late)  **Unfortunately, you will be liable to pay a cancellation fee of £15, or alternatively forfeit a treatment if you are on a pre-paid course if the cancellation period is not adhered to.**  Please be aware if you arrive for a pre-booked laser/IPL treatment, and it is considered unsafe to continue your treatment due to recent sun exposure or the skin holding a tan (real or fake) you will also be liable to pay the cancellation fee.  Each treatment is specific for a person who has had consultations and patch test and it’s NOT transferrable to another person.  We hope you understand that our appointments are limited and we constantly endeavor to accommodate appointments for all of our clients at the times and days most convenient to them. Therefore, it is a waste of appointment time if a clinic room has been booked out for a treatment that cannot be carried out due to a last minute cancellation.  **REFUND POLICY**  Please note that we do not offer refunds on any treatment purchases. However, if you change your mind about your purchase within 14 days, we are happy to exchange it for another treatment or product or offer you a credit note.  **CHILD SUPERVISION IN CLINIC**  Children are welcome into our clinic however we regret that our staff members are unable to supervise children during treatments for both health and safety and insurance purposes. Please could we politely ask that you do not bring your children along to your appointment with us unless they are supervised by another adult. Children will not be allowed into treatment rooms for health and safety reasons. We apologies for any inconvenience caused. |
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