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Research article Medical research

Kalon lueur age defier day creams pf 20: a new strategy for an ideally moisturized and restructured skin

Govind Shukla, C. Subrahmanyam, Kurma Manohar, C.J Sampath Kumar.

Pugos Nutrition Research Centre Hyderabad,
A unit of PUGOS Products Pvt. Ltd. 42, 2nd Floor, Leelavathi Mansion, 6th Cross, Margosa Main Road Malleshwaram Bangalore-56003, INDIA

ABSTRACT

Antioxidants are our first line of defense against free radical damage, and are critical for maintaining optimum health and wellbeing.The need for antioxidants becomes even more critical with increased exposure to free radicals. Pollution, cigarette smoke, drugs, illness, stress, and even exercise can increase free radical exposure. Because so many factors can contribute to oxidative stress, individual assessment of susceptibility becomes important. Antioxidants terminate the chain reactions by removing free radical intermediates, and inhibit other oxidation reactions. They do this by being oxidized themselves, so antioxidants are often called as reducing agents. Skin immunity is regularly challenged by factors such as pollution, sunlight and stress, which deteriorate the skin's quality. Moreover, the concentration of immune cells decreases as we age and their efficiency declines. This leads to signs of ageing on the skin's surface.
Skin immunity plays a key role in healthy functioning skin. Immune cells in the skin function as and play an important for the constant repair, protection and renewal of tissue. Thus, efficient skin immunity is essential to attain functional, healthy and beautiful skin

Keywords: Kalon Lueur Age Defier Day Cream, Antioxidants, Oxidative stress, Pollution, Skin infections, poor diet, toxins, radiation.

INTRODUCTION

OXIDATIVE STRESS occurs in response to excessive levels of cytotoxic oxidants and free radicals in the environment. Antioxidant is a chemical compound or substance that inhibits oxidation to protect body cells from the damaging effects of oxidation.

The term "oxidative stress" has been coined to represent a shift towards the pro-oxidants in the pro-oxidant/antioxidant balance that can occur as a result of an increase in oxidative metabolism. Increased oxidative stress at the cellular level can come about as a consequence of many factors, including exposure to alcohol, medications, trauma, cold, infections, poor diet, toxins, radiation, or strenuous physical activity. Protection against all of these processes is dependent upon the adequacy of various antioxidant substances that are derived either directly or indirectly from the diet. Consequently, an inadequate intake of antioxidant nutrients may compromise antioxidant potential, thus compounding overall oxidative stress.

OXIDATIVE STRESS TO BODY,CELL & DNA

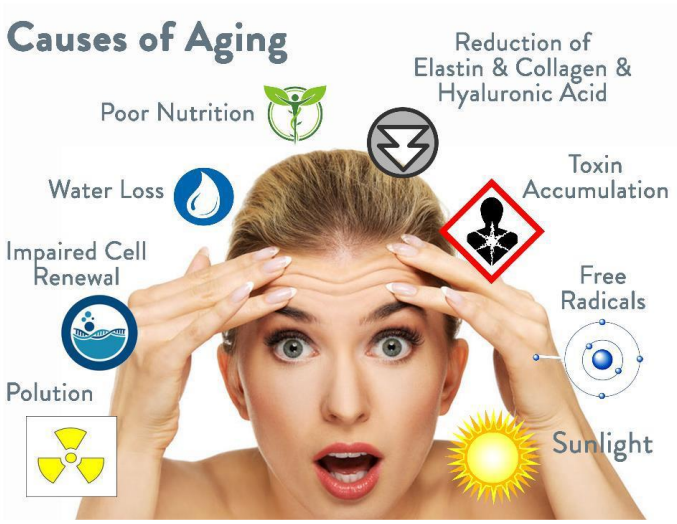
OXIDATIVE STRESS AND HUMAN DISEASE

Oxidative damage to DNA, proteins, and other macromolecules has been implicated in the pathogenesis of a wide variety of diseases, most notably heart disease and cancer.

Clinical intervention trials suggest that antioxidants may play a pivotal role in preventing or slowing the progression of wide variety of diseases, such as heart disease and some forms of cancer.

