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The Apex of Anti-Aging Formulation. Setting the Standard in Ageless Beauty.

ED'S GUIDE TO

Understanding how we age and what we can do to embrace it gracefully

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Disclaimer

This e-book has been written from my own research and the team of skin scientists who develop products with me. The information provided in this e-book is for educational and informational purposes only. The content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or qualified healthcare provider with any questions you may have regarding a medical condition or before embarking on any skincare regimen or lifestyle changes.

Furthermore, individual results may vary, and the effectiveness of anti-aging strategies can differ based on numerous factors, including but not limited to genetics, lifestyle, and environmental influences.

By reading this e-book, you acknowledge that you have read and understood this disclaimer and agree to use the information at your own discretion and risk.



aging

he interest in anti-aging products stems from a variety of reasons. Firstly, there's a cultural emphasis on youth and appearance, which influences people to seek ways to maintain a youthful look as they age. Society often associates youthfulness with vitality, attractiveness, and even success, so there's a natural desire to retain these qualities.

Additionally, advancements in skincare science have led to the development of products that claim to reduce signs of aging, such as wrinkles, fine lines, and age spots. Many individuals see these products as a means to preserve their skin's health and appearance over time.

Furthermore, as people live longer, healthier lives, there's a growing interest in prolonging a youthful appearance to match an active lifestyle. Aging is a natural process, but there's a desire to age gracefully and maintain a sense of confidence and self-assurance.

Ultimately, the reasons behind the interest in anti-aging products are personal and diverse. It could be about maintaining self-esteem, feeling good about one's appearance, or simply embracing the evolving beauty standards of society.



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aging 101

How do we Age?

Skin aging involves various chemical and structural changes that occur over time. Here are some key factors contributing to these changes:

Collagen and Elastin: These proteins provide the skin with elasticity and firmness. With age, the production of collagen and elastin slows down, leading to a loss of skin elasticity and the formation of wrinkles.

Hyaluronic Acid: This substance helps maintain skin moisture and volume. As we age, the production of hyaluronic acid decreases, resulting in drier and less supple skin.

Oxidative Stress: Free radicals, which are unstable molecules generated by factors like UV rays, pollution, and lifestyle habits, can damage skin cells and accelerate aging by breaking down collagen and elastin fibers.

Glycation: This process occurs when sugar molecules bind to proteins, including collagen, leading to the formation of advanced glycation end products (AGEs). AGEs contribute to the stiffness and loss of elasticity in the skin.

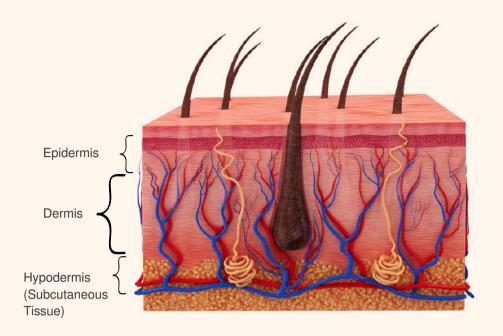
Decreased Cell Turnover: As we age, the rate of skin cell turnover slows down, leading to a buildup of dead skin cells on the skin's surface, making it look dull and less radiant.

Thinning of the Dermis: The dermis, the skin's deeper layer, becomes thinner with age due to the loss of fat, leading to a sagging appearance and reduced support for the upper layers of the skin.

These chemical changes collectively contribute to the visible signs of aging, such as wrinkles, fine lines, sagging, and a loss of skin radiance and firmness. Various skincare products and treatments aim to address these changes by targeting specific aspects of aging, such as boosting collagen production, hydrating the skin, and providing antioxidants to combat oxidative stress.







understanding the layers to our skin

 $\stackrel{'}{I}$ he skin on our face, like the skin elsewhere on our bodies, is composed of several layers, each with its own unique characteristics and functions. These layers are:

Epidermis: This is the outermost layer of the skin and acts as a protective barrier against environmental factors, such as UV radiation, pathogens, and chemicals. The epidermis consists of several sub-layers:

Dermis: The dermis is located beneath the epidermis and contains various structures, including blood vessels, nerves, hair follicles, sweat glands, and collagen/elastin fibers. This layer provides support, elasticity, and nourishment to the skin.

