

# THE TRUTH ABOUT DEFENSINS

*Defensins book*



# THE TRUTH ABOUT DEFENSINS

What They Are and  
What Can They Do for Your Skin

Can your skin naturally turn back the clock?

Actually, according to clinical studies, it can. The secret weapon is Age-Repair Defensins®, available exclusively in DefenAge Skincare formulas. Defensins can reprogram your body to make skin visibly younger. Find out how.

With so many skincare ingredients available, it can be difficult to keep them straight. From peptides to stem cells and growth factors, many products with these ingredients claim to be the fountain of youth – but understanding these pieces of the skincare puzzle and what each does within the skin is key.

## Peptides

By definition, peptides are long chains of amino acids that are the building blocks of proteins. As for as skincare is concerned, peptides perform a variety of functions ranging from sending messages between cells (prompting the production of proteins such as collagen) to transporting molecules within the cell and inhibiting nerve signals (such as the ones responsible for wrinkle-causing muscle contractions).

## Growth factors

Growth factors are a type of peptide; however, their main job is to promote communication within the skin, essentially sending instructions that tell the cells to replicate, repair and rejuvenate themselves. However, growth factors can be likened to an army drill sergeant, and any cell that “hears” them – “good” (such as collagen-producing cells) or “bad” (i.e. cancer cells) – will follow their instructions.





# Stem cells

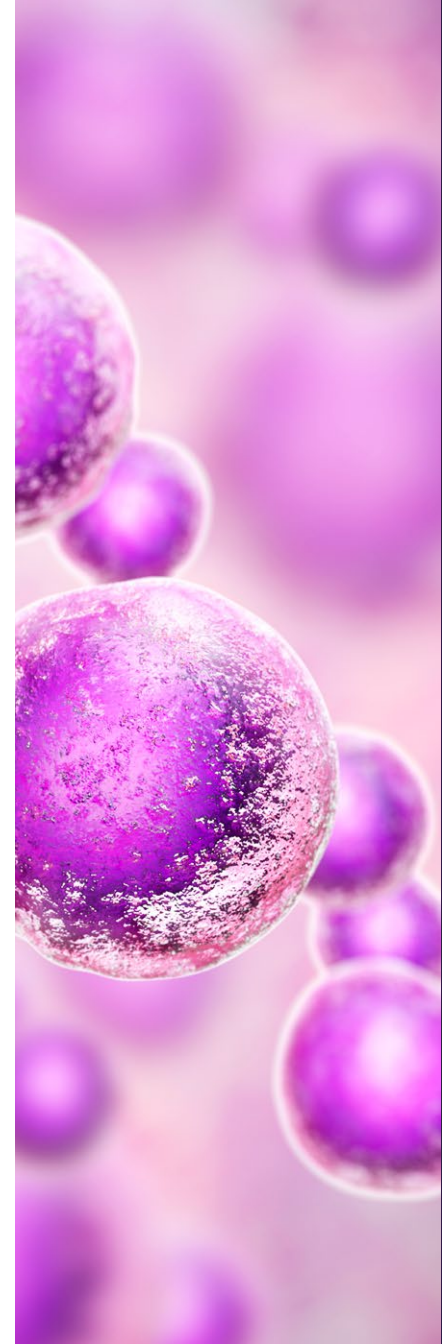
Stem cells are a little trickier to understand since there are a variety of types. Those found in embryos, placental tissue and umbilical cords are extremely controversial, as they come along with ethical, regulatory and infection-related concerns.

Most stem cells found in skincare are a different type of cells - usually plant-derived or adult stem cells. Although there is little scientific evidence that stem cells from fruit or other botanicals have an anti-aging effect on the skin, adult skin cells are a different story, and are not typically associated with controversy, risks or unwanted side effects.

Adult stem cells are abundant within the body, and they are responsible for replacing dying and damaged cells in all tissues and organs, as well as repairing trauma. For example, basal stem cells produce new skin cells. Similarly, hair follicle stem cells prompt hair growth, however researchers have identified more than 10 types of hair follicle stem cells that have been found to be capable of doing a lot more, including maintaining and repairing other components of the skin.

LGR6+ stem cells are perhaps the most interesting type of hair-follicle stem cell because they have been found to act as “master stem cells” within the skin. These unique stem cells are capable of generating new hair follicles, oil glands, basal stem cells and promote wound healing. However, LGR6+ stem cells are dormant most of the time, and they need to be activated in order to repair and regenerate the skin.

That’s where Defensins come in...



## Defensins

Defensins are “target-specific” peptides, which means they only work with certain types of cells – in this case, LGR6+ stem cells. Simply put, defensins “wake up” LRG6+ stem cells, prompting them to make fresh basal stem cells.

But if the basal stem cells found naturally in the skin are already creating new cells, why do we need defensins? Think of cell multiplication like photocopying... A fresh, new print-out (like basal stem cells produced by defensins) is going to yield a high-quality copy. On the flip side, basal stem cells are constantly multiplying, and they become damaged over time. As a result, they create copies with the same damage every time they reproduce.

DefenAge is the only skincare range that harnesses the power of Age-Repair Defensins to target specific stem cells and prompts them to produce new, fresh skin cells.

### The results

Several double-blind, placebo-controlled clinical studies have shown that DefenAge and its Age-Repair Defensins provide significant improvement in cosmetic skin elasticity and discoloration, skin evenness, appearance of visible pores, fine lines and wrinkles, hydration levels, and excess oil.

“DefenAge really represents a major advanced paradigm shift seen once per decade.

The science behind this product is remarkable.

DefenAge is made of a perfect copy of human defensins, which is small enough to be absorbed into the skin.”

