The Cause & Treatment of Aging Skin

Science:

The main issues that lead to the various signs of skin aging are:

1. **Intrinsic Aging** – Genetic predisposition to aging aka, the normal aging process, leading to general sagging and wrinkling of the skin, with decreased structural moisture and lipids, dry brittle dull skin, and pre-cancerous lesions beginning to appear. An overall lack luster appearance is evident.
2. **Extrinsic Aging** – Environmentally exposure (sun) and factors due to lifestyle (alcohol, stress, smoking, etc.) all contribute to weakening of the collagen and elastin (structural support for the skin) leading to wrinkling and fine lines, brown spots, dull, rough, reddening skin. An overall loss of skin vitality and health is seen.

1.) Intrinsic Aging is normal. We will all age and begin to show these signs of aging according to our own unique genetic roadmap. The affects of gravity on the body will start to show signs of sagging and wrinkling skin. Our expressions, over time, will leave their inevitable mark in the form of laugh lines and frown lines, etc. as the collagen and elastin fibers weaken and become less abundant. It's like bending a coat hanger in one spot. Eventually that area becomes weakened and breaks. The same is virtually true with skin as it will wrinkle and develop fine lines as we age. Also, the body does not produce skin cells at the rate it once did and these cells do not migrate to the surface as quickly or exfoliate off the surface as quickly. The "turn over rate" is slowed down and the result is uneven texture and tone with a build up of dead skin on the surface. These superficial layers of skin do not exhibit the same amount of moisture and oils within the skin resulting in a dry, brittle, lackluster appearance. Additionally, our genetic code leaves some of us with the likelihood of developing cancerous lesions.

The goal with treating intrinsic aging process with skin care remedies is to address the collagen, elastin, moisture, lipids, and tone, texture, and vitality of the skin. This can be done with a wide variety of measures. Namely, Vitamin-A (Retinol), L-Ascorbic acid (Vitamin-C), Vitamin-K, DMAE, Coenzyme Q10, Peptides, Alpha-Hydroxy-acids, and Beta-Hydroxy-acids, Hyaluronic acid and/or lipid based moisturizers, bleaching agents, and sun protection. Clinical peeling approaches can speed up the renewal process and allow the topical skin care products to work more effectively.

2.) Extrinsic aging is the visible signs of aging associated with all factors we have control over – the environment and habits. The sun and smoking are the biggest contributors to the pre-mature aging process. When the skin is exposed to the environment, the skin will lose its ability to repair the collagen and elastin cells in the

dermis damaged by free radicals and will show signs of wrinkling and fine lines. Other skin cells, like melanocytes, will also become dysfunctional and lead to brown pigment being formed at unusual levels. The skin will also begin to redden and develop fine "spider veins" as a result of the constant stress of the sun, wind, and extreme temperatures.

The "Free Radical Theory of Aging" suggests that 99% of all visible signs of aging are due to what is called "free radical" damage. Free radicals are basically oxygen particles, with a negative ionic electron charge (think of the positive and negative sides of a battery) which are produced by all cells in your body as the normal by-product of each cell's function (the exhaust of each cell, so to speak). These free radicals attack healthy cells and steal away the healthy cell's own positive electron charge (think of a battery no longer has a charge and will not work). This action, along with distortions of the DNA and RNA of each cell by the free radicals, will eventually destroy them. This process is normal and is happening right now.

The problem is with the sun, smoking, alcohol, stress, pollution, and other environmental toxins that put additional stress upon the body, leading to an excessive amount of free radical formation. Combine this with cells that have their integrity compromised by these stress factors and by cells that are not created with the proper defense mechanism in the first place, and you have a scenario where the body is overwhelmed and cannot keep up. This is the pre-mature aging process (extrinsic aging).

Antioxidants are highly regarded in combating free radicals (oxygen molecules with a negative charge) by neutralizing them and can be considered a preventive measure. Antioxidants do this by lending their own positive charge to the free radical before it can affect a healthy cell. The "oxidation" (rusting so to speak) of the cell is therefore averted. Oral and topical antioxidants, combined with avoidance of the factors increasing free radical formation, will lead to a healthier skin appearance, and studies show stronger doses of topical Vitamin-C in the form of L-Ascorbic acid can even repair damaged skin structures and improve wrinkles, fine lines, and discoloration of the skin. Topical Vitamin-A in the form of Retinol and Retinyl Palmitate can act as preventative and restorative antioxidants as well. Vitamin-E is also another favorite antioxidant.

AHA's, BHA's, and other exfoliants can remove superficial built up layers of dead skin and unveil the healthier cells below. Stronger levels of these acids are thought to increase the cell turnover rate and improve the collagen layer. Retinol is a highly regarded ingredient thought to improve the collagen layer and turnover rate of the skin to more normal levels as well.

Made Simple:

In short, the objective here is to normalize the skin function through a customized rejuvenation program incorporating the most regarded key ingredients in creating younger appearing skin. Soft, hydrated, healthy, vibrant skin, with minimal lines, hyperpigmentation, better tone and texture, is the ultimate goal.

Biophora products that help ease aging conditions

- Bioactive Cleanser – Exfoliating, ph balanced cleanser designed to remove make-up, oil, dirt, debris, and leave your skin refreshingly clean and residue free.
- Bioactive Solution & Bioactive Solution Extra Strength – 3 & 5% Glycolic acid, 0.75% Salicylic acid for advanced exfoliation of the skin surface.
- Bioactive Gel & AHA Active Gel – 8 & 15% Glycolic acid, 0.75% Salicylic acid for even more advanced exfoliation of the skin surface.
- Antioxidant Moisturizer & DermaRich Moisturizer – Vitamin-E & A enriched for antioxidant purposes, Beta Glucan for skin immunity boosting effect, Allantoin, Sodium Hyaluronate for moisture infusion.
- Light Hydration – a weightless serum, containing active ingredients to stimulate production of Collagen, Elastin, Fibronectin and Glycosaminoglycans – elements that bind tissue and hold in the moisture of the skin, helping to increase circulation and cell respiration while firming, nourishing, protecting and healing the skin.
- Night Protection – Cosmetic silicone (Cylclomethicone and Dimethicone) designed to prevent moisture loss and keep the skins' own moisture it produces intact.
- PURE "C" – 100% pure topical vitamin C (l-ascorbic acid) – highly stable, absorbable antioxidant. Fully dissolves into compatible products.
- Enzyme Exfoliating Mask – Papain and Bromelain digestive enzymes, soft exfoliating granules (Diatomaceous Earth) used occasionally for deep, advanced, enzymatic exfoliation of the skin surface.
- Intensive Anti-Aging Eye Treatment – A light, hydrating, non-irritating antioxidant and botanically-rich formulation designed to treat delicate eye area.
- Multivitamin Freeze Mask – A refreshing, cooling, soothing and nourishing clay based mask with a neutral pH for all skin types. This contains Collagen, Elastin, and Vitamins A, E, C, D3, K and B complex.
- Bioactive Firming Cream – Highly nourishing formulation for lifting and firming the skin while enhancing circulation and collagen production.
- Daily Protection SPF 30 – Antioxidant rich, broad-spectrum sun protection to prevent environmental damage to the skin.