

## Laser Hair Removal

Unwanted hair growth may appear on many areas of the body including the upper lip, sideburns, chin, ears, chest, back, armpits, legs, fingers, feet, or toes and is annoying for both men and women. Lasers help eliminate unwanted hair. Causes of excessive hair growth are classified as either hypertrichosis or hirsutism. Hypertrichosis is the presence of excess hair in a normal or abnormal pattern. This may be inherited (genetic), or due to medications, hormones, malnutrition, tumors, or metabolic problems. Hirsutism is the presence of excess hair in women in a male pattern such as the beard, mustache, or lower abdomen, and may be due to hormonal problems, medications, tumors, or heredity.

### Hair Removal Methods

There are many ways to remove unwanted hair including shaving, plucking, electronic tweezers, radiofrequency tweezers, waxing, depilatories (creams), and electrolysis (inserting a needle into each hair follicle one at a time followed by an electric spark to burn out the follicle). Most of these methods, however, are temporary. A topical cream called eflornithine can be applied to slow hair growth on the face in women, but must be used on an ongoing basis. Lasers offer the only method for permanent hair reduction.

### Types of Lasers and How They Work

A large area of the skin can be treated at one time making laser hair removal cost-effective and faster than other methods. Lasers send a low-energy beam through the skin that is absorbed by dark pigment (melanin) present in the shaft of the hair follicles. Since hair cycles as it grows, repeated treatments are necessary to destroy about 80 percent of the hairs. Different types of lasers may be used. The ruby, alexandrite, and diode were the first lasers approved for hair reduction. The intense pulsed light (IPL) systems are also used. These lasers work best on light-skinned, dark-haired individuals because dark pigments in the surrounding skin cannot absorb the light they emit. Lasers with longer wavelengths, such as the Nd:YAG lasers, have the ability to treat darker skin types including African-American skin.

After the preoperative evaluation, the appropriate laser and treatment settings can be determined. Realistic patient expectations should be discussed including the need for multiple treatment sessions, the potential need for maintenance treatments, and the possibility of variable responses to treatment.

### Areas treated with Laser

- Face, Lips and Chin
- Ears and Nose
- Back and Chest
- Neck and Hairline
- Underarms and Arms
- Bikini area and Legs
- Feet and Toes

## **Side Effects**

The laser pulses feel like the snapping of a rubber band or warm pinpricks against the skin. Side effects of laser hair removal treatments may include pain, perifollicular edema (swelling around the hair follicle due to excessive fluid), and erythema (redness and inflammation) lasting one to three days. Blistering, herpes simplex outbreaks, and bacterial infections also can occur. Temporary skin lightening or darkening, especially in darker skin types, or in patients with a recent tan, may be seen. Permanent skin pigment change or scarring is very rare. Loss of freckles or lightening of moles in the treatment area may occur, as well as darkening or lightening of tattoos.

## **Number of Treatments**

Normally 3-6 treatments are recommended. The interval between laser hair removals is 6 to 8 weeks or when you begin to see new hair growth.

## **Laser Hair Efficacy**

The percentage of hairs removed per session varies in different body locations, with areas of thin skin (for example, bikini and armpits) generally showing a better response than areas of thick skin (for example, the back and chin). Approximately 10-25 percent reduction in hair growth can be expected with each treatment. Treatments are repeated every four to eight weeks. The hair that re-grows tends to be lighter and finer in texture.

## **Advantages of laser hair removal**

- It is considered safe when performed properly by an experienced provider.
- Light-skinned, dark-haired patients experience best results.
- Re-growth is often lighter, and finer textured.
- Because the laser method is quicker than electrolysis, it is especially useful for large areas of hair removal in one sitting.

## **Disadvantages of laser hair removal**

- The procedure requires eye protection.
- The procedure can be expensive.
- It is not as effective on darker skin tones, or on persons with gray, red, or blonde hair.
- Improper treatment or overexposure to laser light can cause burns, lesions, and long-lasting skin discoloration.
- Re-growth can be patchy or patterned.
- Because regulations vary, inadequate control methods to ensure competent practitioners exist.
- Some persons find the treatment painful.
- Some persons, even those determined to be a good candidate, do not respond well to treatment.