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Ageing Frequently Asked Questions

AGEING FAQ

Contents

[AGEING 3](#_Toc104897309)

[ESSE PLUS 5](#_Toc104897310)

[INGREDIENTS 12](#_Toc104897311)

# AGEING

**What Is the difference between Intrinsic Ageing and Extrinsic Ageing?**

The aspects of ageing that cannot be avoided and are part of our internal functions are called intrinsic ageing contributors.

There are also processes and conditions that speed up ageing significantly. The contributors to ageing that can be avoided or dealt with (often factors that are more dependent upon our external behaviours and environments) are referred to as extrinsic ageing contributors. These include things like UV exposure, pollutants and toxins, diet, hygiene behaviour, etc.

**What is the relationship between UV and ageing? What is Esse’s approach?**

UV exposure is an ageing factor that is widely discussed. UV exposure is often spoken of as a factor that invariably causes ageing, and wearing sunscreen at all times is often recommended.

Our view is a little different… Humans evolved different skin tones in response to varying sunlight intensity at different latitudes. Higher latitude generally means lower sunlight intensity and less pigmented skin. A European skin is not equipped to deal with full days of equatorial African sun. Of course, we should be very careful of over-exposing ourselves to intense sunlight, and ageing outcomes will certainly be negatively affected if we do this frequently over the long term – we often see thick, leathery skin as a result of over-exposure.

However, just because high UV exposure accelerates ageing does not mean that no UV is the solution.

Our skin also needs sunlight to a certain extent. If we avoid sunlight entirely or under-expose ourselves over the long term, we see thin, crepe-like skin as a result in old age.

We like to promote sensible sun exposure. One key consideration with this is that we need sunlight on our skin to make Vitamin D. Because modern lifestyles don’t allow for much sunlight, deficiency of this vitamin is prolific in the modern world. This has hugely important implications for skin health, as Vitamin D is needed for important functions, such as resolving inflammation and modulating the activity of sebocytes (it plays a role in sebum production).

**Can diet accelerate the signs of ageing?**

Diet is a major lifestyle area in which we can control the level of extrinsic ageing.

A diet containing a lot of processed sugars is likely to contribute greatly to the rate of glycation. If you eat a lot of sugar, there will be more sugar in your bloodstream. This means that there will be some sugars that aren’t immediately used for energy by cells, and they could react with collagen and elastin. This process of glycation will result in crosslinking, which will reduce the flexibility of the collagen and elastin network.

Essential omega fatty acids are often lacking in modern diets. These are an important part of skin function along with the functioning of the rest of the body. They play vital roles in controlling inflammation and are also important in maintaining a high quality in sebum output. This means that a deficiency in omega fatty acids is likely to result in a higher level of inflammation (bad for ageing) and reduced sebum quality, which will affect the lipid barrier and lead to drier skin.

Dietary carotenoids are also a consideration. Their role in skin is as part of the antioxidant system, reducing oxidative stress and limiting things like DNA damage as a result of UV exposure.

**How do these extrinsic factors accelerate ageing?**

We can think of extrinsic ageing factors as evolutionary mismatches. What we mean by this is that we didn’t evolve in conditions that included these factors, so our bodies are not equipped to deal with them. There was no air pollution or cigarette smoking when we were living hunter-gatherer lifestyles, and we were all living in the regions that we evolved for, so our skin pigmentation levels accounted for the UV exposure in our respective evolutionary cribs.

But how is it that these mismatches result in accelerated ageing? The answer is, in large part, through an increase in inflammation.

**What is the Hayflick Limit important to skincare practices?**

The skincare industry seems to have taken to the idea of promoting cell turnover to get skin looking young and vivacious again. The idea is to use treatments like deep chemical peels, laser therapy, dermabrasion, needling, etc., to either remove skin cells or initiate an inflammatory response. The damage done on a cellular level during such treatments results in a regeneration process, in which skin cells proliferate to replace those lost during the treatment. This leaves the client with young-looking skin once healing has taken place.

The problem here is that this approach relies heavily on the effective replacement of lost cells. Our skin cells need to divide a whole lot to get things back on track. This unfortunately means we move a lot faster through the available divisions before we reach the Hayflick Limit and end up reaching that point a lot sooner.