CONDITIONS ASSOCIATED WITH OXIDATIVE DAMAGE

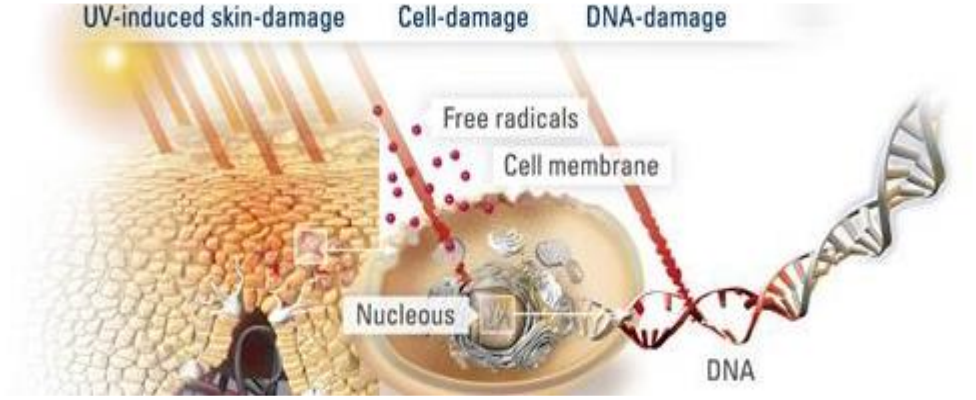
- Atherosclerosis
- Cancer
- Pulmonary dysfunction
- Cataracts
- Arthritis and inflammatory diseases
- Diabetes
- Shock, trauma, and ischemia
- Renal disease and hemodialysis
- Multiple sclerosis
- Pancreatitis
- Inflammatory bowel disease and colitis
- Parkinson's disease
- Neonatal lipoprotein oxidation
- Drug reactions
- Skin lesion & Aging



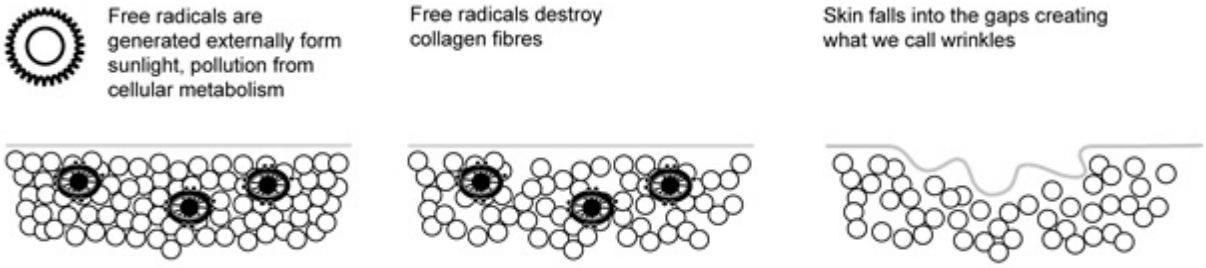
Aging is a biological, degenerative process. It progresses slowly and is much more complicated to be measured quantitatively. Aging results in functional decline of organisms such as physiological functions with time and hence chances of death and disease rate are increased. The increased rate of life expectancy is a consequence of the availability of treatments and better life quality conditions. Numerous chronic and non-communicable diseases are responsible for disability and death worldwide. The average life span for a healthy person is 80 years and aging leads to mortality and pathophysiological conditions.

Aging theories

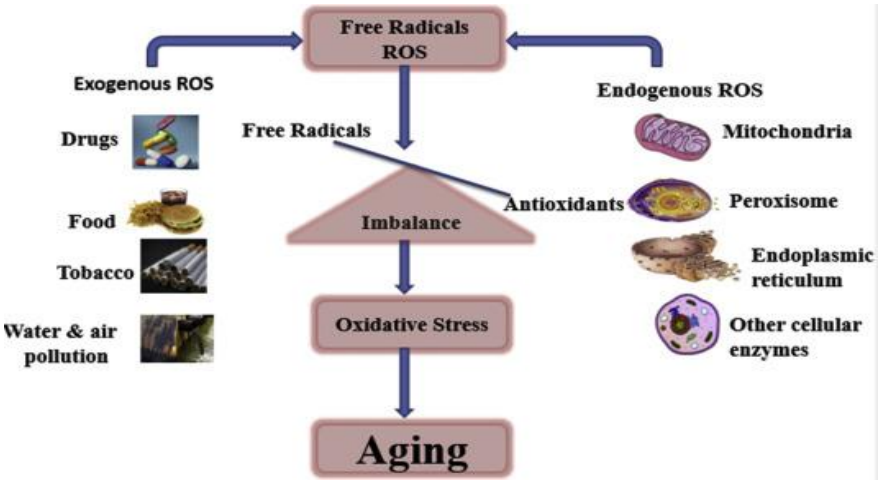
Indeed, above 300 theories including many mechanistic and evolutionary theories have been proposed by the scientific community to explain why and how living organisms age and the driving force behind aging, but not even a single theory has been proved to be universally applicative. For instance, according to the "somatic mutation" theory, somatic mutation and increased DNA damage largely account for aging, while "telomere loss" theory suggests that with age cellular division capacity associated with progressive telomeres shortening in somatic tissues is decreased. However, the "altered proteins and waste accumulation" theory postulates about association of certain factors with some age-linked ailments, like protein turnover being indispensable to conserve cellular function and accumulation of altered proteins and damaged proteins over time.
Hence, it is considered from all aging theories, from programmed cell death to 'wear-and-tear', that ROS (reactive oxygen species) or free radicals account for age development.



