



A Bounty of BIOSTIMULATORS

This year has seen such a barrage of new injectable skin boosters enter the market, that we are now faced with the first-world problem of trying to distinguish between the different biostimulators: conundrums such as making sense of how they work and choosing the right one without having FOMO about the others.

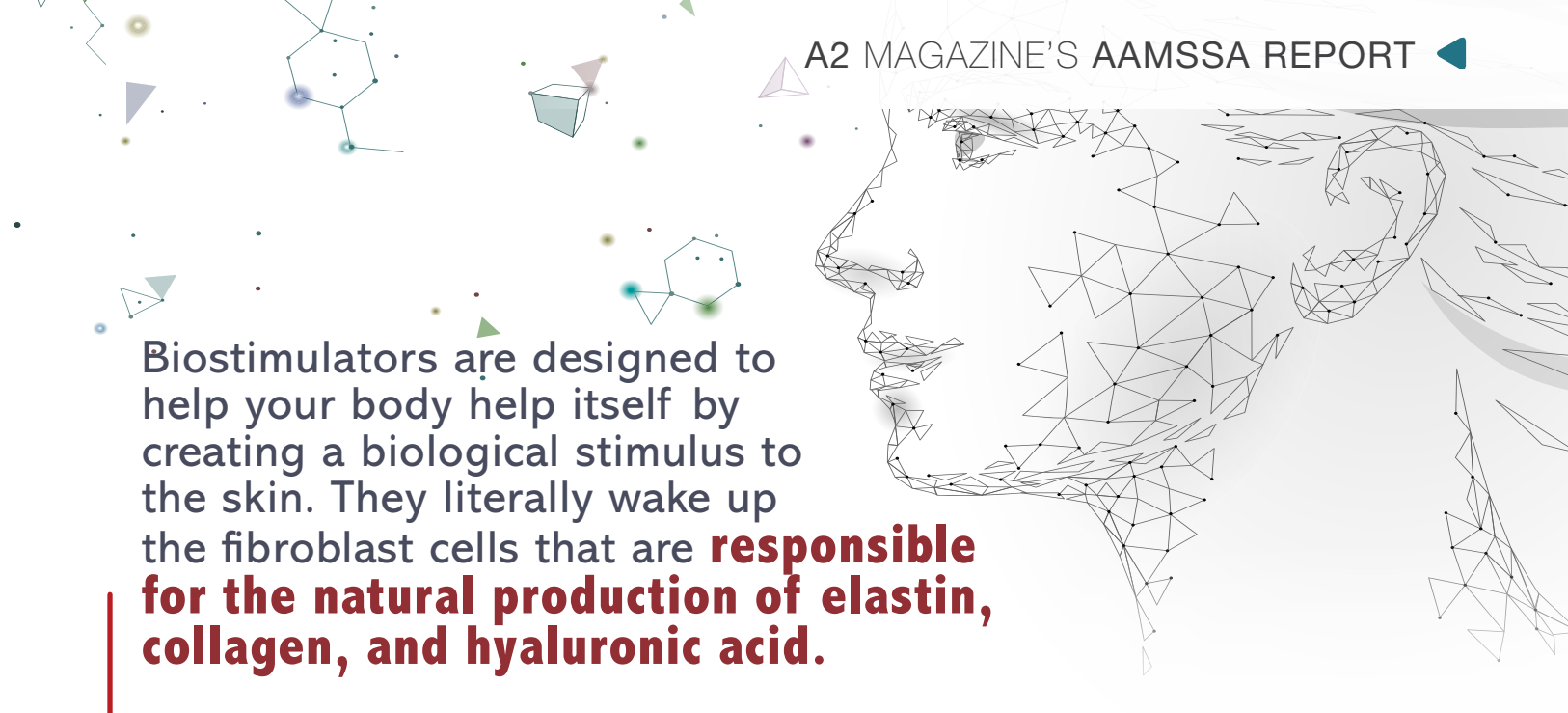
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While some of us may be familiar with the traditional term “skin booster” (an injectable mesotherapy solution that provides hydration while feeding the skin with nutrients, vitamins, antioxidants, and minerals), there is, in fact, a whole smorgasbord of new terminologies and options that are available to us. We now have terms such as bio-remodeling, bio-revitalization, bio-regeneration and hydrolyfting to add to our aesthetic repertoire, as well as having the opportunity to be able to choose whether we want hyaluronic acid (HA) biostimulators, or non-HA biostimulators (made from calcium or medical polymers). It's no wonder that we are all a little confused! This editorial is aimed to help you better understand the biostimulators launched over the past year in SA.

