

# InnerGlow Skin Care

## Markham Village Naturopathic Clinic

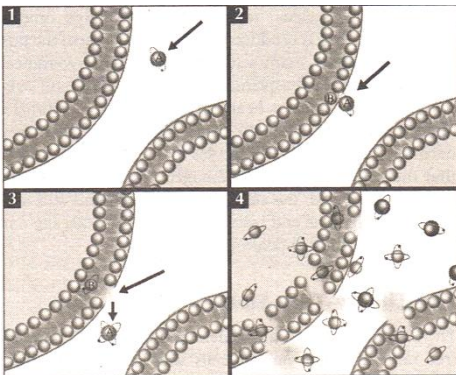
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### Free-Radicals and Inflammation-Aging Connection

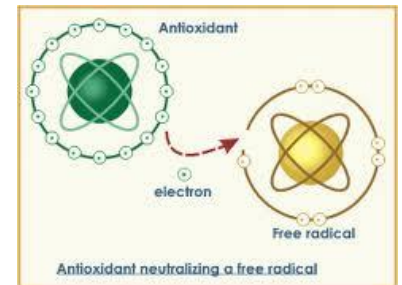
“Aging” of our skin is a pre-programmed process that begins with degeneration or damage of tissue at a cellular level. Finding ways to reduce or eliminate cell damage significantly affects the aging process.

The most important cause of cellular damage is free-radicals. Free radicals are oxygen molecules that have lost an electron in interactions with other molecules. As a result, these molecules are extremely unstable, or reactive. In their quest to “heal” themselves, free radicals steal electrons from other, healthy molecules, creating more free radicals in the process, damaging cell components.

Although free radicals are entirely natural – they are a by-product of normal bodily processes, like breathing air or digesting food – they are also extremely damaging. Every time free radicals seek to stabilize themselves, they harm healthy cells. Worse, free radicals aren’t just manufactured by our own bodies. They’re also unleashed by external factors including sunlight, cigarette smoke, hormonal imbalances, a poor diet, undiagnosed food sensitivities and air pollution.



Free radical A seeks an electron (1) and steals it from the molecule-dense cell plasma membrane (2), damaging the cell plasma membrane and starting a chain reaction of free radical activity (3 and 4).



Free radicals can damage virtually every part of a cell, including the nucleus, where DNA, the body’s unique genetic blueprint, is produced. They can also harm the fats inside the cells. If they take the extra electron they need from the collagen molecule in our skin, the result is that the collagen becomes damaged. Recall from our understanding of the anatomy/physiology of the skin that collagen is one of the main proteins that give our skin its youthful suppleness and tautness. When the collagen becomes damaged, the skin gets discoloured and stiff and loses elasticity, a condition that tends to make the skin look “old”. Since collagen stays in our skin for years, free radicals can attack it mercilessly and the end result is that free radicals sap our skin of its youthful appearance.

### **Antioxidants**

Happily, our skin has allies in its continuing fight against free-radical damage. Antioxidants are a group of nutrients (including certain vitamins, amino acids and some other natural substances) that can stop or even reverse free-radical damage and put an end to subclinical inflammation and micro-scarring. They are basically standing guard and prepared to fight to keep your cells healthy, your skin beautiful and your body disease-free. Since there is no way to constantly monitor free radical activity or to measure the amount of antioxidants you have at any given moment, the best way to ensure you have protection is to have regular intake of dietary antioxidants. The best way to do this is to eat the freshest fruits and vegetables several times per day.

In addition to this is important to take an anti-oxidant-rich vitamin supplement that addresses your individual needs, based on your age, activity level, gender, how much stress you endure on an average day and other health concerns.

Research proves that consuming healthy foods can help your skin have a youthful, plump, radiant, glowing appearance. In 2007, the American Journal of Clinical Nutrition published a study done by British researchers that examined whether the food people eat affects the way their skin looks – and the answer was clear. More pronounced wrinkles were found in those with a higher intake of bad fats and processed carbohydrates (such as white bread and packaged cookies and snacks), while a diet rich in vitamin C was found to reduce wrinkles later in life.

When we don't have enough anti-oxidants on board and free radicals get the upper hand, they damage the deep workings of the skin tissue in a process called "oxidation". Think of the way an apple turns brown when it's exposed to the air and you'll get the picture.

### **Vitamins for Skin Care**

Since good skin health begins from within, various vitamins can be of benefit.

**Vitamin A** and its precursor, **Beta-Carotene**, help preserve the skin's elasticity, regulate sebaceous glands, protect against infection, and stimulate collagen formation. A deficiency of this vitamin may result in dry, itchy skin, making it more likely that dead skin cells will clog the pores and cause breakouts.



The **B-complex vitamins** help keep the ravages of stress from showing on our skin. A deficiency is sometimes implicated in cracks around the mouth, corners of the mouth and eyes. B-complex vitamins are critical links in a number of enzyme-related chemical reactions that protect the skin, and your health in different ways. At any given time, one of the B-vitamins is at work in your body spurring on carbohydrate metabolism, nervous system function, fatty acid metabolism, the maturation of red blood cells and other important processes.

**Vitamin C** does miraculous things for your skin health. It prevents free-radical damage, strengthens the capillaries, promotes healing, stimulates collagen production and increases skin elasticity. Bioflavonoids help keep the capillaries strong, thereby inhibiting bruises, spider veins and varicose veins.

**CoEnzyme Q10** is important to add to your supplement regime as it is the antioxidant most easily depleted in the skin by sun exposure or toxins. It is extremely important because it gets into the cell membrane and protects it from free-radical damage. It also works in the mitochondria – the energy producing portion of your cells.

Once you learn how skin is built, how it works, what causes skin problems and what nutrients and foods help your skin look beautiful, you have the ultimate recipe for healthy, radiant skin.