Oxidative stress



Oxidative damage means the accumulation of free radicals due to free radical's over-production that cannot be processed gradually or because of less availability of antioxidants. It leads to a wide range of random and indiscriminate biomolecular damage.Term "oxidative stress" was first used in the 1970s & 1980s, for various deleterious processes. However, it was later defined as antioxidants and oxidants imbalance in favor of the oxidants, which potentially leads to deterioration as shown in figure. Oxidative stress occurs when the antioxidant buffering capacity is less than the production of pro-oxidant compounds such as ROS.



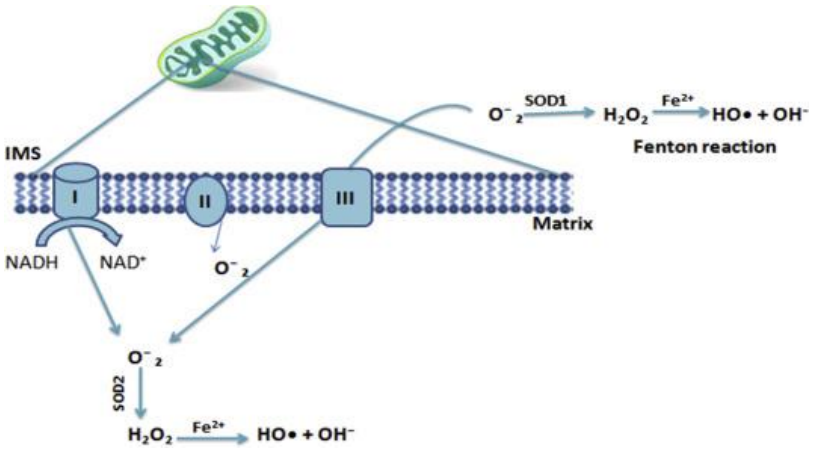
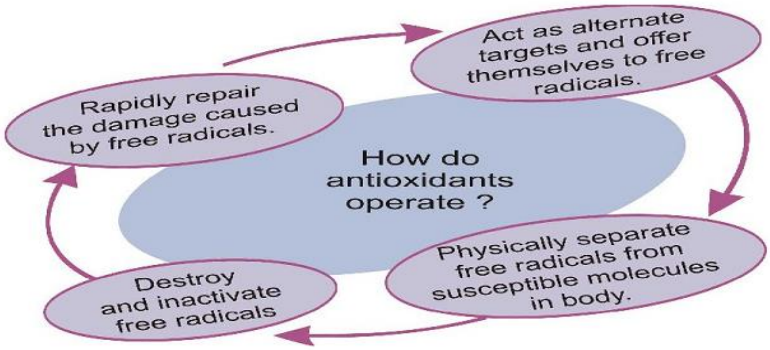


Fig 1: Generation of ROS in the electron transport chain through complex

What Are Antioxidants?

Antioxidants are found in many foods. They work to keep our cells healthy by protecting them from damage by free radicals (molecules responsible for aging, tissue damage, and some disease). Free radicals damage cells in a process called oxidation. Oxidation results from everyday body functions such as breathing or walking, but certain processed and fatty foods, toxic substances, and sunlight can increase its effects. Antioxidants help repair damaged cells, which can prevent diseases, including cancer. A diet rich in a variety of plant-based foods provides all of the antioxidants the body needs. Research shows that vitamins, minerals, and phytochemicals from whole foods interact to boost their disease-fighting effects. These nutrients benefit both healthy people and those fighting disease. This is why it is important to focus on eating nutrient-rich foods rather than focusing on a single nutrient in supplement form.

