

ARK[®]
AGE AWARE SKINCARE

Fact Sheet: Supplements for Skin Health

Oral supplements

“As a practising Naturopathic Doctor, nutritional supplements play an important role in my treatment protocols. Naturopathic medicine is a primary health care system that blends modern scientific knowledge with traditional and natural forms of medicine. Its philosophy is to stimulate the healing power of the body and treat the underlying cause of disease. Unlike traditional medicine, which tends to treat symptoms, naturopathic medicine aims to treat the underlying cause in both a therapeutic and preventative manner.

Oral supplements provide natural factors that are either deficient in our diets or need to be present in a higher concentration to exert a therapeutic effect. They are safe and free of side effects*. They provide the building materials that the skin and body need to function optimally, working from the inside to reflect our health on the outside.

The supplements and ingredients I have chosen are based on my research and eleven years in clinical practise. They represent the safest and most effective therapies that I have used with my patients, combining treatment and prevention, repair and reinforcement. The combination of internal and external therapies is unique and offers the most exceptional opportunity for individuals to improve their skin and their health.”

Dr. Penny Kendall-Reed

*Note: All natural ingredients and supplements used in the ARK Age Aware Skincare product range are safe, free from side effects and will not interact with other medication. This is not true for all natural supplements available at health stores.

There are 4 basic natural oral supplements that we recommend for all age treatments. They accompany each of the 3 age appropriate product ranges. Their constituents have the following benefits for your skin:

- Enhance and strengthen collagen production
- Provide important anti-oxidants
- Reduce inflammation
- Improve hydration

Supplement 1

Collagen Forte – Vitamin C, L-lysine and L-proline

This formula is designed to encourage healthy collagen synthesis at any age.

Vitamin C is essential for the synthesis of collagen and glycosaminoglycans (GAGs), the building blocks of connective tissue. Vitamin C helps to catalyze the cross-linking of collagen fibres and is a powerful antioxidant.

L-lysine and **L-Proline** are two amino acids that are required for the cross-linking of collagen fibres. Cross-linking provides crucial strength and resilience, while improving collagen flexibility. Both amino acids require Vitamin C to help initiate the process.

Supplement 2

Ultra Antioxidant

This is a multi-spectrum anti-oxidant formula that targets both water and fat-soluble tissues. It contains Vitamins C, E, A, NAC (N-acetyl-cysteine), Glutathione, bioflavonoids, Hesperidin and Beta-carotene

Vitamins C, E and A provide both water and fat-soluble protection against oxidation caused by UV radiation, pollution, stress and normal metabolic functions. NAC is a precursor to the amino acid Cysteine, which is used to synthesise Glutathione, the body's main free radical scavenger. NAC also provides unique antioxidant properties itself specific to most metabolic reactions. The bioflavonoids and Hesperidin decrease inflammation and oxidation as well as prevent excess release of histamine and other substrates that promote redness and irritation to the skin and blood vessels.

Supplement 3

Nutri Derm

This formula provides all the essential vitamins and minerals to support healthy skin growth and maintenance. It contains Vitamins A, B1, B2, B6, B12, Pantothenic acid, Folic acid, Biotin, Choline, Zinc, Inositol, PABA, L-cysteine and Methionine.

B vitamins are essential components in most metabolic reactions ranging from the breakdown of food into energy, to the production of hormones, maintenance of the nervous system and growth of new skin cells. Zinc is an important co-factor in all reactions needed for cellular turnover – especially that of the skin. It is also a powerful wound healer for the skin and mucous membranes as well as possessing antiviral properties to help boost and strengthen immunity. PABA has powerful antioxidant properties, while inositol and choline help regulate the nervous system and inflammatory processes.

Supplement 4
Flex HA

Hyaluronic Acid, or HA, is the major component of the “ground substance” which imparts fullness and flexibility to the dermis. It is a large molecule that attracts and holds water to maintain skin turgor. HA has the following properties:

- Rheological – electrostatic potential which helps direct the flow of therapeutic ingredients in the skin.
- Viscoelastic – flexible, resists deformation and maintains shape.
- Hygroscopic – attracts and holds water to maintain turgor and prevent inflammatory dehydration.

