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introduction: skin ageing – it's not all genetics

Research suggests that **up to 50% of visible signs of skin ageing come from your exposome**, *not* just your genes as previously thought.^{1,2} Your exposome (environment and lifestyle) includes factors such as climate, UV exposure, pollution, sleep, diet and stress. These factors can be healthy or unhealthy, but a chronically unhealthy exposome can accelerate skin ageing beyond what your DNA alone would dictate. For many people, heightened stress, lack of sleep, overprocessed food and environmental conditions are having more negative effects on skin than ever before.

NEW Phyto-Nature Firming Serum helps bridge the gap by combating the appearance of exposome-driven skin ageing. This dual-phase serum takes a whole new approach to natural skin care by reawakening and safeguarding the nature of younger-looking skin. A true triumph of the latest technological advancements in biomimicry and botanical science, Phyto-Nature Firming Serum delivers next-level performance and opens doors to new client experiences that reawaken skin through the power of touch.

exposome (x'·poe·zome) | noun environment + lifestyle

biomimicry (bye-oh-mi'-mi-cree) | noun the new nature: the study and creation of synthetic processes that mimic naturallyoccurring processes At Dermalogica, our focus has always been on finding innovative ways to improve skin health. For the first time ever, we have harnessed the skin's own nature, along with the world's most potent botanicals, 12 to create this powerful product. A combination of two serums in one, it works both quickly and over time to flash-firm, lift and revitalise skin while reinforcing its defenses against your exposome. It is also clinically proven to double skin's luminosity and minimise the appearance of fine lines after just 1 application, while reducing visible wrinkles in 4 weeks.



phyto-nature firming serum at a glance

why your clients need it

NEW Phyto-Nature Firming Serum is a must for clients who are concerned about premature signs of skin ageing from their environment and lifestyle, aka their exposome.

what it is

A dual-phase lifting firming serum that reawakens and preserves the nature of younger-looking skin by reducing the appearance of premature skin ageing.

skin condition

Normal to mature or prematurely-ageing skin.

key benefits



Flash-firms: Minimises the appearance of fine lines after just 1 application



Lifts: Reduces visible wrinkles in just 4 weeks



Revitalises: Double skin's luminosity after just 1 application

application

Dispense 1–2 pumps into the palm of your hand. Blend the two serums and smooth over cleansed face and neck. Can be used morning and/or evening. Follow with your moisturiser.

Certified cruelty-free, gluten-free and vegan, and formulated without artificial fragrances or colours.



ageing, genes and your exposome

What makes skin look prematurely old? Apart from the genes we are born with, the answer may lie in our exposome (environment and lifestyle). Studies have suggested that our exposome has a profound effect on our genetic expression and, significantly, how our body and skin age. 1-6 This is known as epigenetics.

For example, in studies done on twins with different exposomes, the twins who had more exposure to factors such as cigarette smoke, sun and/or chronic stress showed uneven skin tone and age spots, wrinkles and deepened creases. Such premature signs of skin ageing added beyond 10 years to their perceived age (how old they looked), compared to the twins who had less sun exposure and experienced less stress.^{1, 3, 4}

This is significant because it shows how important our environment and lifestyle are to the appearance of our skin. While research on the underlying interactions between gene expression and our exposome is still ongoing, these early learnings are already being applied in the field of skin care and should inform your approach as a professional skin therapist.

What Is Epigenetics?

Our DNA gives instructions to our cells. Epigenetics affects how genes are read by cells – genes can be switched on or switched off (i.e., expressed or not expressed). What you eat, where you live, when you sleep, how stressed you are – all of these factors can cause chemical modifications around the genes that will turn them on or off over time.

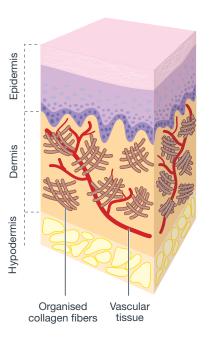


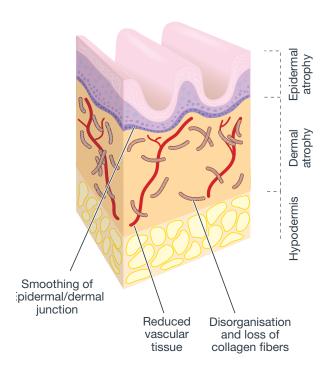


Composite / average images of 12 women with (top) an optimal lifestyle and (bottom) a suboptimal lifestyle.

younger skin

older skin





If we looked closely at younger skin, or skin that has not experienced accelerated ageing from the exposome, it would look smooth and generally even-toned. There might be some exaggerated expression lines, but by and large, the skin would be well preserved. Under the microscope, we might see some early signs of ageing, including a flattening of the epidermal-dermal interface and minor breakdown of dermal tissue.

