



“ Embrace your eternal beauty ”

# aeonion NAD Booster



**Natural food supplement for cellular regeneration & anti-ageing**

- ✓ increases cellular energy and facilitates DNA repair
- ✓ reduces fine lines and wrinkles, promoting the synthesis of elastin and collagen
- ✓ neutralizes the effects of ageing, activating cellular autophagy
- ✓ strengthens hair growth
- ✓ helps to rejuvenate the skin

**90**  
κάψουλες

**Ageing** can be defined as the time-related deterioration of the physiological functions necessary for survival. The characteristics of ageing—as distinguished from diseases of ageing (such as cancer and heart disease)—affect all the individuals of any species.

Several causes of ageing are widely accepted today, including

- Oxidative damage
- General wear-and-tear and genetic instability
- Mitochondrial genome damage
- Telomere shortening
- Genetic ageing

Skin changes are among the most visible signs of ageing. Evidence of increasing age includes wrinkles and sagging skin. Whitening or graying of the hair is another obvious sign of ageing.

For the increasingly ageing population, the quest to look younger has become more important than ever. The anti-ageing market is booming and represents the “key growth engine” for the entire skin care industry. Consumers have high expectations for the efficacy of skin care and want to see visible results. Formulating effective anti-ageing products requires a thorough understanding of consumers’ cognitive and emotional needs, formulation chemistry, and most of all, the biology of skin ageing.

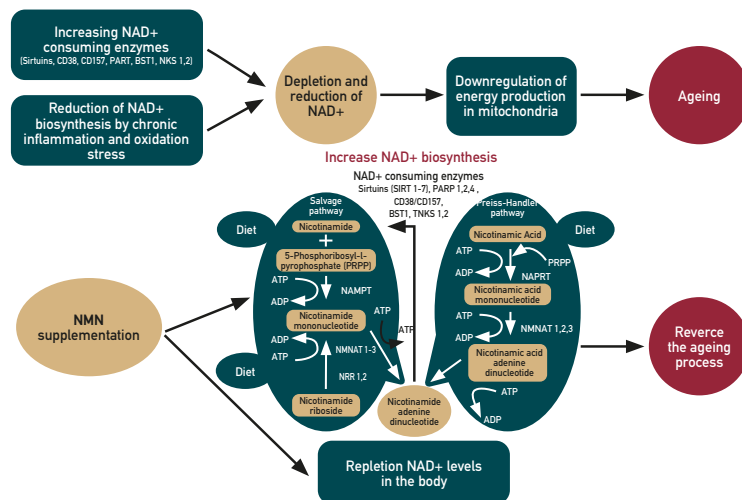
The process of skin ageing is complex and multifactorial, as structural, functional and aesthetic changes happen at a variable rate. It is misleading to consider skin ageing as a uniform biological event; several distinct biological processes may occur concurrently.

There are five types of skin ageing, including: intrinsic, extrinsic, lifestyle, hormonal or catabolic.

Intrinsic, chronological ageing reflects the passage of time from gravity and genetics. Extrinsic ageing is usually attributed to photoageing and smoking. Lifestyle or behavioral ageing includes diet, alcohol and drugs. Hormonal ageing involves dysfunction or ageing of hormonal systems. Finally, catabolic ageing is related to chronic diseases.

## Does NMN reverse skin ageing?

Nicotinamide mononucleotide (NMN) as an anti-ageing health product



The elderly population has been progressively rising in the world, thus the demand for anti-ageing health products to assure longevity as well as to ameliorate age-related complications is also on the rise. Among various anti-ageing health products, NMN (Nicotinamide Mono-Nucleotide) has been gaining the attention of the consumers and the scientific community alike.

### What is the current knowledge on promises and safety concerns of NMN as an anti-ageing health product?

In summary, NAD+ (Nicotinamide Adenine Dinucleotide) levels in the body deplete with ageing and it is associated with down regulation of energy production in mitochondria, oxidative stress, DNA damage, cognitive impairment and inflammatory conditions. However, NMN, as the precursor of NAD+, can slow down this process by elevating NAD+ levels in the body. A number of in vivo studies have indicated affirmative results of therapeutic effects for various age-induced complications with NMN supplementation. In general NMN supplementation is a safe and effective alternative approach to anti-ageing strategies.