Hypodermis (Subcutaneous Tissue): This is the deepest layer of the skin and consists mainly of fat, connective tissue, and larger blood vessels. The hypodermis acts as a cushion, providing insulation and support to the skin.

Each layer plays a crucial role in maintaining the skin's function, structure, and appearance. Skincare products and treatments often target these layers to address specific concerns or maintain overall skin health

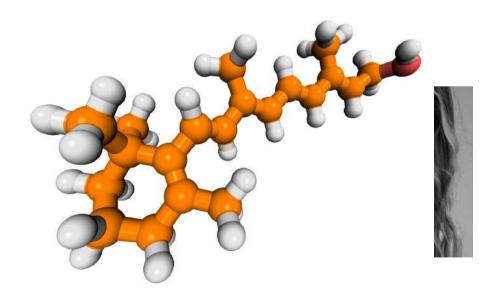


Vitamin A is a fat-soluble vitamin that plays a crucial role in various bodily functions, including vision, immune system support, cell growth, and maintaining healthy skin.

Vitamin A is essential for vision, especially in low-light conditions, and it supports the health of the skin and mucous membranes, aiding in wound healing and maintaining skin integrity. It also contributes to the proper functioning of the immune system by supporting the production and activity of white blood cells.

In skincare, vitamin A derivatives like retinoids are used for their ability to promote skin cell turnover, boost collagen production, and address various skin concerns such as acne, wrinkles, and hyperpigmentation.

what is vitamin A?





What forms of Vit A are there? And how are they converted into our skin?



Prescription-strength vitamin A, known as retinoic acid (or Tretinoin/Retin-A), is like the superstar in skincare. It's super effective for a bunch of skin issues, from acne to signs of aging. It's kind of like a magic ingredient that can fix or seriously help with lots of different skin problems.

Here's the thing: Retinoic acid is ready to work right away on your skin. But other forms of vitamin A like retinol, retinaldehyde, or retinol esters need your skin to change them into retinoic acid before they can do the same job. And here's the kicker: Every time they have to go through this change, they become a bit weaker. That's why a 1% retinol might not work as well as a 0.025% retinoic acid but could be more irritating.

Understanding the Retinoid family

Retinoic acid/tretinoin/all-trans-retinoic acid (prescription only)



Retinal - retinaldehyde (retinaldehyde - one conversion - acts quickly, just not as quickly as the above)



Retinol

(two conversions - still works, takes a little longer to get you there)



Retinol esters including : retinol propionate retinyl palmitate

(three conversions minimum – these all differ but there is evidence showing that palmitate is the weaker of the family)



Where does HPR fit in the VIT A family?

Retinoic acid/tretinoin/all-trans-retinoic acid (prescription only)



 HPR

hydroxypinacolone retinoate (granactive)

Retinal - retinaldehyde (retinaldehyde - one conversion - acts quickly, just not as quickly as the above)



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Retinol esters including : retinol propionate retinyl palmitate

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HPR or hydroxypinacolone retinoate is an ester of retinoic acid.
Hydroxypinacolone retinoate (HPR) is like a cousin of vitamin A, part of the retinoid family. They also call it Granactive Retinoid sometimes, but that's a bit different.
Let's back it up and talk about retinoids.
So, retinoids? They're all linked to vitamin A, like retinol or retinyl palmitate. They're awesome for skin stuff—smooth out wrinkles, fix pigmentation problems and make your skin feel great.