So, while these treatments show great results in the short term, the consequences inevitably come around with premature and rapid ageing.

# ESSE PLUS

**What is the concept behind the Plus Range?**

Esse Plus is our premium anti-ageing range. We’ve spared no expense to deliver the world’s most advanced probiotic anti-ageing products. All of the products in this range boast **high-level probiotic actives and potent plant extracts to boost your skin’s microbiome and provide visible anti-ageing results.**

Ageing cannot be stopped. However, the process can be delayed, and premature ageing can be prevented by being mindful of external stressors, maintaining a healthy, balanced lifestyle, and making conscious decisions to prevent inflammation and protect the skin microbiome.

Skin in an overall healthier state ages much slower than skin that is inflamed or under stress.

The overall condition of the skin is improved by Probiotics in the following ways:

* Protection – one of the primary functions of your skin’s microbiome is to protect you from pathogenic microbes. If your microbial populations are low, there will be space and food available for invading microbes. We aim to increase synergistic microbial populations to the point that there are no available niches for invaders. This prevents activation of your skin’s immune system and reduces inflammation in the skin.
* Hydration – Lactic Acid is produced by your body to keep the pH of the skin in balance and to retain moisture on the surface of the skin. Recently it was discovered that the majority of the Lactic Acid on the skin is produced by microbes. Lactobacillus species are particularly efficient at producing Lactic Acid – hence their name.
* Barrier Function – We only discovered the importance of T-junctions in the skin barrier around 2002, but this mode of cell binding is absolutely critical to barrier function. Microbes modulate T-junctions and it is possible to radically improve barrier function by using probiotic microbes.
* Communication – a large part of the function of the probiotic microbes in the Probiotic Serum is centred on the cellular communication with your skin cells. Lactobacillus cells can adhere to your skin cells (at specific binding sites) and cause chemical messages to flow from those cells that regulate the immune response from nearby cells. This reduces sub-clinical inflammation and slows ageing.

Which products have been included in the Plus Range?

**Eye Contour Cream -** 15ml / 0.5 fl oz airless glass pump

Albizia extract boosts collagen and elastin production, visibly improving crow’s feet while Belides extract manages dark rings and Darutoside reduces puffiness.

**Probiotic Serum -** 30ml / 1 fl oz airless glass pump

The world’s first live probiotic serum. It contains more than 1 billion live probiotics per ml to improve barrier function and rectify skin imbalances for a firmer, fuller, more resilient skin.

**Ageless Serum -** 30ml / 1 fl oz airless glass pump

The firming and lifting effects of this serum are noticeable within 28 days. It contains a range of probiotic and plant extracts that improve skin structure and reduce pigmentation.

**Intensity Serum -** 30ml / 1 fl oz airless glass pump

Nature’s answer to Botox, with rapid softening of wrinkles by relaxing facial muscles. First effects are seen after 2 hours and there is a cumulative effect if used every morning.

**Defence Moisturiser -** 50ml / 1.7 fl oz airless glass pump

Provides daytime protection from pollutants and free radicals in a nourishing but light formulation. Prebiotics and probiotic extracts improve barrier function to firm and plump the skin.

**Restorative Moisturiser -** 50ml / 1.7 fl oz airless glass pump

This is an intensely moisturising formulation that is targeted at night-time repair and restoration. Hyaluronic Acid with prebiotics and probiotic extracts boost moisturisation and slow ageing.

**Could you please elaborate on the packaging chosen for the Plus Range?**

The packaging is in airless glass. There is a polypropylene bag in the glass bottle that is deflated as the product is used. At the end of use, the lid should be unscrewed, and the plastic component of the packaging separated from the glass component so they can then be recycled separately. We felt that this was an elegant Cradle-to-Cradle solution.

**Do we need to keep the Probiotic Serum in the fridge once opened?**

This is not necessary. The bacteria are stable at 25˚C for 18 months. Refrigeration will increase the life of the product though.