## Does NMN make your skin better?

Researchers found that NMN given orally might reduce the effects of ageing by influencing the activity of genes involved in the ageing process. Your skin, hair, and general health may all improve as a result of using NMN.

### In Humans:

Laboratory studies have demonstrated that NMN supplements have a significant anti-ageing effect. It increases the formation of NAD+ (Nicotinamide Adenine Dinucleotide), a coenzyme that is vital for human survival. NMN has been demonstrated to function and there is reason to suspect that it may act in a similar way in humans. Researchers found that NMN given orally might reduce the effects of ageing by influencing the activity of genes involved in the ageing process. Your skin, hair, and general health may all improve as a result of using NMN.

### For Wrinkles and Puffiness:

Studies suggest that it enhances skin elasticity significantly, reducing the appearance of wrinkles and fine lines.

<https://www.myinivity.com/anti-ageing-benefits-nmn>

### Reduces Skin Ageing:

In another research on NMN's efficacy for post menopausal women, as published in the journal *Science*, oral supplementation with NMN offered metabolic advantages. After eight weeks of treatment with NMN, the subjects' AGE levels decreased. Since greater levels of AGEs (Advanced Glycation End products) are associated with advanced skin ageing, the decrease in AGEs indicated that NMN is beneficial to aged skin. Results add to the growing body of research suggesting that NMN supplementation can benefit metabolic, hormonal, and skin health.

### Hyperpigmentation Due to Ageing:

NMN suppressed melanin synthesis in human skin containing old melanocytes that had been regenerated. NMN used as a topical agent, is therefore a human-friendly anti-melanogenic agent with the potential to help in the treatment of hyperpigmentation due to ageing.

*J Dermatol Sci. 2022 Jun;106(3):159-169*

## Elevates Glutathione Levels:

Oral administration of NMN restored glutathione levels via normalizing oxidative levels associated with NAD+ during UV irradiation of skin cells. It indicates that NMN reduces lipid peroxide buildup by stimulating glutathione synthesis.

### Alopecia/Hair loss:

A study also studied the benefits of NMN on alopecia. With the help of microneedle technology, this study intended to examine the results of treating individuals with androgenetic alopecia with the addition of topical NMN to a Growth Factor Cocktail (GFC). Over the course of 12 weeks, patients got six treatments every two weeks. This study resulted in a positive approach for NMN topical application for the treatment of alopecia.

Clinical tests conducted by the American Academy of Dermatology demonstrate the anti-ageing effectiveness of topical NMN in cosmeceuticals. These studies and others have demonstrated the following results:

- **Anti-wrinkle treatment**
- **Lightening of hyperpigmented spots**
- **Enhancing the skin's moisture levels**
- **Enhanced brightness, symmetry, and color of the skin.**

NMN uses for Skin/ Human	Effects
Topical uses of NMN	<ul style="list-style-type: none"><li>• Reduces skin puffiness, wrinkles</li><li>• Suppresses melanin production</li><li>• Good for alopecia/hair loss</li><li>• Enhancing skin moisture, and color, treating hyperpigmentation.</li></ul>
Oral Supplemental uses of NMN	<ul style="list-style-type: none"><li>• Overall improvement in the skin in postmenopausal women</li><li>• Elevation of glutathione level aiding in the recovery of UV damage.</li></ul>

In laboratory studies as of 2022, research has been conducted to determine the effects of NMN on human skin. However, the supplement improved metabolism, prevented illness, and had a general anti-ageing effect. Therefore, experts hypothesize that NMN may also promote human health and lifespan.

Until the "Fountain of Youth" is materialized, NAD+ and NMN supplements offer significant benefits for slowing the ravages of cellular ageing.

<https://rescence.com/the-use-of-topical-nmn>

Of the anti-ageing compounds, NMN is perhaps the most well-studied in humans. Clinical trials have shown that NMN improves physical performance and sleep quality, strength and walking speed, insulin sensitivity, and skin ageing, as well as cholesterol levels, blood pressure, and weight.

