

AESTHETICA



**Laser Surgery Center
Cosmetic and Plastic Surgery
Cosmetics and Skin Care**

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Reveal your inner beauty™

About your surgery

Hair Removal



Before Treatment



After Treatment

Surgery for the removal of hair has had many different phases and developments over the years.

Shaving and waxing are means of temporarily removing the active shaft of the hair but the follicle is not affected and, consequently, hair regrows.

The surgical removal of hair by elevating the skin and destroying the follicles has been and is very useful when performing facelift procedures so as not to move areas of hair-bearing skin to areas which normally are not hirsute.

Electrolysis is a procedure whereby the hair follicle is heated through a needle which is inserted through the skin. The procedure is painful, costly and has a great potential for

scarring since the skin is heated at the same time as the hair follicle. It is very operator dependent. It is a means of permanent hair removal and has been approved by the FDA as such. It has been attempted for centuries to remove hair by means of running an electric current through the hair shaft in order to disable the follicle. This has never and will never be able to work because the hair shaft is an extremely poor conductor of electricity and heat.

Lasers are used for many different skin conditions ranging from the removal of pigment (both natural and man-made in the form of tattoos) and superficial blood vessels through to the treatment of large nevi and Port-wine stains and various resurfacing procedures for the treatment of acne scarring and wrinkles.

The laser light can penetrate the skin very deeply but yet target only the structure which is being treated. In the case of blood vessels, this target is hemoglobin (the molecule which carries oxygen on our red blood cells). In the case of pigment removal, the target is *melanin*, the body's natural pigment. It was found that certain types of lasers could penetrate the skin deeply enough to target the melanin which gives color to dark hair. This targeted melanin could then absorb enough energy to specifically heat and destroy the hair follicle. Once this is successfully done, the hair cannot regrow.

Initially, many different systems were tested and, indeed, Dr. Caputy was part of the FDA approval process for a number of these early lasers. Some were more successful at hair removal than were others. One of the early systems using a YAG laser and a proprietary

carbon-containing substance applied to the skin only delayed hair growth and initial enthusiasm for the entire process was squelched.

Following that, ruby and alexandrite lasers were tested at higher powers and hair growth was either slowed or stopped. We then received FDA approval for both of these two lasers and, more recently, for a diode laser for hair removal. We are in the process of receiving FDA approval for *permanent* hair removal by these processes. A long time frame was necessary for the permanent clause and we now have patients who have no hair regrowth after 12 to 18 months which will fulfill the criteria of permanency.

There is no doubt that permanent hair removal by laser is achievable and is performed daily across the country. Dr. Caputy is at the forefront of the best and safest of these various methods. He is also known as the non-Caucasian expert in many different aspects of laser treatment. This is particularly important in the case of hair removal because the target molecule, melanin, is also found in varying degrees in the skin. If too much energy is used initially, this can cause discoloration problems of the skin with either stimulation of excess pigment (*hyperpigmentation*) or, more problematically, loss of pigment (*hypopigmentation*). The former is readily treated with other lasers or bleaching agents whereas the latter cannot be treated well at this time and can lead to permanent light areas of the skin. It is very important in those with tans or with some pigment in the skin to treat very conservatively until the correct amount of energy is used to injure the hair follicle but not injure the skin.

Sometimes cooling is necessary to protect the superficial layers of skin. The process still works best and with the fewest number of treatments if you have very light skin and very dark hair. Very light blonde hair and white hair cannot be treated by the laser method. As the skin color becomes darker and the hair becomes lighter, it is progressively harder to treat and, often, multiple treatment sessions are required.

Often, Dr. Caputy will treat only small test areas until he is satisfied that the process is as efficacious as it can be. This also gives you a good idea of what is involved in the process. There is usually only minimal discomfort, most patients describe it as slight stinging sensation or like a light needle poke. There is very little after effect from the treatment with slight reddening of the area treated. In tanned individuals, there may be darkening of the pigment for the first week or so following the treatment.

Some continued hair growth often occurs followed by loss of the hair shaft. If there is some regrowth, it occurs at variable lengths of time in different body areas. Dr. Caputy often waits for between one and three months between treatments to make certain that all hairs that are in resting phase are treated with the second session.

Only actively growing hairs (about 80 to 90% of all hairs) are treated and, in the best case scenario, only 80 to 90% of the hairs are effectively treated by each laser treatment. This means that 60 to 80% of hairs are effectively treated with each laser session.

This is the reason that, even with near complete efficacy, multiple treatments are likely necessary for complete hair removal with permanency.

The laser is able to safely and effectively kill the hair follicle. It is capable of doing so with little or no damage to the surrounding skin and other structures such as oil and sweat glands. As with any laser treatment there are small risks of scarring or infection although these are very rare in Dr. Caputy's practice. The treatments are usually very rapid with an upper lip taking about 5 minutes, bikini areas about 10 to 15 minutes and legs and larger areas requiring longer times.

Most patients experience little discomfort with the procedure and cooling helps this. If there is some pain, a prescription for EMLA or other topical anesthetic can make the procedure almost painless. This is very individualized and is readily discussed with Dr. Caputy at the time of initial consultation or test area treatment. The treated area may become pink or red within about 30 minutes of treatment and this may last from a few hours to several days, depending upon the individual.

There have been a few reports nationally of paradoxical hair growth which is very difficult to remove. Repeated laser treatments and time seem to allow for the resolution of this very rare possible sequela of treatment.

Sun exposure should be minimized for 4-6 weeks following the treatment. There is no need to wax or shave the area to be treated as long as you know where the hair is that you desire removed. Only 1 to 2 mm (stubble) of

hair growth is usually required to define the area which requires treatment. Bleaching, plucking and waxing hair should be avoided for a minimum of 6 weeks prior to the treatment.

If you have a history of herpes (cold sores around the mouth or genital) and that is the area undergoing treatment, antiviral therapy will be prescribed. If you have a tan or darker skin pigmentation, a bleaching cream may be prescribed along with sun block for 2 to 6 weeks prior to the treatment.

We hope that this short informational brochure answers some of the questions which you have about hair removal by laser. Please ask either the staff of **AESTHETICA** or Dr. Caputy should you have any other questions about any of these procedures.

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