As well as having the same number of syllables, ‘ver-sa-ti-li-ty’ and ‘e-lec-tro-l-y-sis’ are two words that belong together. Electrolysis, still the only proven permanent method of hair removal to date, is versatility personified. From humble beginnings, as a primitive medical treatment for trichiasis, the medical benefits of permanent hair removal became quickly recognised. The ‘cosmetic awareness’ and growth which accompanied that, through to its more recent development into minor cosmetic procedures, illustrates the versatility of electrolysis.

Invented by ophthalmologist Dr Charles E Michel in 1875 using a Galvanic/Direct current electrolysis was featured in the medical journal, The Lancet. From this research other ophthalmologists practiced this method and electrolysis for trichiasis became an accepted and popular treatment. In trichiasis, the eyelashes grow abnormally. On the upper eyelid there are approximately 150 eyelashes arranged in three or four rows and on the lower eyelid there are about 75 in two rows. Trichiasis is where one or more lashes of the upper or lower eyelid grow in a distorted fashion and turn in towards the cornea. They grow from follicles at distorted angles, from meibomian gland orifices or from other areas of the eyelids or conjunctiva which are normally free of eyelash growth. Marginal entropion is the most common cause of trichiasis in adults and happens when the posterior eyelid margin becomes rounded. This causes the lashes to become distorted and is considered a mild form of cicatricial entropion. Usually trichiasis results from changes in the lid due to ageing, however some races, (particularly Asian), trichiasis of the lower lids often occurs near the punctum and there are congenital causes (e.g. ephiblepharon and distichiasis) and acquired causes such as trauma, marginal entropion.

Distichiasis (a relatively rare condition) is where an additional row of lashes lie posterior to the normal lashes. These grow from the meibomian gland orifices, which are not normally hair producing sebaceous glands.

Entropion is a condition in which the eyelid turns inwards against the ball of the eye and is classified as congenital, ageing or cicatrical. Cicatrical lashes result from acute or chronic inflammation caused by e.g. herpes, blepharitis, and rosacea.

Ephiblepharon Seen most commonly in Asian children involving only the lower eyelids where the lashes are pushed against the ball of the eye due to skin and muscle riding above the lid margin.
MULTIPLE NEEDLE MACHINE

Electrolysis is not only versatile because of the various methods that can be deployed but also because of the versatility of the range of treatments it can provide from one simple machine. There will always be one of the many methods of epilation suitable for a particular client as electrolysis offers effective permanent hair removal for all skin types and all hair types which no other hair removal system can offer. It provides the answer for both the hirsute female to the transgender client wanting Gender Reassignment Surgery and requiring many hours of genital work in addition to facial and other areas work as well as offering cosmetic relief for the consumer with mild hirsutism. Electrolysis is also performed at veterinary surgeries as eyelash disorders are common in dogs and horses. Picture Right: Charlie, a one year old, long haired daschshund with ectopic cilia on his upper and lower lid margins especially at the medial canthus of his right eye being treated with electrolysis.

Electrolysis continues to be an accepted treatment for trichiasis and other distortions of eyelid hair growth as well as for the removal of minor cosmetically disfiguring blemishes without surgery, stitches or any visible scarring. Treatment can be performed on many skin disorders for cosmetic purposes, resulting in a real visible reduction in the appearance of that blemish or disorder. Treatment pertaining to blemishes such as telangiectasia, vascular blemishes, milia, all members of the wart family, fibrous blemishes, fibroepithelial polyps, cosmetic visible reduction in the appearance of moles, xanthiasma, syringoma, sebaceous hyperplasia and sebaceous cysts, dermatosis papula nigra and many more are highly effective and successful.

TYPES OF ELECTROLYSIS

Following Charles E Michel’s invention Professor Paul Kree recognised the cosmetic potential of this system of permanent hair removal and the Kree Company launched the multiple needle technique epilator, which for the first time offered hirsute women a lifeline.

Kree thought electrolysis was brilliant but it was very slow at the time, taking up to one to two minutes per hair. His simple but original idea was to speed up the system by inserting a number of needles into several hair follicles at one time and then waiting the required time. Instead of the removal of one hair per minute, 10-20 hairs per minute became a practical solution for the cosmetic consumer market.

Today there are three methods of electrolysis:
- The original Galvanic method coupled with the 21st century technology now takes 10 seconds+
- The Thermolysis (or Short Wave Diathermy) method which utilises an Alternating current
- The more modern method – Blend, hailed as being the most effective method

Galvanic Method
The Galvanic DC (Direct Current) method causes a chemical reaction in the salt and water in the follicle. This reaction creates a chemical called Sodium Hydroxide or lye, inhibiting blood and nourishment to the cells, which cause hair growth.

Thermolysis or Short Wave Diathermy Method
Thermolysis uses an alternating current at a high frequency and low voltage. This causes the water molecules around the follicle to vibrate resulting in the production of heat, stopping the blood supply to the root, which weakens and eventually destroys the hair.

Blend Method
The Blend method combines Galvanic and Thermolysis. This is the most effective method because the lye is more efficient at weakening the hair when heated. This is the quickest and commonly reported as the most comfortable method. The Sterex SK8 Blend epilator uses this technology and also offers Short Wave Diathermy or Galvanic individually.