### Does NMN improve skin elasticity?

NMN has shown notable efficacy in enhancing skin health. Studies suggest that it enhances skin elasticity significantly, reducing the appearance of wrinkles and fine lines. These make NMN a potential ally in maintaining youthful skin texture and appearance.

NMN is a promising molecule that has garnered attention in recent years in the eternal quest for healthy ageing. While ageing is a natural process, it brings about various challenges, such as wrinkles, fine lines, and a decline in overall health.

Many of us seek effective methods to promote youthful ageing and maintain our vitality. This desire to slow down or reverse ageing has led to numerous scientific explorations.

NMN's potential in anti-ageing strategies has ignited excitement in both scientific and wellness communities. Let's explore the findings, and how we can reap the benefits.

### What is NMN?

NMN is a naturally occurring molecule derived from vitamin B3, serves as a pivotal component within the NAD pathway. It acts as a precursor to NAD+, an essential coenzyme vital for various biological functions, including energy generation from food, DNA repair, and cellular defense against damage. It is found naturally in small quantities in both plant and animal sources such as broccoli, cabbage, avocados. Within our bodies, NMN plays a crucial role in raising NAD+ levels. Its contribution to cellular health and ageing is significant, as declining NAD+ levels are linked to the ageing process.

Understanding NMN's impact involves delving into the mechanisms of ageing itself and recognizing its importance in maintaining cellular function and overall well-being.

### The Science Behind NMN

Understanding NMN's impact on cellular health involves exploring its intricate molecular mechanisms:

- NMN helps keep your cells healthy by supporting the body's tiny powerhouses, mitochondria, which produce energy.
- NMN helps DNA repair, protecting your genetic material. This double action strengthens cells and helps them resist the effects of ageing.
- NMN activates special proteins called sirtuins that are involved in various important processes, including those related to ageing.

By increasing NAD+ levels, through NMN nutritional supplements, you may be able to enhance cell repair and potentially slow down age-related decline.

## NMN and Ageing:

### A Scientific Breakthrough in Anti-Ageing Research

The existing research provides promising insights into its potential anti-ageing effects. One study conducted on skeletal muscle biopsies found that NAD+ levels decline with age, leading to age-related cellular dysfunction and impairments in tissue function.

Another study revealed that physical activity can increase NAD+ levels naturally by stimulating the production of NAMPT (Nicotinamide Phosphoribosyl-Transferase), an enzyme involved in NAD+ synthesis.

The importance of NAD+ in human physiology is well-established in scientific circles. With NAD+ levels believed to decline in various tissues as we age, there's a growing interest in finding methods to boost NAD+ levels, potentially influencing ageing processes and associated metabolic issues. The idea of using NMN as an anti-ageing supplement has gained traction due to these promising findings.

### NMN Benefits in Anti-Ageing

NMN shows great potential for a holistic approach towards ageing, overall longevity and vitality. It offers various healthy ageing benefits that include better skin health, increased energy, potential improvements in thinking skills, and fighting age-related decline.



### Skin health improvement

NMN has shown notable efficacy in enhancing skin health. Studies suggest that it enhances skin elasticity significantly, reducing the appearance of wrinkles and fine lines. These make NMN a potential ally in maintaining youthful skin texture and appearance.

### Energy enhancement

An intriguing aspect of NMN supplementation lies in its potential to supplement our energy levels. This boost in energy not only contributes to overall vitality, but also fosters a sense of youthfulness, as it potentially enhances our overall well being and vigor.

### Cellular processes and longevity

NMN's influence extends beyond superficial effects. It could potentially influence longevity by supporting critical cellular processes involved in ageing. By bolstering these mechanisms, NMN may contribute to the extension of a healthy lifespan.

### NMN Supplementation and Dosage

A 2023 study revealed that oral dosing of up to 900mg of NMN daily is generally safe and well-tolerated in adults.

### The Future of Anti-Ageing Solutions

As the scientific understanding of NMN expands, it holds promise as a potent healthy ageing supplement, thanks to its role in cellular rejuvenation and vitality preservation. The journey towards combating

ageing is a multifaceted endeavour, and NMN emerges as a beacon of hope, promising youthful vigour and longevity.