HA is able to attract and hold more water than any other natural or synthetic polymer molecule. It also helps to increase the migration of epithelial cells to the skin’s surface providing a “fresh” look, without increasing cellular turnover, which would speed the rate of ageing. HA promotes fibroblastic proliferation and differentiation in ageing skin, and inhibits the degrading action of enzymes such as collagenase. It also stimulates immune cells within the skin to react more quickly to damage and promotes faster repair.

HA binds proteins known as hyalderins, such as fibrinogen and albumin, which increase strength and hydration, augmenting protection from UV light, free radicals and hormonal changes.

Additional supplements may be added on an individual basis with the following general recommendations based on age appropriate treatment.

age prepare

Generally no additional supplements required.

age maintain:

Add Amino Acid Complex

Glycine, proline, and lysine are the 3 amino acids necessary in the manufacture of collagen. (Vitamin C is also required to convert proline to hydroxyproline and lysine to hydroxylysine, which give collagen its unique properties).

Dietary intake of these amino acids is often insufficient, with lysine being one of the essential amino acids the body cannot manufacture. With age, our ability to absorb and synthesise these important components wanes. Oral intake of amino acids increases the available substrate for fibroblasts to manufacture new collagen. In addition, higher amino acid levels provide more building material to repair damaged or injured skin cells, leaving skin stronger and more resilient to infection, burns, inflammation and oxidation.

Lysine and arginine are the two amino acids required for the synthesis of growth hormone and IGF-1 (insulin like growth factor – 1). They are both essential amino acids (the body is unable to synthesise them). By adding arginine to the formula, the production of growth hormone is maximised, improving fibroblast activity and skin repair.

age repair

Add CoQ-10 and Isoflavones

CoQ 10 (Co-enzyme Q-10), also known as Ubiquinone or Vitamin-Q10, is a compound that is naturally synthesised in the body. It is an essential component for the energy reaction within every cell of the body. It has been likened to the “spark plug” of an internal combustion engine. It is also a powerful antioxidant, with a particular affinity to protect DNA and cardiac tissue. CoQ-10 is found in all cells, but its highest concentrations are in the heart, liver, skin, kidneys and pancreas. Natural levels of CoQ 10 decrease with age, illness and stress and replacement is considered one of the keystones of anti-ageing therapy.

Taken internally, CoQ10 acts as an antioxidant with specific affinity for the skin and cardiovascular system. It activates the enzyme phosphotyrosine kinase, which prevents DNA damage inside body tissues including the skin. Higher levels of CoQ10 in the skin also suppress UV-induced fibroblast collagenase production. This is the enzyme that breaks down and destroys collagen in the skin and other body tissues. By decreasing the activity of this enzyme, collagen damage is reduced.

Other added internal benefits of CoQ10 include its ability to decrease the aggregation of cholesterol and sugars onto the walls of blood vessels, reduce the onset and progression of coronary artery disease and Alzheimer's disease, as well as improve overall lung capacity.

Isoflavones are secondary vegetable substances, which can act as estrogens in the body and overall have a protective function. The oestrogen effects of isoflavones are much less powerful than the oestrogen hormones themselves (approximately 1/1000th the potency). This is why isoflavones and phyto-oestrogens exert a balancing effect when the level of oestrogen is low, such as during menopause. Besides helping ameliorate symptoms associated with menopause, isoflavones can also reduce the effect of low oestrogen on cells and skin layers such as decreased skin thickness and poor hydration and turgor.

Isoflavones have anti-tumour effects, which are not related to oestrogen activity. They inactivate certain enzymes known to be involved in the development of cancer. These include tyrosine kinase and aromatase-5 α -reductase. Tests have shown that the isoflavone genistein can inhibit the activity of tyrosine kinase. In addition, by reducing the formation of blood vessels it inhibits tumour nutrition and growth.

Isoflavones also act as strong antioxidants, similar to Vitamins C and E, neutralising the free radicals which play another important role in carcinogenesis.

It also appears that isoflavones have an anti-ageing effect on UV-damaged skin.