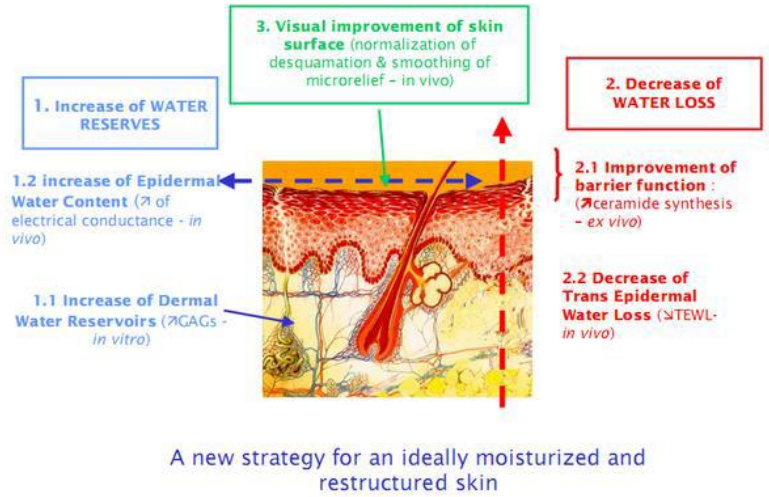
HOW DO ANTIOXIDANTS OPERATE?



NATURAL ANTIOXIDANTS TO NEUTRALIZE FREE RADICALS

To protect the cells and organ systems of the body against reactive oxygen species, humans have evolved a highly sophisticated and complex antioxidant protection system. It involves a variety of components, both endogenous and exogenous in origin, that function interactively and synergistically to neutralize free radicals.

KALON LUEUR AGE DEFIER DAY CREAMS PF 20: A NEW STRATEGY FOR AN IDEALLY MOISTURIZED AND RESTRUCTURED SKIN



A new strategy for an ideally moisturized and restructured skin

Mechanism of Action of each ingredient.

ASTAXANTHIN

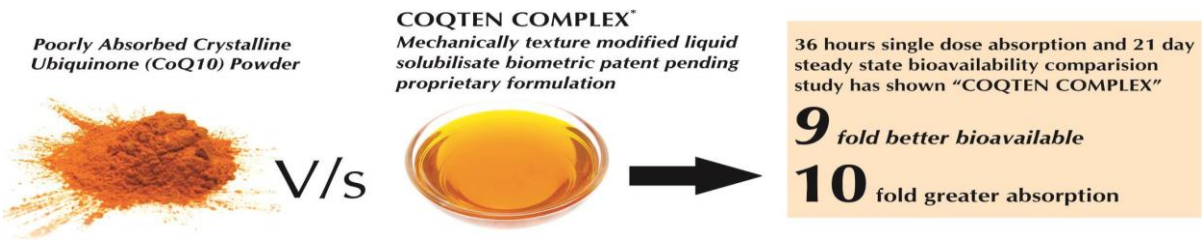
Astaxanthin in Kalon Lueur is procured from the world's leading manufacturer of Astaxanthin. Astaxanthin is a naturally occurring carotenoid which is derived from microalgae Heamatoccocus Pluvialis.

•The most powerful antioxidant from nature that supports to neutralize the free radicals from causing skin damage.
•Increases the skin's ability to resist environmental stripping of skin nutrients by restoring the skin's natural antioxidant balance (SOD,CAT, GSH), and by protecting cell membranes against lipid per-oxidation.
•Reduce age spots by inhibiting overproduction and oxidation of melanin.
•It deeply penetrates the skin and provides protection to all the skin layers inside out.
•It is shown to be an efficient absorber of specific UV rays than may contribute to skin aging, pigmentation and reduced skin elasticity.
•Improves elasticity by strengthening the collagen layer.
•Prevents and reduces the presence of UV-induced wrinkles by protecting the dermal layer against oxidative stress dysfunction.
•Revitalizes photo aged skin by quenching free radicals in all skin layers.
•Reduces the size of wrinkles and improves skin micro texture.
•Promotes firmness and improves skin elasticity.
•Reduces puffiness and erythema by suppressing the inflammatory pathway.
•Firms skin and increases moisture by allowing repair processes to heal the collagen network.
•Reduces the risk of skin cancer by protecting against accumulated DNA damage