<https://www.myinvity.com/anti-ageing-benefits-nmn>

### Morning or night?

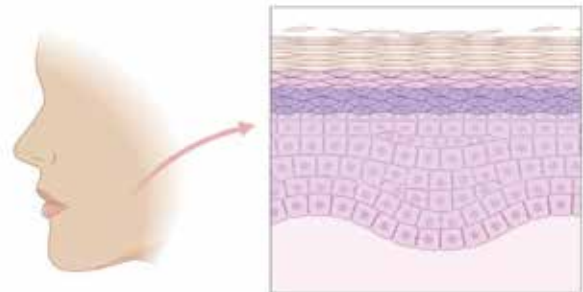
One advantage of taking NMN in the morning is that it can help to boost energy levels and mental clarity. Additionally, many people find that they are better able to absorb NMN when taken on an empty stomach. However, taking NMN at night can also be beneficial, as it can help to promote restful sleep.

### When does NMN start significantly affecting skin quality?

After **8 WEEKS of NMN** supplementation your skin start showing significant benefits.

Advanced glycation end products, or AGEs, are markers of skin ageing. A clinical trial involving healthy postmenopausal women found that NMN supplementation for eight weeks at 300 mg of NMN per day resulted in decreased AGEs in the skin.

*Morita, Y. et al., Glycative Stress Research 9 (2): 33-41 (2022).*



## Combining NMN and Resveratrol

could offer multiple health benefits. Together, they may enhance longevity by activating longevity genes and improving cellular health, as evidenced in laboratory studies. They also can improve metabolic and cardiovascular health, which is crucial in combating ageing and related diseases.

“The use of resveratrol increases collagen production and decreases reactive oxygen species, which improve elasticity and make the skin thicker and more homogeneous, repairing scars and marks. Resveratrol can inhibit the production of melanin and as such help fade age spots and even out skin tone. By fortifying the skin’s barrier function, it helps protect the skin from external harm and excess water loss, thereby enhancing the skin’s protection.

## Resveratrol

### 6 The molecule of eternal youth?

Resveratrol is a flavonoid—a compound from the plant world that carries out various protective biological functions. It’s most commonly found in the skins of grapes, blueberries, raspberries, and cranberries, as well as in peanuts, pistachios, cacao, and dark chocolate. The molecule resveratrol was popularized by the Harvard professor David Sinclair, who was named to Time’s list of the most influential people of the year in 2014 for his research on longevity. Sinclair identified the key role of resveratrol as a regulator of hepatic glucose and lipid metabolism in laboratory experiments.

### The benefits of resveratrol

The most important property of resveratrol is that it’s a potent antioxidant; it fights the free radicals responsible for cellular ageing throughout the body. When taken as a supplement or via food, it helps remove oxidative stress, lower blood pressure, extend the lifespan of skin cells and maximize collagen production. Resveratrol controls several aspects of liver metabolism in response to nutritional and hormonal signals, making it essential for maintaining energy homeostasis, i.e. the body’s internal and external regulation system.

## Taking a resveratrol supplement

For the body to receive the optimum beneficial effects of resveratrol, it needs a minimum of 150mg per day. That’s the equivalent to eating entire pallets of grapes or, worse, drinking “one hundred to one thousand glasses of red wine” Sinclair. That’s an impossible amount of wine! Better skip the extra alcohol and instead increase your consumption of resveratrol through supplements. If you go that route, experts say it’s ideal to take these supplements before meals, for a treatment cycle of a minimum 60 days.

<https://www.vogue.com/article/resveratrol-benefits-for-skin>

When it comes to skincare, Resveratrol delivers benefits through its powerful antioxidant abilities. It also helps to combat oxidative stress and inflammation. These actions are what drive its anti-ageing and skin protective effects.