**Do the Lactobacillus bacteria live a long time on the skin after using Probiotic Serum?**

We have shown that the Lactobacillus stay alive on the skin at high levels for at least 8 hours. The numbers then start to decrease quite quickly, but we have shown that with repeated application, the Lactobacillus can become a part of the skin microbiome. Lactobacillus should not be the dominant species on skin, but it should be a small but important part of the ecosystem.

So will the Probiotic Serum grow on your skin? Yes. The 1 billion cfu/ml will colonise your skin and protect, balance and moisturise it.

But is this enough to change my microbiome if I use it just once? No. Compare it to something like cardiovascular exercise. Will you get fit? Yes. Will you get fit if you only do it once? No. You might get your heart rate up, but not enough to maintain your fitness level over a longer period of time.

We recommend using the Probiotic Serum in the evenings only for the first 5 days, followed by every second evening for two weeks. Thereafter it can be applied 2 – 3 times per week as a maintenance treatment. We recommend using the Probiotic Serum twice daily for distressed skin.

**What happens to my skin when I use the Probiotic Serum?**

By using the Probiotic Serum, you add 1 billion live cfu/ml to your skin, providing a solid covering of beneficial microbes to protect you from incoming pathogenic microbes. By means of “competitive exclusion”, these microbes occupy all the space and uses up all the nutrients, making it difficult for a pathogenic microbe to survive.

Probiotics improve barrier function, by communicating to skin cells to improve quantity and quality of T-junctions between the cells, thereby reducing moisture loss and the incursion of toxins and pathogens into the lower layers of the skin. With a strengthened barrier, inflammation is reduced.

Natural moisturising factors are produced such as Lactic Acid and Hyaluronic Acid. Lactic acid, produced by *Lactobacillus,*maintains a low pH, creating a less desirable environment for certain pathogens.

Due to enhanced cell-to-cell communication, probiotics assist with correct immune response, thereby reducing the number of times the skin responds to a threat and slowing the ageing process.

All these factors reduce the rate of skin ageing and result in an overall healthier skin.

**How do you keep the probiotics alive in the probiotic serum?**

First, we encapsulate the Lactobacillus in a water-soluble prebiotic so that we have tiny spheres that contain the live (but dormant) bacteria. The Probiotic Serum is an oil-based serum and into this oil, we distribute the capsules of live Lactobacillus. This protects them from the outside world until they come into contact with water on the surface of your skin. This water will dissolve the capsule and release the living Lactobacillus. The prebiotic capsule will also provide food for the bacteria to start growing.

**Is it necessary to use oral probiotics with Lactobacillus bacteria when we are using Probiotic Serum?**

Oral probiotics have been shown to have a positive effect on some skin conditions, but we have not used oral probiotics in any of the studies that we have done on the Probiotic Serum, so supplementation is not necessary to achieve good results with the product.

**Does the Esse range, especially products with live Lactobacillus, have any contraindication or side effects?**

We have seen that clients can sometimes overuse the Probiotic Serum. They often see good results and then start to use the product twice or three times per day. Lactobacillus should not be the dominant species in the skin microbiome. Overuse of the product can cause overproduction of Lactic Acid and we have seen some cases of temporary peri-oral dermatitis in some clients.

**Is the Probiotic Serum for daily use the year around or is it a special treatment that you should only use for a certain amount of time?**

We generally recommend the serum as a once-a-year purchase. Continuous use should not be necessary.

**What is the big difference between the Restorative Moisturiser and the Defence Moisturiser? How does the Low Molecular Weight Hyaluronic Acid work with the skin?**

The **Restorative Moisturise**r is a heavier product for drier skin. It is formulated with night-time restoration in mind. The **Defence Moisturiser** is geared to have a protective role during day-time use.

Hyaluronic Acid penetrates skin well, interrupts the cytokine cascade to prevent inflammation and holds 10 times its weight in water, so has a strong moisturising effect.

Our Hyaluronic Acid has a molecular weight between 60 and 80 kDa.

**Does the Probiotic Serum contain any water?**

The only water that is present in the product is the very tiny amount that is in the live bacterial cells. This water is contained in the cell membrane and in the polysaccharide “envelope” that the microbes use to encyst.

So, the only water is in the live probiotic cells and if this freezes, the cell membrane breaks, and the cell dies.