The difference between a biostimulator and a filler

Dermal fillers are made of hyaluronic acid which has been transformed from a liquid state into a firmer gel (called cross-linking). They are injected into parts of the face where volume loss needs to be addressed, such as tired cheeks and deep nasolabial folds. Fillers are additionally used to augment and beautify various facial zones (the lip area being a great example), while also providing immediate improvement.

A biostimulator, on the other hand, is not a filler. It is designed to help your body to help itself. As the name implies, by creating a biological stimulus to the skin, biostimulators literally wake up the fibroblast cells which are responsible for the natural production of elastin, collagen, and hyaluronic acid. And because it's



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your own collagen and elastin, results are always perfectly natural, with patients not running the risk of looking overfilled or puffy. That said, it's important to note that results are not instant, as it takes six-eight weeks for your body to produce new collagen and elastin. Patients therefore need to be patient.

What's all the fuss about fibroblasts?

Fibroblasts are essential cells found in the dermal layer of the skin. They're not only responsible for the production of collagen, elastin, and our own endogenous hyaluronic acid (a natural moisture in our skin), but also in producing the components of the extracellular matrix that are responsible for holding everything together. The bad news is that as we age, these fibroblast cells become senescent (senescence is a medical word meaning "getting old", switching off, slowing down or simply getting lazy). The good news is that biostimulators can wake up the senescent fibroblasts to the point where they blast them into action once more! They literally change the shape of the fibroblast from blobby to spiky – which is what we're after as it's these spiky fibroblasts that actively make lots of lovely collagen.

Highly concentrated HA: The first on the scene in the biostimulator race in SA

A hyaluronic acid biostimulator comprising of highly concentrated

(64 mg) hyaluronic acid - together with a 2ml syringe containing both high molecular weight hyaluronic acid (1100-1400Kda) and low molecular weight hyaluronic acid (80-100Kda) - was the first of its kind to enter the country. And due to the biostimulator being based on a new thermal technology called NAHYCO® Hybrid Technology (where no chemicals are added), it resulted in a stable product that is highly biocompatible and diffuses well into the tissues. This biostimulator also relies on the hydrating and stretching effect of hyaluronic acid to reactivate sleepy fibroblast cells – making it a double whammy treatment as it intensely hydrates while slowly building collagen and elastin over several weeks.

Two-three sessions are recommended, spaced four weeks apart, with the final results taking into effect after six-eight weeks. It is injected via a tiny needle in five Bio-Aesthetic (BAP) points on either side of the face or neck, in mobile and non-mobile areas of the face, as well as the neck and décolletage. Furthermore, a larger 3ml syringe is now available with an even higher concentration of HA for body areas such as crepey tummy and crinkly arm skin.

PLLA follows close behind

Next to arrive was a non-HA biostimulator made up of medical polymers called poly-L-lactic acid (PLLA). Yet while the PLLA biostimulator is by no means new to the market (it's had FDA

approval in the USA since 2004), the use of this injectable has been refined and adapted over the years. Nowadays, it is only used as a biostimulator in the lateral non-mobile aspects of the face and neck in a very dilute form.

How does it work?

