

Introduction to Photomedicine

Photomedicine is a very new field of medicine that utilizes light energy to treat a growing number of medical and skin problems. Often we think of light as only causing injury to the skin, however, when it is used in a controlled manner (that is when we can pick and choose the right wavelength and duration of exposure) light can be very effective in treating a host of skin conditions and in removing efficiently unwanted hair.

How light can be used to remove unwanted hair

Light at specific wavelengths can be used to destroy hair. Melanin is a pigment found in the hair shaft and serves as the target. When melanin in the hair shaft absorbs the light, the energy in light is converted into heat. The heat can then be transmitted down the hair shaft to the root causing injury or destruction of the hair. The source of the light can be a laser that operates in the red to near infrared wavelength region or the light can come from a specialized flash lamp that utilizes filters that eliminate shorter wavelengths. This allows only longer more penetrating wavelengths to be emitted. This device allows for a wide choice in wavelengths, which makes the device effective in treating a wide range of skin types (light to dark skin). One of the challenges in photomedicine is to be able to destroy the target (hair) but not injuring the skin. The potential for injury exists because the epidermis (varying according to skin color) contains melanin and melanin in the skin can compete with the melanin in the hair follicles for absorption of the light energy. If melanin in the skin were to absorb significant amount of light energy, the epidermis could be injured. This problem can however be prevented by the selective cooling of the epidermis.

The device that we have selected is the Palomar MediLux IPL, which utilizes a sapphire hand piece that is cooled between 0 and 10 degrees Celsius. The hand piece is put in direct contact with the skin and provides a heat conduction pathway away from the epidermis before, during and after each pulse of light is administered. Furthermore, some applied pressure to the skin is administered.

There are three phases in the life cycle of a hair. They are Anagen (the active phase of hair growth), Catagen (a transition phase when cell division ceases) and Telogen (a resting phase during which the hair follicle detach and fall out). Light therapy is only effective when the hair is in the Anagen phase (ie: active cell division is taking place). On any given body part a variable amount of hairs are in the Anagen phase at any one time. Because this is the only time when hair is vulnerable to injury, one application is not likely to be completely successful and a repeat application will be necessary when the hair follicles once again enter into Anagen. The duration of each phases can vary from one part of the body to the next, but this usually occurs in 6-8 weeks.

Melanin is absent in blond, red and gray hair and therefore it is very difficult to destroy this hair type. Patients with darker skin have more melanin in their epidermis and therefore hair removal, although possible, is somewhat more difficult. The ideal patient is one with light skin, but dark hair. Because the flashlight used in therapy could be damaging to the retina of the eye, proper eye protectors must be worn both by the patient and the operator of the IPL device.

The IPL therapy is not a completely painless procedure, but the amount of discomfort is relatively mild and might, when it is at its worst, equals to the discomfort felt when an elastic band is flicked against the skin.

Some hair is immediately vaporized at the time of the procedure, but most often the hairs fall out over

the course of the next week. There can be and usually is some mild swelling of the skin after a treatment. This can last several days, but does not require any specific treatment.

Aftercare Instructions

Please read the following carefully! This information will help you know what to expect and how to care for the treated areas.

What to Expect

- The treated area may swell somewhat for a day or so. Swelling results from heat, not infection, and is therefore normal and expected.
- Crust may form in some spots (in hair or skin spot removal). Again, this does not mean infection and does not mean the area will scar. **DO NOT** pick at crusting!
- In hair removal you may notice dead hair surfacing for 2-3 weeks after treatment. Although this may appear to be new growth, it is not. This process is called “purging,” and will take time to complete. You should wipe away these hairs with a damp cloth or exfoliate with a loofah once the sensitivity of treated area resolves.
- For optimal results multiple treatments are necessary. Follow up treatments will vary between 4-8+ weeks depending on body area.

Care of the Treated Area

- If the area becomes dry or itchy, you should apply a thin coat of fragrance-free moisturizer (Lubriderm, Eucerine or Curel) to the treated area once or twice a day for 7 days. If itching persists, apply an over the counter hydrocortisone cream.
- Pat dry after showering, but do not pick or treated area
- Tylenol, aspirin or ibuprofen may be taken if you have any discomfort
- Apply a cool compress to relieve swelling or warm sensations for 1-2 hours after treatment
- If you experience intense itching 2-4 days after treatment, application of ice, Gold Bold Cream®, or hydrocortisone cream (i.e. Cortaid Intensive) will help

Precautions

- Do not scratch or pick the area. Scratching or picking the area will have the same result as picking any scab or pimple, and the area could scar.
- Wear clothing or sun block (SPF 30) to protect the treated area from direct sun exposure. Be sure to reapply sun block throughout the day.

It is imperative to the success of future treatments and skin health to protect the skin from sun exposure while undergoing laser hair removal treatments.

If you have any further questions or concerns. Please contact us immediately.

Enlighten

Cancellation Policy

The goal of Enlighten is to give our patients the utmost of attention and care. Time is valuable for all. Our office will require a 24-hour advance notice of cancellation of a scheduled appointment or a \$50 charge will be applied. We understand that emergencies do occur, and we will take those into consideration (preferably before the appointment). We hope, however, that this policy will reduce confusion, delay and improve the attention that we are able to provide. I appreciate your cooperation.