## Resveratrol Skin Benefits

As far as the skin is concerned, there’s growing evidence that Resveratrol has a number of benefits. It can be used as oral supplement. Here are the main ways it benefits the skin:

- 1. Anti-Ageing:** Resveratrol helps neutralize free radicals which protects the skin and prevents early ageing. It also improves the appearance of fine lines and wrinkles through boosting the production of collagen. This also enhances skin elasticity and firmness.
- 2. Anti-Inflammatory:** This property makes Resveratrol good for calming the skin as well as reducing redness and irritation. This is particularly useful for people with sensitive skin or inflammatory conditions like rosacea.
- 3. Skin Brightening:** Resveratrol can inhibit the production of melanin and as such help fade age spots and even out skin tone.
- 4. Enhancing Skin Protection:** By fortifying the skin’s barrier function, it helps protect the skin from external harm and excess water loss.



**5. Combating Acne:** There is growing evidence that Resveratrol may also help reduce acne breakouts and promotes clearer skin. It does so through its anti-inflammatory and antimicrobial effects.

**6. Boosting Your Skincare:** There is great synergy between Resveratrol and skincare ingredients like vitamin C and vitamin E. The combination of these products can amplify their overall antioxidant actions and enhances skin regeneration and repair.

Additionally, it appears that Resveratrol increases the lifespan of several model organisms by regulating oxidative stress, energy metabolism, nutrient sensing, and epigenetics, primarily by activating sirtuin 1. This review summarizes the most important biological mechanisms of ageing, and the ability of resveratrol to prevent age-related diseases.

*Molecules. 2020 Oct; 25(20): 4649.*

**Optimal Dosage:** 150-500 mg daily recommended for various health benefits.

**Maximizing Absorption:** Best taken with fat sources; avoid protein or fibre.

**Potential Side Effects:** High doses may cause nausea or diarrhoea.

## Quercetin

is an anti-ageing flavonoid which can improve cellular antioxidant function, enhance dermal fibroblast activity, and activate SIRT1 pathways – all of which make it a novel potent cosmeceutical ingredient.

### Quercetin in skincare

It is a well-known phenomenon in the anti-ageing research community that low-level stress (such as metabolic stress or free radicals) will kick start cellular defense mechanisms that promote DNA repair and increase the cell's own production of antioxidants. It's the very adaptation to low-level stress that promotes cell survival and the cell is now able to function more efficiently, in a way that mimics younger cells.

Let's put this in the context of the skin and the chief cell type that is responsible for maintaining the skin's structure - **dermal fibroblasts**.

Dermal fibroblasts are highly mobile cells that are responsible for maintaining skin extracellular material, like the production of collagen, elastin and hyaluronic acid (among a myriad of other things). With age, dermal fibroblasts become sluggish and less metabolically active. In fact, some researchers have called **aged dermal fibroblasts "cells with a lost identity"**, as they no longer appear or function like younger fibroblasts and instead resemble fat cells. Not only do **aged fibroblasts make less collagen**, but also they make it clumsily, in disorganized ways, and this ultimately affects the skin's integrity and structure.

### What causes this drastic age-related change in dermal fibroblasts?

It's chiefly the accumulation of **DNA damage and reduced antioxidant defense systems in aged cells** that eventually forces cells into "senescence" - a state of gradual deterioration of function.

So, it stands to reason: if one were able to repair DNA and boost endogenous antioxidant production, the very signs of ageing can be reversed - at least functionally.

Luckily, the scientific literature and evidence largely supports this approach and this is where quercetin fits into the picture.

**Quercetin is long described as an antioxidant** with proven protection against the oxidation of lipids from free radicals. Though

the antioxidant activity of quercetin is unlikely to be the mechanism by which quercetin improves cell health. It's more likely that quercetin is paradoxically acting as a stressor to cells. Quercetin rapidly oxidizes within cells and transforms into a pro-oxidant. Pro-oxidants can place just enough stress on cells to improve their function (much like exercising at the gym) - and this is where quercetin action comes into play. When quercetin oxidizes in cells, it binds to the endogenous glutathione and forms the quercetin-glutathione complex. Glutathione is a critical cell antioxidant, but when bound to quercetin, it becomes useless and the quercetin-glutathione conjugate is eventually kicked out of the cell. This results in a **temporary depletion of glutathione levels within the cell, causing a low-level stress** environment due to an imbalance of oxidants and antioxidants. The **cells respond to this low-level stress by upregulating more antioxidant defense systems**, to not only restore glutathione levels, but also improve its agility to respond to subsequent oxidant challenges.

