Laser resurfacing – fully ablative

Laser and procedural dermatologists rely on fully ablative lasers, including CO2 (carbon dioxide) and erbium lasers to treat a variety of skin conditions. Laser resurfacing can involve using fully ablative lasers (meaning that the entire skin's surface is treated) or fractionally ablative lasers (meaning only a percentage or fraction of the skin is treated). The following information deals with fully ablative lasers only.

When do dermatologists employ fully ablative laser resurfacing?

It can be employed effectively to treat the following skin conditions:

- **Sun damage**: this includes actinic keratosis and actinic cheilitis or sun damaged lips. The treatment of sun damaged lips is known as laser vermillectomy.

- **Acne scarring:** fully ablative lasers are best for box-car scars and mixed acne scars. Erbium laser is chosen over CO2 for darker skin types due to the lower risk of post laser skin colour changes, known as post inflammatory hyperpigmentation.

- **Traumatic and surgical scars** can be treated with fully ablative lasers. These lasers work by remodelling scar tissue as well as debulking excess skin. See scar treatment

- **Cosmetic laser resurfacing:** wrinkles, poor skin tone, open pores and uneven skin texture can be treated with ablative lasers. It can improve the appearance of aged skin and stimulate new collagen formation. Resurfacing also removes age spots such as age-keratosis (age-warts) and pigmentation.

- **Benign skin tumours:** Syringomas, tricoepitheliomas and other non-cancerous lumps can occur around the eyes and nose area. They can be treated with either CO2 or erbium lasers.

- **Warts** are due to viral infections and can be treated with ablative lasers.

- **Rhinophyma** is a form of rosacea characterised by skin thickening. Fully ablative CO2 laser can reshape the nose.

- **Xanthelasma** – these are cholesterol deposits that occur around the eye area. They can be treated effectively with either CO2 or erbium laser.

How long does it take to heal from fully ablative laser resurfacing?

Healing time depends on factors such as the skin condition treated, depth of laser resurfacing and the individual's health.

As a guide:

- Laser vermillectomy for sun damage lips: 14 to 21 days

- Rhinophyma:14 to 21 days

- Acne scarring: 7 to 11 days
- Cosmetic fully ablative laser resurfacing: 7 to14 days

- Syringoma treatments: 7 to10 days

What types of lasers are used for full ablative laser resurfacing?

The most common types of lasers are CO2 or carbon dioxide lasers and erbium lasers. These lasers are flexible and can be used in “fractional mode” meaning they can be programmed to treat only a fraction of the skin’s surface.

Fully ablative lasers versus fractional laser resurfacing

Fractional laser resurfacing has evolved over the past decade and has been a popular cosmetic procedure. However, for conditions such as extensive sun damage on facial skin and lips, as well as thickened skin such as in rhinophyma, fully ablative lasers are more effective in treating these skin conditions compared to fractionally ablative lasers. Fully ablative lasers remove the skin’s entire surface and in selected cases, will lead to better results.

What are the potential side effects and risks of laser resurfacing?

Side effects from fully ablative laser resurfacing are rare, providing they are performed by specialists trained in this procedure. After-care following the procedure is just as important as the technical aspects of the procedure itself.

Potential side effects include:

- **Skin colour changes** – both lightening of the skin (hypopigmentation) and darkening of the skin (post –inflammatory hyperpigmentation) are more common in individuals with darker skin types.

- **Infection** is uncommon. Antibiotics and antiviral treatments are usually prescribed after laser resurfacing as cold sores (Herpes virus) can be re-activated after laser treatment.

- **Scarring** is an uncommon event. Scarring following laser resurfacing is more common in those who have a history of keloid scarring or if the procedure is carried out on the neck and areas away from the face.