But retinoic acid? That's like the superstar form of vitamin A that your skin loves. When you use any vitamin A stuff, it needs to change into retinoic acid to work. The less it has to change, the better it is for your skin. For instance, some need three steps to work, others two, and some just one

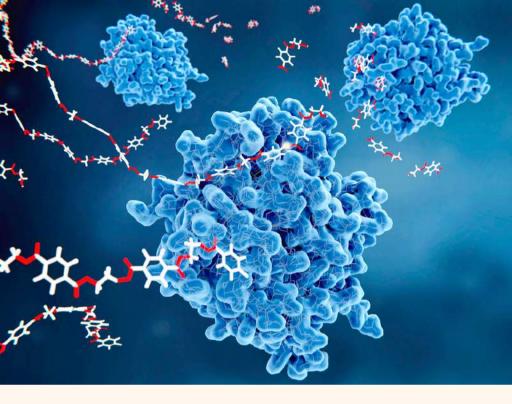
Now, HPR—it's a cool type of retinoic acid. Unlike other vitamin A stuff that needs lots of steps to work, HPR is ready to go for your skin. It's bioavailable, which means your skin can use it right away.



Comparing HPR to other retinoids: It's effective, like retinal, not as strong as straight-up retinoic acid, but it's nice on your skin, like the gentle ones. Being oilbased makes it milder than straight retinoic acid. HPR is gentler than even the same amount of retinol, but it still gives your skin all the good stuff. That's why people like HPR more. It's powerful and good for sensitive skin. (HPR - hydroxypinacolone retinoate is a retinoic acid ester – so it's directly related to the Boss, but it's not a direct descendant, more a cousin. Sometimes used in higher %s because it's an ester and gentle)

Benefits of HPR

- Reduces the appearances of fine lines and wrinkles
- Stimulates collagen production for plumper and firmer skin
- Boosts production of natural moisturising factors and essential skin proteins
- Thickens the epidermis level of our skin
- Reduces sebum production
- Accelerates skin cell turnover rate (which naturally slows down as we get older), which in turn can help fade dark spots and clear your pores
- Helps reverse the effects of sun damage



Inhibiting the retinoic acid degrading enzyme, CYP26A1, involves blocking or reducing the activity of this specific enzyme. CYP26A1 is responsible for breaking down retinoic acid, a potent form of vitamin A crucial for skin health and various biological functions.

By inhibiting CYP26A1, it's possible to slow down the breakdown of retinoic acid. This inhibition leads to increased levels of retinoic acid within the skin cells, allowing it to exert its beneficial effects. This approach is often explored in skincare and pharmaceutical research to enhance the presence and activity of retinoic acid, which can help address skin concerns like acne, aging, and other conditions related to skin health.

inhibiting the retinoic acid degrading enzyme, CYP26Al

What is NovoRetin?

NovoRetin™ is based on mastic, an aromatic resin that comes from a tree which exclusively grows on the Greek island of Chios. NovoRetin™ serves as an ideal plant-based retinol alternative, providing both strong anti-aging effects and exceptional benefits for acne-prone skin.

How does NovoRetin work?

Retinoic acid, the potent form of retinol, is responsible for its effects on the skin. It's naturally present in skin cells (VIT A) but gets broken down by specific enzymes (CYP26). By stopping these enzymes by inhibiting them, we can boost retinoic acid levels, which has effects like retinol. NovoRetinTM, a plant-based inhibitor, decreases these enzymes in skin cells. Studies demonstrate that NovoRetinTM maintains retinoic acid activity, just like retinol, offering potential skin benefits.

Benefits of NovoRetin

- Inhibition of retinoic acid degrading enzyme
- Boosts naturally occurring retinoic acid in the skin
- · Improves skin elasticity and density
- Effects immediate lifting
- Visibly refines pores and blemishes
- Stable and safe retinol activity
- Demonstrates clinical skin brightening effects





"THE APEX OF ANTI-AGING FORMULATION.
SETTING THE STANDARD IN AGELESS BEAUTY."



eologi



 $\stackrel{f}{I}_{\text{he}}$ Apex of Anti-Aging Formulation." Setting the Standard in Ageless Beauty".

Discover our revolutionary anti-aging marvel, engineered to defy the effects of time and breathe new life into your skin. While aging is a natural progression, our unwavering desire for youthful and vibrant skin remains undeniable. With society's emphasis on youthful vigor, confidence, and elegance in aging, our anti-aging solution boldly combats the chemical and structural transformations inherent in this journey. Delving into your skin's layers, our product targets reduced cell turnover, the thinning dermis, and the vital decline in elements like collagen and hyaluronic acid.