In short, **quercetin increases the cell's own antioxidant defense system**.

### What about DNA repair?

DNA repair plays a critical role in preventing the accumulation of DNA damage and subsequent loss of cellular function. One key mechanism to kick start DNA repair in cells is the **upregulation of SIRT1** - a key enzyme that regulates metabolic pathways, cell survival, DNA repair, and is ultimately associated **with anti-ageing functions**. In fact, SIRT1 is so intrinsically related to ageing that the cosmeceutical research space considers this to be a marker of effectiveness. **SIRT1 levels gradually decline as we age**, and this has a real impact on the ability of cells to undergo maintenance repair for continual optimal function. While there are several 'hacks' to increase our SIRT1 levels, such as calorie restriction, fasting and exercise, scientists have identified certain naturally occurring compounds that can increase and even activate SIRT1 in cells to a significant degree. These compounds are called "Sirtuin-Activating Compounds", or STACs for short.

**Quercetin is a STAC compound**, due to its ability to target and **activate SIRT1**, therefore initiating DNA repair and prevent age-related dysfunction of cells.

A recent study showed that quercetin enhances the proliferation and migration of dermal fibroblasts. This pathway is critical for cutaneous wound healing, and quercetin was shown to improve wound healing by **accelerating the formation of collagen**.

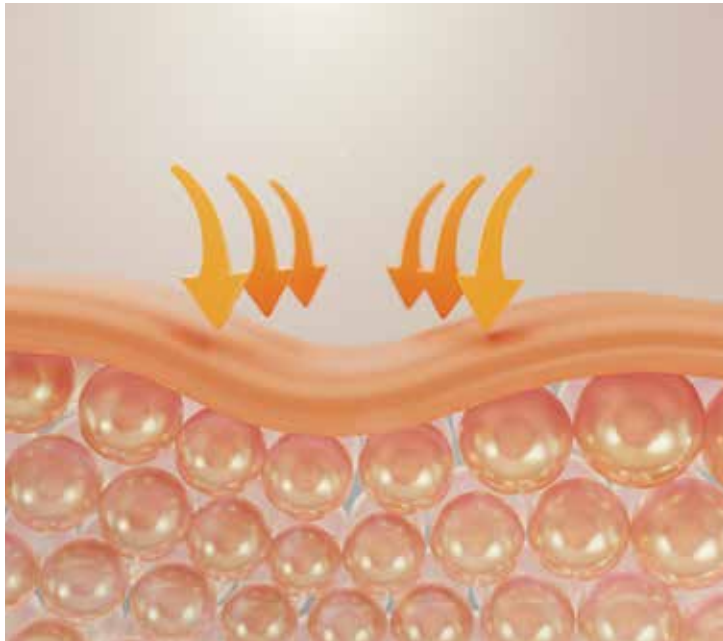


Another study on aged dermal fibroblasts showed that quercetin was able to both **restore cellular antioxidant levels**, improve mitochondria function and downregulate cellular senescence activity - all of which relate to the "youthfulness" of cells.

### Caveat of topical quercetin

**Quercetin cannot be used in conjunction with physical sunscreens containing zinc oxide.** This causes a temporary tanning effect on the skin - which although harmless is nonetheless undesirable from a cosmetic perspective. Taking a supplement containing Quercetin, like **aeonion NAD Booster**, bypasses this significant undesirable effect.

**In summary, Quercetin is an anti-ageing flavonoid** which can improve cellular antioxidant function, enhance dermal fibroblast activity, and activate SIRT1 pathways – all of which make it a **novel cosmeceutical ingredient**. The evidence is rapidly mounting for quercetin as not only a useful antioxidant but a **potent "bio-stimulator"**, capable of improving dermal fibroblast function with likely anti-ageing activity.



## Spermidine- the Anti-Ageing Polyamine that Induces Autophagy

Spermidine is one of the 3 major polyamines found in mammalian cells, spermine, and putrescine being the other two.