In direct contrast, older skin, or skin that has experienced accelerated ageing from the exposome, would appear wrinkled and mottled with areas of hyper- and hypopigmentation. We might also notice loss of elasticity, increased fragility, and benign lesions such as keratoses and telangiectasias (dilated capillaries). Under the microscope, changes would be evident with a reduction in elastin fibers and collagen as well as changes in their organisation.

reawakening and safeguarding the nature of younger-looking skin



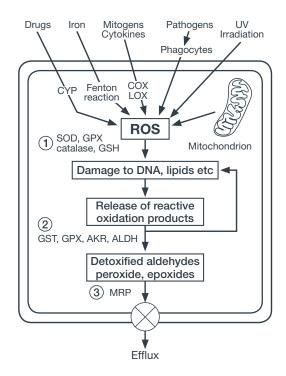
How do we get skin to act younger now? How do we future-proof it against accelerated skin ageing from our exposome? These are questions we asked when developing Phyto-Nature Firming Serum. The answers led us to the key skin processes that lead to visible signs of skin ageing, as well as several exciting technologies and ingredients that help counter visible sians of skin ageing.

Reawakening the Nature of Younger-Looking Skin

As skin ages, it experiences a slowing of the natural processes which help maintain youthful qualities such as firmness, tautness and radiance. This decline is worsened by chronic interaction with external stressors from your exposome. Biomimetic peptides have been shown to help reawaken such processes and reduce the appearance of skin ageing.

biomimetic (bye-oh-mi-met'-ik) peptides | noun synthetic peptides that are lab-crafted to mimic naturally-occurring peptides.

key skin processes that decline with age



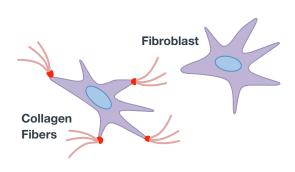
Cell Defenses Weaken

Skin regularly faces assault from Reactive Oxygen Species (ROS), also known as free radicals. ROS are generally very small, highly-reactive molecules that form as a natural by-product of the normal metabolism of oxygen. They are also induced in the skin as a result of external stressors such as UV and pollution. Our bodies have natural antioxidants which can help combat free radical assault, however, as we age and accumulate more free radical damage over time, our natural ability to fight off such damage declines.

When our antioxidants are in short supply, or when free radical assault is made worse by our exposome, oxidative stress builds up in the skin. This can give rise to significant damage. On skin, such damage can manifest as superficial lines, wrinkles, hyperpigmentation, and inflammation.

Perhaps our most notable and abundant form of defense against free radicals is an antioxidant peptide found naturally in the body called Glutathione - often regarded as a hallmark of cellular health. Glutathione helps neutralise free radicals, but it declines with ageing and exposure to acute environmental stress such as UV.

Glutathione can be made into a biomimetic peptide for skin care formulations. Because this peptide is easily oxidised and therefore unstable, it can be bound to substances such as Sapphire to help shield it and increase its bioavailability as it works to counter the negative effects of ROS.



Fibroblast Turnover Decreases.

Fibroblasts are the skin cells responsible for synthesizing collagen and elastin. Collagen, a primary component of the body's connective tissue, supports skin strength; while elastin enables elasticity, letting skin "bounce back" when stretched or pulled. As we age, fibroblast turnover decreases. This means we have more, older, less-functioning fibroblasts. Not only are collagen and elastin produced at a slower rate, which impacts the skin's inability to repair itself, but the organisation of the proteins also changes as we age, affecting skin's structure. As a result, skin can show wrinkles, sagging and loss of elasticity.

Ingredients such as **Palmitoyl Tripeptides** have been shown to act as growth factors which help increase fibroblast turnover and re-energise collagen machinery to help firm the appearance of skin.



Skin Cells Lose Vitality.