Respectfully Yours,

Kari Feinstein

Print Name: _____ Signature: _____

Patient Consent Form Intense Pulse Light Treatment

1. I understand that the Intense Pulse Light System is intended for the treatment of skin discoloration, prominent blood vessels, and hair removal. Initial _____.
2. I understand that the skin's response to this treatment is not 100% predictable and that in some situations a test site will be recommended. This response will guide *Enlighten's* technicians in determining the parameters of treatment. In spite of a satisfactory response at test site, my subsequent response at the treatment site has not been guaranteed. Initial _____.
3. I understand that possible complications at the test treatment site include loss of skin color, darkening of skin color, and skin burn with rare scarring. In order to minimize any complication that may result, I agree to notify *Enlighten* at once, should my test or treatment site respond in a manner that was not anticipated. Initial _____.
4. I understand that a fee of _____ will be charged for a test site performance and evaluation. If I choose to proceed with the treatment, this fee will be deducted from the treatment fee. Initial _____.
5. I understand that my treatment is considered to be "cosmetic" and that my medical insurance carrier will not reimburse it. Initial _____.
6. I understand that when the device is used for pigmented removal, the treatment area will develop dark brown scale of devitalized skin, which peels off in less than 3 weeks. I understand that I should not pick or remove any crusting or scabbing. Initial _____.
7. I understand that when the device is used for hair removal, the treatment will be ineffective if the area has been waxed or plucked within two weeks of treatment. The treatment will also be ineffective if the target hair is blond, gray, or light color. Initial _____.
8. I understand that a suntan (within two weeks) is likely to result in loss of skin color at the test site. I have notified *Enlighten's* technician that my last sun exposure with tanning was on _____. I understand that it is my responsibility to advise them of my most recent sun exposure before each subsequent treatment is performed. Initial _____.
9. **I understand that glycolic acid treatments, Retina A, Renova, Obagi programs will adversely influence the skin's response to IPL. I have notified *Enlighten's* technician that my last exposure to any of these products was _____.** Initials _____.
10. I acknowledge that the fee and the estimated of treatments have been discussed with me. I understand that the number of required treatment may sometimes exceed the estimated number; if so, I will be charged a reduced fee for each additional treatment. Initial _____.

Area(s) you want treated: _____

Print Name: _____ Date: _____

Patient Signature: _____ Witness Signature: _____

Consent for Light Source Treatment

I authorize Enlighten to perform pulsed light hair removal, pigmented lesion treatment, and/or vascular removal treatment on me. I understand that the procedure is purely elective.

I understand that: Serious complications are rare, but possible. Common side effects include temporary redness and mild “sunburn” like effects that may last a few hours to 3-4 days or longer. Pigment changes (light or dark spots on the skin) lasting 1-6 months or longer may occur. In addition, freckles may temporary or permanently disappear in treated areas. Other potential risks include crusting, itching, pain bruising, burns infection, scabbing, scarring, swelling and failure to achieve the desired results. Intense light can cause eye injury and protective eyewear must be worn during treatment.

I understand that sun or tanning lamp exposure and not adhering to the post-care instructions provided to me may increase my chance of complications.

I consent to photographs being taken to evaluate treatment effectiveness, for medical education training, professional publications or sales purposes. No photographs revealing my identity will be used without my written consent. If my identity is not revealed, these photographs may be used and displayed publicly without my permission.

Before and after treatment instructions have been discussed with me. The procedure as well as potential benefits and risks have been explained to my satisfaction. I have had all my questions answered. I freely consent to the proposed treatment.

Patient's Signature

Date

Print Name

Witness Signature

Date

Fitzpatrick Skin Type

Genetic Disposition					
Score	0	1	2	3	4
What color are your eyes?	Light Blue, Gray, Green	Blue, Gray or Green	Blue	Dark Brown	Brownish Black
What is your natural hair color?	Sandy Red	Blond	Chestnut/Dark Blond	Dark Brown	Black
What is the color of your skin (non-exposed areas)?	Reddish	Very Pale	Pale with Beige tint	Light Brown	Dark Brown
Do you have freckles on unexposed areas?	Many	Several	Few	Incidental	None
Total Score					

Reaction to Sun					
Score	0	1	2	3	4
What happens when you stay in the sun too long?	Painful redness, blistering, peeling	Blistering followed by peeling	Burns sometimes followed by peeling	Rare burns	Never had burns
To what degree do you turn brown?	Hardly or not at all	Light color tan	Reasonably tan	Tan very easy	Turn dark brown quickly
Do you turn brown within several hours after sun exposure?	Never	Seldom	Sometimes	Often	Always
How does your face react to the sun?	Very Sensitive	Sensitive	Normal	Very resistant	Never had a problem
Total Score					

Tanning Habits					
Score	0	1	2	3	4
When did you last expose your body to sun (or artificial sunlamp/tanning cream)?	More than 3 months ago	2-3 months ago	1-2 months ago	Less than a month ago	Less than 2 weeks ago
Did you expose the area to be treated to the sun?	Never	Hardly ever	Sometimes	Often	Always
Total Score					

	Score	Fitzpatrick Skin Type
Combined Scores: _____	0-7	I
	8-16	II
	17-25	III
	26-30	IV
	Over 30	VI

Enlighten Medical History

Name: _____ Date: _____

Family Doctor: _____

Please answer all of the following questions:

Yes

No

1. Do you have ANY current or chronic medical illness we should know about? Please List: _____

2. Do you take ANY medications on a regular or daily basis? Please List: _____

3. Do you have ANY allergies to medicine or skin sensitivities? Please List: _____

4. (For women) are or could you be pregnant?

5. (For women) are your menstrual periods regular?

6. Do you have a history of keloid scarring?

7. Do you have a history of herpes I or II in areas being treated?

8. Have you taken Accutane or anticoagulants in the last 6 months?

Client Signature: _____ Date: _____