Polyamines are present everywhere in living cells and tissues. They are known as biogenic amines which are compounds with more than two amino groups. Polyamines occur naturally in our bodies and unfortunately, as we age these levels decrease.

### Polyamines play a role in:

- **Cell division and differentiation**
- **Cell proliferation**
- **DNA and protein synthesis**
- **Homeostasis (the body's ability to adjust and maintain a stable state)**
- **Gene expression (the code of a gene used to direct protein synthesis)**

Looking at all the functions of polyamines, we can see why we should be concerned if ageing causes our levels to drop. These essential compounds seem to be very involved in the processes of cell growth and maintaining genetic stability. They, therefore, help slow the process of growing older and improve our lifespan and our health span (our quality of life). The drop in our levels of polyamines is therefore denying us some rich therapeutic benefits. Revolutionary research and interventions with spermidine are ongoing and indicate that it may **delay ageing and play a role in protecting our bodies from age-associated diseases**.

### How can spermidine help us as we age?

The anti-ageing properties of spermidine may help solve some of our common day to day problems associated with age. Over time our body's undergo many changes. Factors such as menopause, hormonal changes, and age-related health issues are all part of ageing. Let's see how supplementing with spermidine is anti-ageing and could help us stay more youthful.

## Is spermidine good for hair?

Most of us invest a lot of time and money in our hair. Yet as we age we notice our hair's texture and colour changes. The dreaded thinning of hair associated with age leaves us feeling despondent and even depressed. For us to really understand the hair loss problem, we need to look at the hair cycle from the time it grows to the time it falls out.

Now every hair passes through 3 phases and every hair goes through these phases at different times. This explains why we don't have all our hair falling out simultaneously. The phases of hair growth are the growth phase (anagen), the intermediate phase (catagen) and the resting phase (telogen). Unfortunately, as we grow older our hair has a shorter life cycle and the new hair strand is often finer.

Studies have shown that polyamine spermidine can prolong the anagen phase, which means that the longer you can keep a hair in its growing phase, the longer the hair grows. So instead of shedding the average 80 to 100 hairs, you could be holding on to around 20-25% of those hairs a day!

Spermidine has also been shown to play a role in the production of melanocytes which is involved in the hair pigmentation process. Could spermidine be a contender for grey hair reversal? If all else it sounds like spermidine could help you have a thicker, healthier head of hair.



## How does autophagy work?

**"Life is maintained by a delicate balance between continuous synthesis and degradation. I found that degradation is just as important as synthesis for the maintenance of dynamic biological systems like the body"**

*- Yoshinori Ohsumi, Nobel Prize Winner 2016.*

**Autophagy, calorie restriction, intermittent fasting** are all terms that have become very popular. They have become synonymous with battling the effects of ageing, in other words prolonging your life. Before we can delve into the more groundbreaking research, we need to understand exactly what **"autophagy"** is. This will aid in comprehending the significance of spermidine and its ability to mimic fasting.

Does autophagy translate to "self-eating"? In a way it does, as autophagy is the beneficial process where our bodies consume and recycle their own tissue.

As we age the ability of many of our body's cells to activate autophagy slows down. We could use the analogy of not collecting the trash and our cellular waste accumulating where it impacts our health negatively. The benefits of autophagy begin with its anti-ageing function in creating younger cells.

Repaired cells work better and more like younger cells. Therefore, when autophagy is running well we may have a younger chronological age and an older biological age.



## On the cellular level, autophagy:

- Guards against neurodegeneration and encourages the growth of brain and nerve cells.
- Prompts regeneration and healthy cells.
- Supports the growth of heart cells and protects against heart disease.
- Prevents necrosis (the death of cells) that happens due to disease, injury, or irregular blood supply.
- Recycles residual proteins and damaged cells.

## How do you trigger autophagy?

1. **Through fasting** - restricting one's calories through intermittent fasting (IF), time-restricted eating (TRE), alternate-day fasting (ADF) and other specialized sub-forms thereof.
2. **The Ketogenic diet** - a diet of high fat, low carbs making the body shift metabolic pathways to use fat for fuel instead of glucose sourced from carbs.
3. **Exercise** - exercising induces positive stress which breaks down tissue. Broken tissue is repaired and grows back more robust. Exercise induces autophagy in organs like muscle, liver, pancreas, and adipose tissue involved in metabolic regulation.

