

Dermatologists weigh in on DefenAge's 8-in-1 BioSerum: Patient outcomes, optimal use

Today's dermatologists may be scratching their heads trying to differentiate and ultimately recommend cosmeceuticals in a marketplace crowded with skin rejuvenation options.

One topical that seems to stand out among dermatologists and patients is the 8-in-1 BioSerum, which features antiaging active defensin-molecules and is the iconic product in the DefenAge Skincare line.

Unique mechanism of action

The 8-in-1 has a unique mechanism of action, according to dermatologist Amy Forman Taub, MD, Medical Director and Managing Partner of Advanced Dermatology in Lincolnshire, Illinois.

"I often liken it to a biologic for psoriasis," Dr. Taub said. "In the old days we used cyclosporine or methotrexate,

which are broad targeted anti-immune medications, but now we know the pathway and are more and more specific in targeting specific inhibitors of the psoriasis pathway.

With DefenAge, you are getting a very specific portion of the antiaging process turned on: specific stem cells, located in the hair follicle, that create a new epidermis and are basically unused and are sequestered. These cells are turned on by defensins and create new epidermal cells. The old way of using many different growth factors and hoping to turn on growth is less specific. And, if it does turn on stem cells, they are in the basal layer and have been subject to the same toxic environment that the epidermis has—unlike the sequestered stem cells."

All in all, the 8-in-1 BioSerum is a more advanced targeted cosmetic therapy with an established scientific mecha-



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nism of action. And the product offers great results for patients quickly, according to Dr. Taub, who co-led DefenAge’s largest clinical study published in the *Journal of Drugs in Dermatology* (<https://jddonline.com/articles/dermatology/S1545961618P0426X>).

Another author of the original research paper, dermatologist Vivian Bucay, MD, of Bucay Center for Dermatology and Aesthetics, in San Antonio, Texas, said the positive results from using defensins in the clinical study have panned out over the years at her clinic.

The 8-in-1 BioSerum is her go-to product in the line because it has 5 times as much of the defensins as the line’s barrier cream. It is the only product with such a high concentration of defensins.

“It is especially lightweight—you can’t even feel it when you’re wearing it,” Dr. Bucay said.

Dr. Bucay not only recommends the BioSerum as a part of patients’ daily skincare but also uses it to achieve optimal outcomes after procedures she does in the office, including microneedling.

Niacinamide is another active ingredient in the 8-in-1 BioSerum, which helps

with pigmentation issues, skin barrier, and skin immunity by protecting the Langerhans cells. Niacinamide also helps prevent acne, she said.

“So, using this product helps me feel confident that the patient will be less likely to break out with acne post treatment,” Dr. Bucay said. “The defensins

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stimulate Lgr6-positive stem cells that are dormant and will then repopulate the epidermis. What we are looking for is re-epithelialization after a procedure, so it makes sense to use a product that works specifically off those cells that help produce a new healthy epidermis.”

Dr. Bucay embraces the BioSerum for what it has and does not have in its ingredient list.

“There is a really strong trend toward clean beauty. The BioSerum does not have mineral oil, phthalates, BPA,

BHT/BHA, or parabens. It does not have formaldehyde or propylene glycol. That is an important differential,” Dr. Bucay said.

Dermatologist Anne Chapas, MD, Director, Union Square Laser Dermatology, and Instructor of Dermatology, Mount Sinai Medical Center, New

York City, has been using and recommending the 8-in-1 BioSerum for years. She was drawn to the products because of their unique mechanism of action.

“DefenAge wasn’t just repackaging retinol or vitamin C or something else,” Dr. Chapas said.

Defensins are immunological molecules that are some of the first line in the body’s immune system defenses.

“There are defensins in the skin, and they play an important role in the mi-



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crobiome of our skin and in eczema and other skin diseases. There also are gut defensins that play a role in the immune system in our gut. What was interesting was [researchers] found that the gut defensins are active on the skin and work to make new stem cells, which is quite a difficult thing to do,” Dr. Chapas said.

DefenAge is not a stem cell treatment. Rather, defensins stimulate the body’s own stem cells to grow more efficiently and to create thicker skin, which does interesting things like decrease pore size and improve overall skin texture and quality, according to Dr. Chapas.

Smoother pores, firmer skin, better skin quality and more

Dr. Chapas uses the 8-in-1 BioSerum as a rejuvenation cosmetic serum for patients who want smoother pores, more skin firmness, or better overall skin quality.

“DefenAge is my go-to for crepey thin skin on the neck and arms,” Dr. Welsh said.

“It is also a product both men and women like. DefenAge has come out with a fragrance-free version, and men tend to prefer that one,” Dr. Chapas said.

Another big selling point is that the 8-in-1 BioSerum is not irritating like a retinol or acids would be, making it a great option for patients with sensitive skin, Dr. Chapas said.

“One of the key things [about the 8-in-1 BioSerum] is it doesn’t tend to irritate the skin. Women can use it around the eye and lip area without having any issues, unlike with retinol or Retin-A (tretinoin),” said dermatologist Angela Bowers, MD, founder of Southlake Dermatology in Southlake,

Texas. “Even some of the other antioxidants and peptides out there can be a little irritating to the eyes and lip area. All skin types tolerate the DefenAge.”

Patients give it a thumbs-up and want more

The BioSerum is a hit with patients because it works in a way that patients can see within a few weeks, according to Dr. Bowers.

“Patients really are the biggest judge. I have been in practice for about 21 years now and I’ve had all the skin care lines. The DefenAge by far has had the most impressive patient feedback of any new skincare line that we have offered,” Dr. Bowers said.

Dr. Bowers has seen melasma patients improve with use of BioSerum, which she said was unexpected. Rosacea patients who use it along with other treatments improve as well.

Dr. Bowers recommends the BioSerum alone or in combination with other skincare products as a part of daily skincare for men and women. She also uses it in conjunction with microneedling or resurfacing procedures.

“The interesting thing is when DefenAge first came out, we did some half-and-half [studies]. We had several people do one hand (usually the worst hand) and not the other hand with the BioSerum,” Dr. Bowers said. “One of our 73-year-old patients participated, and we saw a marked difference at 2 months in her hand that was using the BioSerum versus the other hand. That was a real selling point for us. My point

being that those stem cells are still reactive and still work with DefenAge, even at an older age.”

Still other uses

Dermatologist Kathleen M. Welsh, MD, of Bay Area Cosmetic Dermatology in San Francisco, said the BioSerum is not only for the face, neck, and chest.

“DefenAge is my go-to for crepey thin skin on the neck and arms,” Dr. Welsh said.

Dr. Welsh also has filler patients use it for 4 to 6 weeks before having filler procedures in the office to prep the skin and enhance filler results.

“I have hundreds of patients who could not be happier with the dramatic changes they see with DefenAge on their face. Within a month they are asking if it can be used anywhere else. The first area I recommend is taking it down on the neck and décolleté. Very rapidly they see improvement in these areas too, but comment that they go through product a lot faster. So the new larger size will be well received by this group of patients who are totally dedicated to their new DefenAge skin and want a larger amount for those additional areas,” said Steven Swengel, MD, of RefinedMD in Los Gatos, California. “Anywhere it is applied, you start seeing fewer fine lines and more luminosity and clarity.”

Dr. Swengel also encourages patients who are undergoing office-based skin treatments to use DefenAge before and after those procedures. The 8-in-1 BioSerum primes their skin to respond more quickly and robustly, healing faster after ablative skin treatments.

“It truly is an amazingly unique, medical-grade system with nothing else like it on the market,” Dr. Swengel said. ○