



Acclaimed plastic surgeon Dr Erich Schulte is a firm believer in the critical role of collagen in anti-ageing

Saving Face

Even though he's a nip-tuck man by profession, Dr Erich Schulte believes collagen is king when it comes to anti-ageing.

DR ERICH SCHULTE, acclaimed plastic surgeon, traumatologist at the Göttingen University Clinic in Germany is the brain behind the QMS Medicosmetics skincare collection. It was during Schulte's treatment of severe accident and burn victims that his research led to the discovery of the role of collagen in wound healing. He understood that, even if he reconstructed the shape of a patient's face, skin that remained scarred and damaged after the procedure would not help a patient's quality of life. He knew that if he could find a way to reintroduce collagen into the skin, scar formation would be reduced and skin could be regenerated. Logically, this could be applied for aesthetic reasons, too. The visible improvements in the texture and the healing of the skin when these products were used postoperatively drove Schulte to introduce them in pre-operative care – with exceptional results.

He is mesianic about collagen's role in anti-ageing. 'Collagen is the most important protein in your skin – 65 percent of the body's proteins are collagen. It is responsible for the elasticity of the skin, which is why gravity starts taking its toll after the age of 25. Sadly this is the time when your ability to produce these miracle molecules starts to decrease.'

If collagen's the answer, what stops us from a quick fix? It seems that the epidermis itself is the first barrier. 'Collagen molecules are too big to penetrate the barrier of your skin,' he says. The reason collagen creams have, at best, been labelled ineffective is that the cream is on top, not inside.

Schulte realised he needed to get the collagen past the dermis so that it could do its work of stimulating elasticity. These micellised molecules are made by unravelling the strands of a collagen molecule. Once the molecules are through the epidermis, they reunite as collagen and start working on plumping skin from the inside. His analogy for 'breaking up the helix of the collagen DNA is simple. Separate three South Africans and send them to Spain – they will be reunited because they speak a common language and the trio will again be complete.

It's all about the messenger, says Schulte. The skin is designed as a barrier, and messenger technology is one of the most important advances in science. The challenge is to be effective beyond the basal barrier – the layer between the epidermis and dermis – beyond which most cosmetic formulations go. Once the messenger is there, it initiates a collagen boot camp – stepping up activity levels and production.

Schulte's keen to point out that he is not selling products but offering a 'system', and his guarantees are backed up by computerised skin models.

Bucking the marketing hype that promises relatively quick results, Schulte says of QMS that 'it is not about making the skin look good temporarily but to start regeneration from the inside.'

According to Nick Foulkes, eminent and fairly cynical UK columnist, the results over 120 days are significant. He says he noticed 'changes that betokened a general improvement in the health of my skin: an elasticity about the cheek that had ceased to behave like a recently vacated bean bag and – it may be my imagination – but even the monkey lines seem a little less mocking.'

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It was inevitable that this sort of technology was going to become more widely adopted. The L'Oréal-owned Vichy came out with the LiftActiv range, including Serum 10 and Derm Source Night Cream, with a similar messenger technology to stimulate collagen production.

Schulte counsels that these super-serums will not achieve the same results as, for example, laser treatment, which he believes is ultimately invasive and damaging to the barrier function of the epidermis. 'My credo is long-life stimulation of the skin, for which the skin will thank you later. Less aggressive methods take longer but are more successful.'

As a scientist – and something of a realist – he cautions on expectations. 'Remember, the epidermal layer is only one-tenth of a millimetre thick so you cannot expect anti-sagging effects in such a thin layer. He grabs a handful of his neck and says, 'This? This would need plastic surgery.'

'When you're serious in the business, you don't promise miracles,' he adds. 'The only way to get the maximum out of one-tenth of a millimetre of skin is to be smart.'

His greatest bugbear is the fact that 'clinically proven' results use a certain concentration of ingredients that then are not necessarily used in the same concentration in the final product. This is all set to change. As of May

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next year, the percentage of ingredients used in retail products has to be the same as those used in clinical trials.

The new legislation may have an impact on retail prices but will consumers react by resisting a possible price hike? Judging by market, people's skins are thick when it comes to deflecting the effects of a global recession. 'They may watch cooking channels and eat in, not buy fresh flowers or vacation less,' says Schulte, 'but they are steadfast in their allegiance to skincare.'

That may be down to the broadening market. Schulte says it is not only women but also men who are buying

into the anti-ageing market (at a heavy price). He says his male clientele has increased over the past <XXX> from five to 35 percent for both procedures and creams. 'Men embrace faster-working cellular products like QMS Cellular Marine and Cellular Alpine, which uses the latest in herbal stem cell <treatment?> and harnesses the regenerative power of plant stem cells for rejuvenation.'

Even if you are a forever-young cynic, Schulte's medical expertise, scientific logic and refreshing honesty are a compelling argument for using the new products. That's if you want to save face.

Look on the Light Side of Life

Often the villain when it comes to skin damage, light may just be an unlikely hero in the ageing wars.

Words KATHY MALHERBE

LIGHT HAS A BAD REP when it comes to ageing. We associate it with damaging UVA and UVB rays that cause sunburn and skin cancer. The good news is that it seems light could take years off your skin, provided you get the correct wavelengths, pulse brightness and time exposure. It's all about the circadian rhythm, the internal biochemical, physiological and behavioural process in all living forms. No, it's not mumbo jumbo – ask the blokes from Nasa.

Using light-emitting diodes (LED) for anti-ageing is literally rocket science. LED was first used at Nasa's Marshall Space Flight Center in the late '80s to expedite the growth of plants where there was no natural light. And scientists stumbled onto a human application: the astronauts who were exposed to the LED were thriving – in fact, they appear to have sneaked a mini face-lift at zero gravity.

To back up their observations about the skin-rejuvenating properties of LED, Nasa embarked upon a series of clinical studies using variations of nanometers (nm) that control the depth of the energy and therefore the penetration into the skin. They discovered that specific wavelengths of light enhanced DNA synthesis, leading to the production of new collagen and elastin.

Lee O'Brien, who has brought Bio-Synthesis LED light therapy to South Africa, treats ageing with a Bio-Synthesis Technology Facial and the highly active ingredients in the Hyaluronic Masque, which is placed over on top of the Chromatic Serum. If you're at the age when you need this

type of treatment, you are unlikely to remember any of those, though. But neither would you need to.

The light therapy irreverently can be compared to an LSD trip under strobe lights, and such is the frequency of the flashing that the treatment is contraindicated for epileptics. The Hyaluronic Masque cools it all down and seals in the active ingredients as the LED penetrates the target cells.

The red light, at 640-700nm, travels deep into the tissue and permeates the cell membrane, at which stage the mitochondria become hyperactive. This drives the ATP – the cellular energy source that powers the human body – wild. Collagen and elastin synthesis is increased to promote younger-looking skin. The blue light is shallow and attacks acne activity, the yellow light addresses inflammation and detoxing, and the green light focuses on pigmentation.

Be as sceptical as you like, but O'Brien says LED light therapy is 'natural technology' that's 'not restricted to anti-ageing. It is highly effective on wound healing.'

And what does the future hold? According to O'Brien, LED light therapy is continuously evolving, and yesterday's sci-fi is today's technology. She believes it won't be long before LED bars are launched where you'd pop into a square-metre booth during lunch time for a treatment. You won't only see the light, your ATP will too. And that's what counts in the rejuvenation game. What's more, it's non-invasive so no-one needs to know where you really have been during your break... □