Benefits

- Apex of Anti-Aging Formulation
- Inhibition of retinoic acid degrading enzyme
- · Powerful retinol derivative HPR
- A well-aging solution for a regenerated & healthy-looking skin
- Improves the skin texture appearance by reducing wrinkles & fine lines
- · Strengthens the skin barrier
- Enhances epidermal thickening by extending skin cells proliferation
- · Protects skin against oxidative aging
- Improves skin firmness and elasticity









MADE WITH

- Hydroxypinacolone Retinoate, and advance form of retinol
- NovoRetin™
- BORĒALINE® EXPERT

HERO INGREDIENT HPR

Delving into the Vitamin A family, we introduce Hydroxypinacolone retinoate (HPR), also known as Granactive Retinoid, a derivative directly linked to retinoic acid. Comparatively effective to retinal but gentle like retinol esters, HPR is the solution for those seeking a potent yet skin-friendly anti-aging regimen.

HERO INGREDIENT NovoRetin™

Embracing the power of retinoic acid unlike other forms of vitamin A requires multiple conversions. HPR is bioavailable, ready to work wonders on your skin without weakening in the process. Our product counters the breakdown caused by enzymes like CYP26A1, boosting the levels of active retinoic acid in your skin. Enter NovoRetin™ our plant-based inhibitor derived from the aromatic resin of the mastic tree. NovoRetin™ not only halts these enzymes but maintains the activity of retinoic acid, mimicking the benefits of retinol without the irritation, leaving you with youthful, glowing skin.

NovoRetin™ goes beyond the surface, refining pores, improving elasticity, and lifting your skin, giving you visible results. Say hello to brighter, firmer, and rejuvenated skin, bidding farewell to fine lines, wrinkles, and sun damage. Harness the power of nature with NovoRetin™, your key to timeless and radiant skin.

BORĒALINE® EXPERT

Ocean DerMX, a biodiverse botanical blend derived from native New Zealand Red seaweed and Mamaku-Black fern meristem cells, enhances the delivery of its own active ingredients, and those that have been added. It suppresses the harmful toxins that cause the skin to become dehydrated, hyperpigmented, and prematurely old. This adds a high level of 100% natural anti-aging, moisture-binding, antioxidant, and pollution protection ingredients to your cosmetic products.



Furthermore, here are additional ways to support your journey in aging.

Sun Protection: Shield your skin from harmful UV rays by using sunscreen with a high SPF, wearing protective clothing, and seeking shade when outdoors.

Healthy Diet: Consume a diet rich in antioxidants, vitamins, and omega-3 fatty acids. These nutrients help combat free radicals that can cause skin damage.

Stay Hydrated: Drink plenty of water to keep your skin hydrated and maintain its elasticity.

Skincare Routine: Establish a consistent skincare regimen that includes cleansing, moisturizing, and using products containing retinoids, vitamin C, or hyaluronic acid to promote collagen production and reduce wrinkles.

Avoid Smoking and Limit Alcohol: Smoking accelerates skin aging, while excessive alcohol consumption can dehydrate the skin, leading to premature aging.

Adequate Sleep: Aim for 7-9 hours of quality sleep per night. During sleep, the body repairs and rejuvenates the skin.

Stress Management: Chronic stress can accelerate aging. Practice relaxation techniques like yoga, meditation, or deep breathing exercises to manage stress levels.

Regular Exercise: Engage in regular physical activity to boost circulation, which can nourish the skin and keep it healthy.

Avoid Harsh Chemicals: Be mindful of the skincare products you use. Harsh chemicals can irritate and damage the skin, contributing to premature aging.

Regular Check-ups: Visit a dermatologist regularly for skin checkups and to address any concerns or changes in your skin.

Remember, while these practices can help prevent premature aging, aging is a natural process. Taking care of your skin can slow down the process, but it's essential to embrace aging gracefully and prioritize overall health and well-being.