*Amy Taub, MD*

*Dermatologist, Illinois*

## Scientific Studies

Multi-Center, Double-Blind, Vehicle-Controlled Clinical Trial of an Alpha and Beta Defensin-Containing Anti-Aging Skin Care Regimen With Clinical, Histopathologic, Immunohistochemical, Photographic, and Ultrasound Evaluation.

Taub A, Bucay V, Keller G, Williams J, Mehregan D.

*Journal of Drugs in Dermatology. 2018 Apr1;17(4):426-441.*

Topically Applied Defensins for Comprehensive Improvement of Aging Skin.

Keller G.

*The American Academy of Facial Plastic and Reconstructive Surgery/COSM – Book of Abstracts. 2016 A021.*

Microneedling with Biologicals: Advantages and Limitations.

Duncan D.

*Facial Plastic Surgery Clinics North America. 2018 Nov;26(4):447-454.*

“DefenAge has the most advanced and innovative skin-youthening technology on the market. I see impressive improvement of the quality of the skin in my patients who use DefenAge. I use it myself.”

**Gregory Chernoff,  
MD**

*Plastic Surgeon,  
California*

# The products

The DefenAge range features 5 key products for daily and once- or twice-weekly use. Appropriate for all skin types, skin tones, and ages, this effective age-reversing regimen harnesses the power of defensins to significantly improve the appearance these 15 top skin concerns:

- Loss of firmness
- Dark spots
- Contour definition
- Fine lines
- Wrinkles
- Clogged, enlarged pores
- Sensitivity
- Uneven skin tone
- Surface imperfections
- Skin clarity
- Loss of moisture
- Dryness
- Rough texture
- Skin softness
- Dullness



“The best foundation you can wear is healthy, DefenAge Skin”

— *Jeannel Astarita,*  
*Celebrity Aesthetician*  
*and Founder of*  
*Just Ageless Spa,*  
*New York City*

# Defensin Regimen



## 24/7 Barrier Balance Cream

With DefenAge's patent-pending Age-Repair Defensin peptide technology, this remarkably lightweight yet potent cream hydrates, brightens, refines and energizes the skin to visibly improve signs of aging. Barrier Balance Cream comes in two varieties, with fragrance and with no fragrance added.

**How to use:** Apply twice daily after cleansing while skin is still moist. Place up to 3 pumps of cream onto fingertips and lightly massage over your face, neck and décolleté, avoiding the eye area.



## 8-in-1 BioSerum

Containing the highest concentration of Age-Repair Defensins, this “smart” serum combines the skin-improving benefits of eight separate skincare treatments in one potent formula. Designed to target your skin's unique needs and activate the repair process, this serum is the cornerstone of the DefenAge regimen.

**How to use:** Apply two pumps 30 seconds after using the 24/7 Barrier Balance Cream. Begin application around the eyes before smoothing the serum over the entire face, neck and décolletage.

“I believe DefenAge is the next biggest game-changer in topical products for anti-aging.”

— *Angela Bowers, MD*

*Dermatologist, Texas*





## 2-Minute Reveal Masque

With a blend of three enzymes and sugar crystals for gentle, effective exfoliation, this masque reveals smoother, brighter skin in minutes. Used once or twice a week to eliminate the build-up of dead, dull cells, the self-warming formula helps enhance the penetration of other DefenAge products and is especially important for maximizing the defensins' action.

**How to use:** Apply to dry skin after cleansing. Using dry fingertips, gently massage the masque in circular motions for 20 seconds or less (depending on skin sensitivity). Focus on the nose, forehead, chin and other areas prone to blackheads and rough texture. Leave on for two minutes before massaging with moist fingertips until the sugar crystals have dissolved, then rinse thoroughly.



## 1-Step Multi-Cleanse

Formulated with ingredient that stimulates the skin's natural ability to enhance defensins-response, this unique soap-free cleanser dissolves impurities within the pores and makeup (including waterproof mascara) in seconds. Featuring natural prebiotics, it is ideal for balancing the skin's delicate ecology and preparing it for DefenAge products that follow.

**How to use:** Massage a dime-sized amount into dry skin for 15 seconds. Moisten fingertips and continue to massage in circular motions until a white cleansing milk develops. Rinse well with warm water.

“The clinical results put DefenAge into the best-in-class category for age-reversing skincare. This truly is a landmark product.”

— *Vivian Bucay, MD*

*Dermatologist, Texas*



### 3D Eye Radiance Cream

Designed to visibly lift, firm and smooth the upper eyelids while improving the appearance of fine lines, crow's feet, dark circles and puffiness, this multi-tasking eye cream targets all the main visible signs of aging. With an advanced application system that extends the performance of Age-Repair Defensins, it is also fragrance-free and safe for contact lens wearers.

**How to use:** After cleansing, while skin is still moist from rinsing, pump a drop of cream onto gold applicator tip. Lightly dab 3 dots of Eye Radiance Cream above and below each eye. Use applicator to massage cream around the eyes.



“In two decades of aesthetic practice, there has not been a skincare regimen that is as effective as DefenAge.”

— *Monica Bonakdar,*  
*MD*

*Aesthetic Medicine,*  
*California*

DEFEN**V**GE<sup>®</sup>  
skincare

*as seen in*

NEWBEAUTY<sup>™</sup>  
MAGAZINE

COSMOPOLITAN

DermatologyTimes  
Clinical Analysis for Today's Skincare Specialists

The New York Times

ELLE

Women'sHealth

MARTHA STEWART  
Living

DUJOUR

MedEsthetics.

american spa

Modern  
Aesthetics

PRIME