Skin cells have a natural life cycle; they live and die. However, sometimes cells experience an arrest in growth. This is called cell senescence. This is one of the responses skin cells can have to chronic, continual stress from both intrinsic and extrinsic factors, including your exposome. When cells become senescent, they are neither alive nor dead; they are "zombie" cells that have stopped dividing. Senescent cells can secrete inflammatory toxins, which can damage skin and accelerate the appearance of skin ageing.

Progerin is a protein found in our skin cells, which starts to accumulate as we age. This accumulation of progerin induces accelerated aging and gives rise to cell death and cell senescence.⁷

Sirtuins, on the other hand, help regulate the youthfulness of cells, maintain DNA integrity and increase cell longevity. Known as "longevity proteins," sirtuins help combat premature skin ageing.⁸

One way to slow the appearance of premature skin ageing is to decrease progerin and increase sirtuins. **Trifluoroacetyl Tripeptide-2** is a potent peptide that has been shown to do just that. It not only inhibits progerin and reduces its levels to those of younger cells, it stimulates sirtuins to help maintain cell youthfulness.



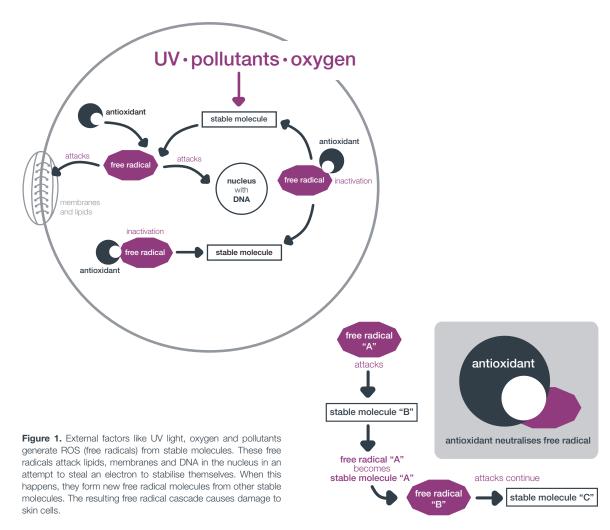
key processes that accelerate visible signs of skin ageing

Free Radical Damage and MMP Activation

As discussed previously, free radical assault can wreak havoc on the skin's natural defences, which decline with age. (See Figure 1.) MMP activation is also a factor. Matrix Metalloproteinases (MMPs) are

enzymes that, when activated, degrade collagen. These are also stimulated by your exposome.

Moroccan Rockrose Extract, a potent antioxidant and strong source of flavonoids (myricetin glycosides), has been shown to neutralise and dramatically reduce ROS as well as MMPs. This ingredient is derived from an incredibly-resilient plant that has the ability to germinate even after burning.



Inflammation

Chronic external assault from one's exposome can also trigger chronic, low-grade inflammation, which may build up over time and gradually damage skin and its immune system. Sometimes called "inflammaging," this continuous stress on skin is considered a driving force for skin ageing.

Caffeic Acid from **Madagascar Green Coffee Bean** has been shown to reduce inflammatory response in skin by decreasing IL-8, an inflammatory marker that is a key part of the skin's inflammatory response. (See Figure 2.) This ingredient is a microbiome-activated phyto-active, meaning it works with the skin's microbiome. Caffeic Acid is a bit unstable, so to help improve its stability and efficacy on skin, it can be bound to a carbohydrate. When the product is applied to the skin, the carbohydrate is digested by the skin's microbiome and the Caffeic Acid is released onto the skin.

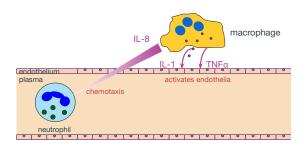


Figure 2. Chemical mediators of the inflammatory response.

