



deeper level of treatment

Sydney facial plastic surgeon **Dr Alan Evans** discusses the latest advances in laser treatments for ageing skin. Caroline Selwyn reports.

One of the most effective anti-ageing treatments is laser skin resurfacing, which can reduce the appearance of fine lines or wrinkles, scars and pigmentation. According to Sydney plastic surgeon Dr Alan Evans, the CO2 laser is the gold standard of skin resurfacing.

However, until 10 years ago lasers were limited in appeal due to lengthy recovery times. 'I found the treatment to be very aggressive,' says Dr Evans. 'It could cause burning and peeling of the surface of the skin. I decided to stop using it until technology advanced to a level where skin problems could be better targeted and the treatment would be safer, with a quicker recovery time.'

The UltraPulse Encore laser technology, which was introduced in 1998, revolutionised the aesthetic laser industry and provided the improved procedure Dr Evans was looking for. The arrival in 2005 of the world's first fractional CO2 laser with the ActiveFX resurfacing head allowed the operator to refine treatment, applying heat more sparingly and, as a result, skin to heal more quickly.

In June 2008, Dr Evan's clinic became the first in Australia to use DeepFX. The microfractional CO2 laser DeepFX is an upgrade of the

UltraPulse Encore technology and offers a 'whole new dimension to laser resurfacing'.

'Most of the machines can treat superficial skin damage and pigmentation, but do not penetrate very deeply,' says Dr Evans. 'DeepFX targets the deep dermal layers of the skin where wrinkles occur.'

The DeepFX treatment offers many advantages for treating deeper wrinkles, smoker's lines and different types of scarring, including acne and traumatic scars. The UltraPulse high-energy short pulse provides a quicker treatment and results in new collagen formation throughout the treatment area. Fractional procedures ablate discrete



BEFORE



AFTER ActiveFX treatment

columns of tissue, deposit heat and promote regeneration throughout the underlying layers of the skin. The result is softening and smoothing of wrinkles and scars, and improved skin texture.

The DeepFX causes minimal superficial skin damage but delivers heat to the deep layers of the skin by sending an extremely fine laser beam into the tissues. The operator can control the depth and adjust the settings appropriately. Dr Evans says because it treats the deeper layers of skin, the redness that results from other lasers doesn't occur. 'There is no burning or peeling of the superficial skin, so the patient heals quickly,' he says. 'The penetration punctures are so narrow that the surrounding skin covers them over in a day or two.'

Dr Evans says the minimal downtime and quick recovery time is appealing to patients. 'I treated a hairdresser a few weeks ago, and she was back at work the day after treatment,' he says.

According to Dr Evans, most deep treatments require multiple treatments, but DeepFX offers significant improvement after just one session. He is currently conducting a study on the removal of smoker's lines. 'We have noticed a softening and reduction of wrinkles after a single treatment, but repeated treatments, up to three, will give better results over time.'

The treatment lasts around 20 minutes and can be done under local anaesthetic. Dr Evans' patients have said the treatment is less painful than other lasers. 'Some even say it's less painful than intense pulsed light treatment,' he says.

By combining the two heads – ActiveFX and DeepFX – a range of problems can be addressed in one treatment and dramatic results achieved in both the superficial and deep skin layers. This combination is called TotalFX.

ActiveFX and DeepFX fractional laser treatments are single-pass procedures that ensure even coverage and eliminate the possibility of overlap. Each laser pulse ablates a column of tissue, causing volumetric skin reduction. The ablation removes surface discolorations and deposits heat deep in the dermis, which causes immediate collagen contraction and long term collagen remodelling.

Dr Evans says careful assessment of the individual patient and their needs and desired outcomes allows him to customise treatments for each patient,

based on their indications and needs, by selecting the density of tissue to be treated. 'I can use ActiveFX for indications with epidermal components and DeepFX for deep dermal stimulation,' explains Dr Evans. 'For example, a younger patient with sun damage may require only the Active FX treatment. A middle-aged or older patient may be more interested in reducing the deeper wrinkles using the DeepFX procedure. But the trend is to use both modalities – TotalFX – in the majority of patients, controlling the settings to deliver the appropriate level of superficial or deep treatment.'

In order to adequately treat the visible signs of ageing, treatments need to reach the deep layers of skin and renew collagen foundation, Dr Evans says. 'The new fractional DeepFX has the ability to treat the deep layers, but keep down time to a minimum.' **acsm**