## Can we trigger autophagy without fasting?

Sticking to a caloric restricted diet for extended amounts of time is not advisable for pregnant, breastfeeding and the very young. Those that are already underweight, that struggle with weight gain, as well as suffering from diabetes, may put themselves at risk with fasting. It is also not encouraged with individuals that may be too motivated in their approach and embark on food abstinence which could lead to malnutrition. Not to mention that fasting takes self-discipline.

Is there a way to bypass some of the obligations that are required to induce autophagy and reap the benefits?

Research suggests that by increasing intake of spermidine via foods or anti-ageing supplements we could still acquire the healthful benefits of autophagy. Why?

Because Spermidine is what is termed as a “caloric restriction mimetic.”

It tricks the body in inducing autophagy. When we are young our spermidine levels are quite high and autophagy is regularly activated by these spermidine levels. We also know that spermidine levels drop with age, so how can we increase our intake of spermidine so that we can enjoy the anti-ageing health benefits of autophagy?

## WHERE CAN SPERMIDINE BE FOUND?

The answer lies in eating specific foods. On the other hand, it could prove challenging reaching that daily intake of spermidine and calculating these amounts. The good news is that spermidine is available as capsules and supplements resolving the amount of guesswork. We can now induce autophagy and reduce the undesirable effects of ageing.

## Live Better for Longer!

Don't settle for a single ingredient to support healthy ageing.

**aeonion**  
NAD Booster

is a unique formulation to offer a 4-compound longevity complex together with the full vit B complex and vit D3, that addresses a plethora of process ranging from oxidative stress, cellular energy production, telomere shortening, to DNA integrity, and DNA repair mechanisms, mitochondrial function and in conclusion ensures improvement in various skin quality parameters.

ΣΤΟΙΧΕΙΑ ΣΥΜΠΛΗΡΩΜΑΤΟΣ / SUPPLEMENT FACTS		
Συστατικά/ Ingredients	περιεχόμενο ανά 3 κάψουλες/ amount per serving 3 caps	Δ.Τ.Α. / N.R.V (%)*
Nicotinamide Mono Nucleotide	500 mg	**
Quercetin	500 mg	**
Resveratrol	500 mg	**
Spermidine	5 mg	**
Vitamin D3 (as cholecalciferol)	5000 IU (125 mcg)	2.500%

B-complex which contains:	10 mg	**
Vitamin B1 (Thiamin)	1.1 mg	100%
Vitamin B2 (Riboflavin)	1.4 mg	100%
Vitamin B3 (Niacin)	16 mg-NE*	100%
Vitamin B5 (Pantothenic acid)	6 mg	100%
Vitamin B6 (Pyridoxine)	1.4 mg	100%
Vitamin B7 (Biotin)	50 µg	100%
Vitamin B9 (Folic acid)	200 µg	100%
Vitamin B12 (Cobalamin)	2.5 µg	100%

**Δόση:**  
2-3 κάψουλες την ημέρα /  
**Δόσεις ανά συσκευασία:**  
30-45

**Serving size:**  
2-3 capsules per day/  
**Servings per container:**  
30-45

“ **Live a longer and healthier life!**

**Don't settle for just one ingredient to support a healthy anti-ageing process.**

**aeonion**  
NAD Booster

is a unique formula that offers a complex of longevity with 4 revolutionary compounds, along with the complete complex of B vitamins and vitamin D3, which has the ability to :

- increase cellular energy and facilitate DNA repair, making it a perfect anti-ageing ingredient.
- reduce fine lines and wrinkles by promoting elastin and collagen synthesis and improving cell function, leading to a smooth, firm and youthful appearance.
- counteract the effects of ageing by activating cellular autophagy and facilitating the removal of damaged cells and matter.
- strengthen hair growth by prolonging the growth phase (anagen phase), maintaining an average of 20-25% more hair per day
- help rejuvenate the skin at the most fundamental level and boosts resilience against environmental damage, fighting ageing in multiple levels



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