Cortisol Buildup

Cortisol (aka "the stress hormone") comes from cortisone, which is found naturally in skin. Enzymes convert cortisone to cortisol, which helps the body handle stress. When cortisol levels are too high for too long, such as with chronic stress from one's exposome, cortisol can do more harm than good. Elevated cortisol levels are among the contributing factors to delayed wound healing, increased DNA damage, and weakened defenses against free radicals, as well as Trans-Epidermal Water Loss (TEWL), inflammation, and wrinkles. 10

Antioxidant botanicals such as **Amazonian Camu Camu** have been shown to help reduce the effects of excess cortisol on skin by decreasing the level of conversion enzymes needed to generate cortisol. (See Figure 3.) Amazonian Camu Camu is often called the "youth berry" and contains 60 times more Vitamin C than an orange. This ingredient has been wild-harvested by indigenous tribes for more than 700 years to maintain health and longevity.¹¹

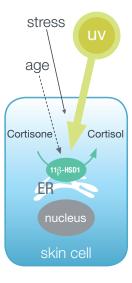


Figure 3. Intrinsic and extrinsic stressors trigger the conversion of cortisone to cortisol via the 11ß-HSD1 conversion enzyme, resulting in a compromised skin barrier as well as increased TEWL, inflammation, wrinkles and skin damage. Camu Camu has been shown to decrease the level of conversion enzymes needed to generate cortisol.

key ingredients and clinical results

Phyto-Nature Firming Serum delivers a new take on natural skin care by marrying the science of biomimicry with some of nature's most powerful botanicals. Biomimicry is a scientific approach that mimics nature to solve complex human challenges. This innovative approach is what enables this dual-phase serum to deliver such next-level performance.

Firming Peptides

- Sapphire-bound Glutathione
- Palmitoyl Tripeptide-28
- Trifluoroacetyl Tripeptide-2

Inspired by the biology of the skin, Phyto-Nature Firming Serum is the first Dermalogica serum to use Sapphire-bound biomimetic peptides such as Glutathione and Palmitoyl Tripeptide-28. These peptides, along with Trifluoroacetyl Tripeptide-2, can be found in the serum's firming phase to help firm skin and reinforce skin defences against the exposome.

Lifting, Firming Botanicals

- Amazonian Camu Camu, sourced sustainably from Peru
- Moroccan Rockrose Extract
- Madagascar Green Coffee Bean (Caffeic Acid)
- Phyto-Nature Technology

Both the firming and lifting phases of Phyto-Nature Firming Serum contain potent, plant-derived bio-extracts to help prolong radiance, visibly revitalise skin and decrease the appearance of fine lines and wrinkles. Phyto-Nature Technology, which helps visibly tighten skin, uses key molecules from herbs such as Astragalus Membranaceus (Huáng Qí) and Spilanthes Acmella (Paracress) to help reduce the appearance of premature skin ageing.

Next-generation Hyaluronic Acid

Phyto-Nature Firming Serum delivers skin-firming results over time, but it also delivers an instant flash-filler effect with next-generation Hyaluronic Acid (HA). The molecular weight of this "super" HA has been optimised to maximise bioavailability.

clinically proven to reawaken the nature of younger-looking skin

In clinical studies, Phyto-Nature Firming Serum was shown to double skin's luminosity and minimise the appearance of fine lines after just 1 application, while reducing visible wrinkles in 4 weeks.*

*An 8-week clinical study was carried out using a reputable Contract Research Organisation. For 32 panelists, luminosity, fine lines and wrinkles were assessed using visual grading by an expert assessor. Cutometer measurements were also performed to measure firmness and elasticity.



13 Phyto-Nature Firming Serum

client service and retail activation tools

NEW! flash-firm and lift skinsolver® treatment

15 Phyto-Nature Firming Serum

time: 10 minutes

For the first time ever, Dermalogica is incorporating a virtual component into the SkinSolver® service to help enhance both your experience and that of your client. Not only will clients be able to experience Phyto-Nature Firming Serum with this 10-minute firming skin treatment, you'll be able to incorporate an acupressure DIY powered by Artificial Intelligence (AI), and hyper-personalised insights about their exposome to help educate them in a totally different way.



skinsolver® step-by-step

Complete the consultation portion of your client's Skin Fitness Plan. Help your client complete the PhytoTouch widget to get their personalised application and acupressure DIY instruction.

Step 1 (2 minutes)

Begin the Dermalogica Double Cleanse by applying PreCleanse Balm to damp disposable wipes. Swipe over skin to remove oil-based debris, make-up, and pollution.

Step 2 (3 minutes)

Mix 1 pump Skin Resurfacing Cleanser or skin-specific cleanser with water in a cup, then add ½ tube of MultiVitamin Power **Exfoliant** and apply with a Fan Masque Brush. Lightly manipulate then remove with damp disposable wipes.