VITAMIN E TPGS

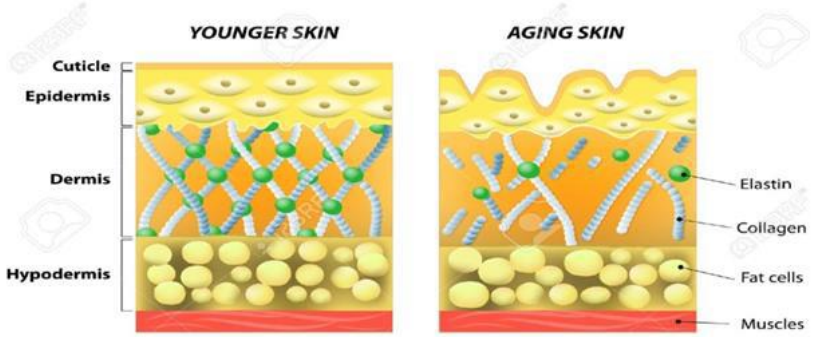
•**Vitamin E** TPGS has effectiveness as a human **skin penetration enhancer by interacting with the lipid bilayer region of the stratum corneum and altering membrane permeability**. Unlike other well-known enhancers, vitamin E is generally thought to be non-irritating and possesses anti- oxidant and emollient properties
•vitamin E, TPGS has unique properties due to its dual combination of lipophilicity and hydrophilicity, it enhances the penetration and absorption of skin lipids.
•Locks moisture into the skin and prevents dehydration & nourishing your skin from within.
•Helps in maintaining the barrier function of the skin.
•Promotes healthy skin, and reverses signs of ageing.
•Helps to regenerate new skin cells and can lighten dark spots or scars.
•Vitamin E TPGS may also have substantial sun screening properties. Topically applied Vitamin E penetrates into dermal layers and protects the dermal components in human skin and thus prevents photo aging.
•Excellent moisturizer that helps to keep the skin healthy and soft.

COQTEN COMPLEX



COQTEN COMPLEX- A Proprietary Coenzyme QTEN formulation with enhanced absorption & bioavailability.
•Coenzyme QTen complex is beneficial in cell replenishment, augmentation of cellular energy metabolism, and antioxidant effects.
•Increases the levels of Quinone on the skin surface & deeper layers.
•Ubiquinone is thought to penetrate the skin easily, and reduce free radical damage via its antioxidant properties.
•Helps to assist cells in building collagen and elastin, therefore reducing the appearance of fine lines and wrinkles.

BETA- GLUCAN



•Skin immunity is regularly challenged by factors such as pollution, sunlight and stress, which deteriorate the skin's quality. Moreover, the concentration of immune cells decreases as we age and their efficiency declines. This leads to signs of ageing on the skin's surface.
•Skin immunity plays a key role in healthy functioning skin. Immune cells in the skin function as and play an important for the constant repair, protection and renewal of tissue. Thus, efficient skin immunity is essential to attain functional, healthy and beautiful skin
•Beta-1,3/1,6-glucan3 is an immune-enhancing component extracted from baker's yeast that can interact with Langerhans cells.
•Beta-glucan from baker's yeast has been used as an ingredient in skin care for a long time and is attractive because of its positive effects on skin tissue and potential in skin repair.
•Yeast is an antioxidant and antioxidants strengthen skin structure and helps to produce healthy skin cells toward off environmental damage.
•Helps to stimulate tissue repair, hydrate skin, repair DNA, produce collagen and brighten skin .
•Increased skin tone and elasticity & reduces fine lines and wrinkles.