**Is it recommended to use the Probiotic Serum on children (if they for etc. have eczema)?**

The product is safe to use on children. However, we should not be focussing on selling this product to treat eczema etc. It is formulated as an anti-ageing product.

**How do the Plus products work if you combine them with “microneedling”?**

The products are safe to use after microneedling, but it may be safer to use the Sensitive range with this sort of treatment.

Trevor: This is our official position on microneedling – The process is invasive, but it is not really something that we have a strong position on. If people want to do it and it works for them, they should go ahead.

Some things to consider:

Microbes from the surface are being pulled from the surface to the lower layers (below the T-junctions in the stratum granulosum). This is generally OK and happens in any wound, but it means that the immune system will be active in dealing with new microbes ... so in a reactive state.

If we then introduce a product that contains many ingredients, we risk an allergic reaction to the product that is deep and could last a really long time. There are reports of serious rashes that last for more than a year from reactions to products used after microneedling.

Of course, we do not want to steep to a level and resort to slamming brands for what they are doing. So, always take it back to inflammation. Think about what you are doing to the skin, think about the process it undergoes. Esse was not formulated to be driven into the skin mechanically, and what happens when something gets to a place where it is not supposed to be? Inflammation and possible infection. Bacteria in the wrong place = inflammation. Additionally, this process typically also contains numbing cream (high chemicals and damaging to the microbiome) and alcohol (kills microbiome and skin cells, but necessary so you do not needle the numbing cream into the skin which will be a real big problem). So ultimately it will result in disruption of the microbiome and increased inflammation. *Esse will not engage in practices that cause long-term ageing to show short-term results, as many of these treatments result in dependence on the product. Invasive treatments are to be treated with extreme caution. We would need to be convinced that the treatment is beneficial far into the future."*

**What ingredient(s) in the Eye Contour Cream strengthen(s) the capillary networks under the eye to reduce the leakage of blood that contributes to dark rings?**

Albizia Extract has been shown to improve collagen synthesis by 256% and elastin synthesis by 229%. This helps to prevent the rupture of capillaries in the fragile networks below the eye. Darutoside (Siegesbeckia Orientalis) also restores collagen and improves regeneration to help in this area.

**Can you elaborate on the Bonn Results of the Plus Range?**

**Eye Contour Cream**

We looked at the ability of the Eye Contour Cream to reduce wrinkle depth. We saw a reduction in wrinkle depth of 14% in 28 days.

**Graphical user interface

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20 women (average age 48.0 years) applied Eye Contour Cream twice daily. After 14 days, wrinkle depth had decreased by an average of 7,4%. After 28 days, wrinkle depth had decreased by an average of 13,6%. A positive eff­ect was seen in 95% of the volunteers during the course of the study.

**Intensity Serum**

We looked at the ability of the Intensity Serum to reduce wrinkle depth. We saw a reduction in wrinkle depth of 17% in 28 days.

Chart

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20 women (average age 48.1 years) applied Intensity Serum twice daily. After 14 days, wrinkle depth had been reduced by an average of 9.1%. After 28 days, wrinkle depth had decreased by an average of 17.0%. An improvement was seen in 100% of the volunteers over the course of the study.

**Probiotic Serum**

We looked at the ability of the Probiotic Serum and its effect on skin firmness. We saw skin firmness increase by 16% in 28 days.

**Chart, bar chart, waterfall chart

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20 women (average age 47.4 years) applied Probiotic Serum twice daily. After 14 days, skin firmness had increased by an average of 7.2%. After 28 days, skin firmness had increased by an average of 16.1%. A positive effect was seen in 100% of the volunteers.

We also looked at the effect of the Probiotic Serum on skin elasticity. We saw an **increase in skin elasticity by 9% in 28 days.**Chart, bar chart, waterfall chart

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20 women (average age 47.4 years) applied Probiotic Serum twice daily. After 14 days, skin elasticity had increased by an average of 4.4%. After 28 days, skin elasticity had increased by an average of 8.6%. A positive effect was seen in 85% of the volunteers.