Modality Option: Use an ultrasonic brush or blade on exfoliation mode for a deep cleanse.

Step 3 (1 minute)

Spritz the skin with Antioxidant HydraMist. Dispense 1 pump of Phyto-Nature Firming **Serum** into your fingertips and blend the two phases together. Apply with medium pressure to the forehead, cheeks and jawline using

human touch meets Al: **NEW** phytotouch widget

In addition to being part of the SkinSolver® treatment, the PhytoTouch Widget will combine the power of human touch with that of Artificial Intelligence (AI) to help you and your client further reawaken the nature of younger-looking skin. This exclusive technology can help you analyse your client's skin condition and location, then guide them through an Al-powered, personalised acupressure application technique. Demonstrate this for your clients and explain to them how to use it at home to address tension headaches, sinus issues, jaw tension and other forms of stress that can increase the appearance of skin ageing.

For more information about this service and the PhytoTouch widget, contact your Dermalogica **Education Training Center.**



frequently asked questions

Why two serums in one?

Phyto-Nature Firming Serum is a dual-phased formula, meaning it contains a lifting serum and a firming serum that work in two separate phases. The serum is crafted this way for the best efficacy and experience, and because it incorporates both oil-soluble and water-soluble actives.

How does Phyto-Nature Firming Serum compare to Retinol?

Phyto-Nature Firming Serum works differently than Retinol, so they are not comparable. If your client would like to have Retinol benefits, consider Overnight Retinol Repair or Overnight Retinol Repair 1%. Phyto-Nature Firming Serum may also be applied under either of those products.

Which products go with Phyto-Nature Firming Serum?

It all depends on your client's Face Mapping® skin analysis. You and your client can also consult the PhytoTouch Widget for additional product recommendations based on your client's skin condition, and location.

How does Phyto-Nature Firming Serum compare to Power Rich?

Power Rich is a triple-action multitasking treatment moisturiser that helps smooth away fine lines, improve resilience and maintain moisture balance. Phyto-Nature Firming Serum is a dual-phase targeted treatment serum that doubles skin luminosity while flash-firming, lifting and revitalising. These products look and feel very different but are highly-effective at reducing the appearance of premature skin ageing.

Does Phyto-Nature Firming Serum work with all skin types and Dermalogica moisturisers?

Any client who is concerned about visible signs of skin ageing can incorporate Phyto-Nature Firming Serum into their Dermalogica regimen, followed by the moisturiser that is best for their skin. For example, a client with dry skin would layer this product under Intensive Moisture Balance, while a client with oily skin would layer this product under Active Moist.

What's the difference between the next-generation Hyaluronic Acid in Phyto-Nature Firming Serum and Dual-Size Hyaluronic Acid?

While both are hydrating, the next-generation Hyaluronic Acid in Phyto-Nature Firming Serum is used primarily to provide an instant flash-filler effect while Dual-Size Hyaluronic Acid is used primarily to reduce TEWL and increase hydration through skin's surface layers.

Are the serums pre-mixed?

No, the serums are housed separately in two chambers, to be dispensed and mixed together by hand prior to application. Keeping these actives separate helps us minimise the need for additional ingredients to help stabilise the actives in an oil-water solution, and helps maximise the potency of actives for the best experience.

How do I dispense this product?

Place your index finger on the center of the pump and press firmly to dispense it into the palm of your hand.

How do I know this serum is right for my client?

Complete a thorough Face Mapping® skin analysis to assess your client's skin, environment and lifestyle (aka their exposome). This serum is best for clients who are concerned about premature skin ageing, and who have fine lines, wrinkles, dullness and/or a loss of elasticity.

How often should my client use this product?

We recommend using it twice a day, morning and evening, after toner and before moisturiser.

Does this product need to be massaged into the skin?

Yes, this product feels and looks best after it is thoroughly massaged into skin.

Can this product be applied on the neck and décolleté?

Can this product be applied after exfoliation? Will it sensitise my client?

Phyto-Nature Firming Serum can be applied after exfoliation. It should not sensitise your client, but if they experience an adverse reaction, please notify us immediately.

How do I use the PhytoTouch Widget?

The widget is accessible at **phytotouch.com**. To use it, simply follow the prompts once it loads. If you have further questions or concerns, please contact your Dermalogica Education Training Center.

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