The British Association of Aesthetic Plastic Surgeons

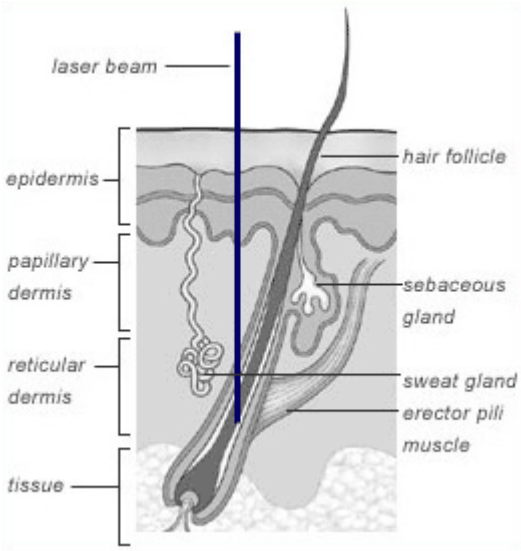
Laser hair removal

Traditional methods for removing unwanted body hair include shaving, waxing, the application of depilatory cream and electrolysis. Depilation by laser is a relatively new technique. It helps not only those with normal hair growth, but also those with excessive hairiness of the body or face, a condition called hirsutism which causes considerable psychological distress.

Hirsutism affects approximately 10% of women between the ages of 18 and 35. In most cases there is no obvious cause but some patients may have a hormonal disturbance. Hirsutism may also be a feature of the menopause. Unwanted hair is a significant problem for transsexuals and transvestites, and many normal males with hair on their back dislike it intensely. Children with hairy moles of the face or lumbar spine area are often teased.

Hair biology

The hair grows in cycles, alternating between a growing phase (anagen) and a quiescent phase (telogen); catagen is the period of transition between the two.



Cells half way up the hair follicle are thought to be responsible for hair growth. The depilation laser delivers a particular wavelengh of laser light which targets the pigment in the hair. This light penetrates up to a millimetre beneath the skin where it is absorbed by the pigment in the part of the hair root which is important for growth.

Hairs come in a variety of thicknesses and colours according to the pigment they contain. Black and Laser light penetrates through the skin and is preferentially absorbed by the hair.

The stem cells responsible for hair growth are thought to be located at the attachment of the erector pili muscle to the brown hairs contain most pigment and are easiest to treat. Grey or blonde hair has little pigment and is unlikely to respond to treatment.

Treatment

Treatment may be a little uncomfortable - it feels a little like an elastic band snapping against the skin - but some patients prefer to use local anaesthetic cream to numb the area first. Aloe vera gel may also be used during or after treatment for its cooling effect. Some lasers have a cooling system which reduces the discomfort of the treatment.

After treatment, the treated area may look red and feel warm and tender. This feeling goes after a couple of hours, but in a few patients, particularly those with dark skin, blistering and crusting of the skin sometimes occurs after laser treatment. Some hairs disappear at the treatment session; others, which initially look curled up or "frazzled" may take a few days to fall out.

Types of laser

A variety of laser systems are now available. Ruby lasers, Alexandrite lasers, Nd-YAG lasers and white light machines can all be used to remove hair with varying degrees of success. The size of the area covered by each pulse of laser energy varies with the machine used.

Results

Initial reports of laser hair removal were extremely promising, and some research went so far as to claim that it may be permanent, but this is generally not the case. A few patients do not respond to the laser treatment at all but many will have good results. Regrowth is not only less dense but also less coarse. In the ideal patient, with dark hair and pale skin, the hair usually disappears for two to three months and then slowly regrows. Repeat treatment is usually required several times a year.

Safety

When laser treatment is carried out it is essential that all those within the treatment room, you and the staff, should wear protective goggles or glasses. Entry to the room is strictly controlled whilst treatment is being given.

Complications and problems

Laser light can damage the skins pigment and sometimes the treatment area may become unusually pale or dark several months after treatment. For this reason, it is always wise to carry out a small trial of treatment in an unobtrusive area before proceeding to extensive treatment. The test patch is examined six to eight weeks later for unwanted side effects and to carefully assess success before proceeding to further treatment. Special care is needed when treating patients with black or brown skin. The Nd-YAG laser may be most suitable for dark skins as it causes less skin damage. After treatment you should stay out of the sun as exposure of recently laser treated skin to strong sunshine may increase the risk of pigmentation problems.

The future

At present many patients derive great benefit from laser hair removal, achieving hair free intervals of up to three months. Further research is likely to improve results in the future. Permanency, the gold standard of hair removal, seems to be some way off however.