**Is the Probiotic Serum only beneficial for ageing purposes or can other skin types benefit from the use of the serum?**

The Probiotic Serum has found application in the treatment of several skin conditions. Two are particularly worth mentioning in more detail:

* Acne - we have found exceptional results on acne – particularly adult acne – when this serum is combined with a sensible skincare routine that minimises sensitisation, keeps pH low and does not strip natural oils. We are busy learning more about the benefits of probiotics for acne and have honed our approach significantly with the Clarifying Range.
* Eczema - the underlying cause of most eczema cases is the dominance of Staphylococcus Aureus on the skin. This microbe is opportunistic and causes a breakdown of barrier function by docking onto skin cells (keratinocytes) and radically shortening their lifespan.

The Probiotic Serum contains billions of live Lactobacillus microbes that compete for the docking sites on skin cells. Once a Lactobacillus cell has docked, the site is no longer available to Staphylococcus to invade, leaving the cell proportionally healthier. Over time, eczema improves substantially, particularly when aided by a moisturiser high in prebiotics.

# INGREDIENTS

**Can you elaborate on the live probiotics included in the Probiotic Serum?**

The Probiotic Serum contains a consortium of three synergistic species of Lactobacillus. These are designed to boost hydration and work together as an anti-ageing treatment. One of these strains was selected for its ability to produce Hyaluronic Acid for example. We’ve selected strains that are present in nature and on healthy skin, mimicking the interaction with natural environments that we miss in our modern lives and calming skin’s immune system for lower inflammation.

**How did you come to the idea of using the anti-ageing power of probiotics?**

Our research team had been following the Human Microbiome Project and, from the findings, it was clear that skin care would go through a fundamental change. We could see that probiotics would be very important in the coming years.

**How are probiotics anti-ageing?**

Probiotics can change the ecology of the skin. If your skin has good levels of beneficial microbes, then your skin will be better hydrated and firmer with fewer wrinkles. If the skin does not have good diversity, then pathogenic microbes will grow in numbers and the skin will be sensitive and barrier function will not be optimum.

* Probiotics assist with improving T-junction expression which leads to better barrier function.
* Probiotics assist with maintaining the pH of the skin.
* Probiotics have a calming effect on the immune system and reduce inflammation.
* Probiotics produce moisturising factors such as Hyaluronic Acid and Lactic Acid which helps keep the skin hydrated and plump.
* Probiotics improve collagen synthesis and improves firmness.

**What effect does Panthenol have in the Ageless Serum?**

Panthenol penetrates deep into skin as Pantothenic Acid and it can accelerate healing, reduce itching and improve skin hydration.

**The training manual says that the PLUS products contain “Chamomile CO2 and Sage CO2”. What does the CO2 mean?**

CO2 refers to supercritical fluid extraction with carbon dioxide as a solvent at very high pressure but low temperature. This is probably the best extraction technique available. There are no solvent residues because the carbon dioxide is a gas and evaporates and the process is environmentally friendly. The extracts are expensive though. <https://en.wikipedia.org/wiki/Supercritical_fluid_extraction>

**Please could you comment on the alcohol in Plus Range?**

The ethanol in the Plus range comes from the Devil’s Claw extract. We need to use ethanol to extract the active compounds from this plant. The final ethanol % in the product is not high enough to cause irritability in the skin and is also not high enough to function as a preservative … so we still need to use the usual preservative system.

So, there is ethanol in most of the Plus products but the % is very low because it is included only as part of the Devil’s Claw extract.

**How long does the Intensity Serum take to work?**

Mafane Extract (Acmella Oleracea) has a powerful myo-relaxing effect and relaxes muscle so that wrinkles soften over 1 to 2 hours. The effect is visible for up to 24 hours or until the product is washed off. Over time, with continuous use, wrinkle depth decreases and there is a smoothing effect on the skin.

**What is the trio of ingredients that is unique to the Ageless Serum?**

Concentrated extract of Pfaffia Paniculata (Pfaffia), Marapuama (Ptychopetalum Olacoides) and Lilium Candidum (White Lily) is a powerful extract combination is unique to this product and is not used anywhere else in the Esse line-up. It is standardised for saponins and flavonoids. It primarily has a lightening and smoothing effect. This combination also reduces puffiness and firms’ skin by improving elasticity – particularly in the eye region but effective on all skin. Effects are seen in around 25 days.

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