Doctors use a blunt flexible micro-cannula to inject the product into the temples, scalp, pre-auricular area (next to the ear), jawline and lateral neck. The tiny PLLA microspheres are potent biostimulators that create a scaffold of collagen in the lateral aspects of the face – a process which ultimately produces a firm and sculpted appearance. Two-three sessions are required within four-six weeks apart yet expect to only see noticeable results after six-eight weeks (in this case, it is definitely worth the wait, as the outcome is a natural look that is combined with lateral lifting). Results are long lasting (up to 25 months) and can be sustained by a maintenance treatment every 12-18 months.

Calcium biostimulators return to our shores

A non-HA biostimulator made of calcium hydroxyapatite (CaHA) microspheres recently reemerged in SA after taking a leave of absence for nearly a decade. These calcium microspheres are similar to the minerals naturally found in the body, and act as potent biostimulators in the skin tissues.



Why biostimulators

Biostimulators have become more and more popular lately as they provide a totally natural result. Due to more and more people becoming concerned about ending up with an over-filled "pillow face" appearance, there has been a worldwide shift away from anti-ageing treatments to that of pro-ageing procedures instead – with the primary focus being on skin health and natural results.

It is a very versatile product as it can be applied as both a dermal filler and a biostimulator (depending on the dilution) For example, it can be used in the undiluted form as a filler using a needle, or it can be spread diffusely in the tissues using a cannula in the more dilute form.

CaHA is additionally well-known for the effective treatment of necks and the backs of hands.

When undiluted and used as a filler, it is particularly successful in the adding of definition to the jawline as it is a relatively stiff product. One session is usually all that is required; however, it does take six-eight weeks to see results, with the outcome lasting 12-18 months. That said, patients can have a second session after three months if needed, and these results can be sustained with a yearly maintenance dose.

Hybrid Injectable for dual effect

Another shining star in this department is the first dual effect or hybrid injectable which boasts a combination of hyaluronic acid filler with a biostimulator (the biostimulator component is calcium hydroxyapatite (CaHA), the filler component, HA). It is designed for treating the lateral aspects of the face such as the jawline, angle of the jaw and lateral cheek bone – and is injected with a blunt flexible microcannula in the lateral edge of the lower face. One session (two syringes, one per side) is usually sufficient, BUT patients can

have more if they so wish after a three-month period. What's more, this hybrid injectable is the "gift that keeps giving", as you not only see an immediate lifting effect from the dermal filler, but also notice a further tightening and firming of the jawline due to the biostimulator effect over time. Results last 12-18 months and can be repeated yearly.

Don't forget the old faithful!

It would be remiss of me not to mention the old faithful skin boosters that have been available to us for many years. Mesotherapy solutions containing HA, peptides, vitamins, minerals, and antioxidants have stood the test of time as effective skin boosters. Injected manually using special mesotherapy needles, meso-guns or infused with micro-needling, they can be used alone or combined with fine line fillers to create a dual effect. Traditional skin boosters need to be injected regularly every few weeks, then repeated often to maintain results.

Other key elements to consider

The choice of biostimulator will depend on many factors, including that of time frames, how quickly you want to see results, and how often you can come in for the treatment. It also depends on the degree of skin laxity and areas of concern. If you have laxity in the temples, then a biostimulator that is injected in the temples will be appropriate for you. If the problem mainly lies in the lower face or jawline

area, then a hybrid product will work well.

Finally, remember to keep these two all-important tips in mind:

1. The decision on whether you're an ideal candidate for these facial injectables will be influenced by any underlying medical conditions and contraindications (which is why a consultation including medical history is so important)
2. You need to budget! There is a significant difference in cost and duration of action of the different biostimulators. Choose one to suit your pocket.

Take home message

Luckily for us there is now a great selection to choose from, so it's guaranteed that one of them will be right for you. The other wonderful thing is that nothing is lost, as all biostimulators benefit your skin. You can try different biostimulators over time, and like a box of chocolates, determine which one is your favourite favourite! **A2**



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