NIACINAMIDE

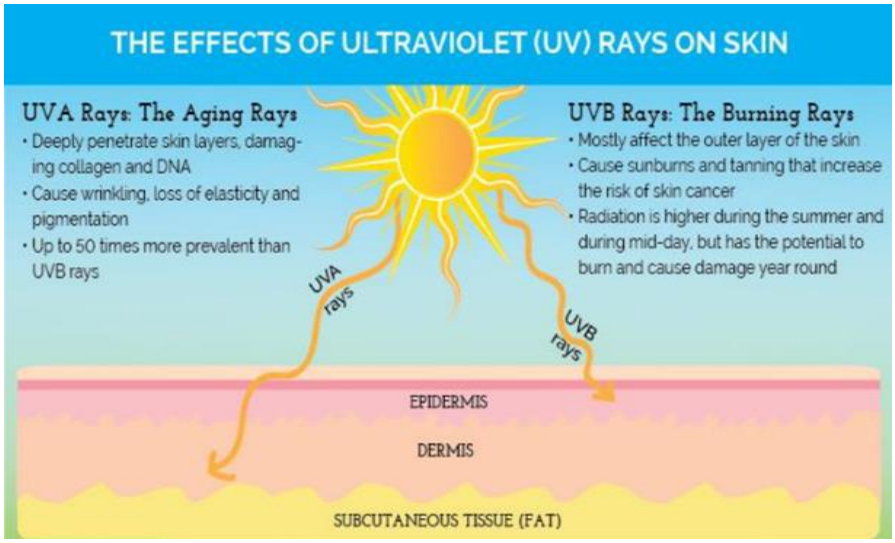
In the skin care world, Niacinamide is an antioxidant, also known as vitamin B3 or nicotinic acid.
•Niacinamide is a derivative of Vitamin B3 that suppresses melanin from reaching the surface of the skin and protects the skin from further UV damage. Too much melanin (which is a naturally occurring substance in the body that is responsible for both its color the skin's absorption of UV rays) can result in age spots, freckles, and hyper-pigmentation.

•Topical application of Niacinamide has been shown to increase ceramide and free fatty acid levels in skin, prevent skin from losing water content, and stimulate microcirculation in the dermis.
•Helps to reduce Acne, hyperpigmentation, dark spots, oversized pores & uneven skin texture.
•Helps to minimize lines, wrinkles, protects skin from infrared light & premature aging.
•Improve the skin's barrier functions by increasing cell turnover and proliferation, as well as lipid production.

RICEBRAN OIL

•Helps to even out the skin tone, improves circulation & brightens overall complexion.
•Increases body's defense against toxins that enter through skin.
•Hydrates the skin and helps to retain moisture, thus, making your skin softer and smoother.
•Helps to protect the skin from sun damage.
•Helps to boosts skin's natural regeneration process.
•Helps to renew and improve skin's surface.
•Rice bran oil nourishes skin cells, slowing down and preventing aging process.
•Improves skin's elasticity, helps to make your skin more youthful and plump.
•Protect the skin from harmful sun damage & working as natural sun blocker.

SUNSCREEN AGENT



•Sunscreen agent are broad spectrum agents which are effective against broad range of solar spectrum.
•Provide complete protection to skin against damage from solar radiation.

AQUAXYL

Aquaxyl is patented from FRANCE.
Revolutionary And Patented 3d Hydration Formula To Keep Skin Hydrated From Morning To Night.
• It moisturizes and restructures the skin. The skin is more resistant and better equipped to combat external aggressions.
•It provides:
3D Hydration Hydra Concept which offers circulation of water optimized throughout all layers of the skin, up to the surface.
Barrier reinforced in 24 hours which limits the water loss.
Promotes softer, smoother skin in 28 days.
•Mitigates Visible Effects Of Skin Damage Caused By Oxidative Stress And Provides Protection To The Deeper Layers Of The Skin.
•Counterbalances The Negative Effects Of Sun Related Damage With Uv Blocking Properties.
•Energizes Cells To Repair Damage And Supports Efficient Cell Renewal.
•Rejuvenates Skin By Stimulating Skin Cell Activity.
•Stimulates Collagen Production And Promotes Healthy Skin.
•Unique Delivery System To Ensure Maximum Absorption.
3d Skin Hydration Hydraconcept Increases Water Reserves And Inhibits Water Loss

CONCLUSION

We all are aware of the fact that a high mortality and morbidity rate are attributed to aging. Aging is a global issue as the number of centenarians increasing worldwide. We cannot deny the reality of being aged but we can convert this time-dependent and natural process of aging, into a healthy aging process with Pugos Nutrition, because the number of healthy centenarians is not very high. As environmental parameters also contribute largely to aging so we should pay attention to regulating the ROS producing environmental factors. Similarly, our diet should be rich in antioxidants such as fresh fruits and vegetables that may help in preserving the equilibrium between oxidants and antioxidants and ultimately healthy aging process.

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