

SHAPIRO

AESTHETIC PLASTIC SURGERY

Glossary of Terms

A

Acne: A skin disorder resulting from the action of hormones on the skin's oil glands (sebaceous glands), which leads to plugged pores and outbreaks of lesions commonly called pimples or zits.

Allantoin: Delivers soothing properties.

Alpha Hydroxy Acid (AHA): Alpha hydroxy acids (AHAs) and beta hydroxy acids (BHAs) have become widely used in recent years. AHAs are derived from fruit and milk sugars, and attract customers with their claims to reduce wrinkles and age spots, and help repair sun-damaged skin. FDA recommends that consumers take precautions with AHA and BHA products: It is important to test any AHA/BHA-containing product on a small area of skin before applying to a larger area. Following the instructions on the label is imperative. Avoid the sun whenever possible and use an effective sunscreen. Do not exceed recommended applications and never use AHA's on infants and children.

Antioxidants and Free Radicals: Antioxidants are nutrients that block some of the damage caused by Free radicals, which are by-products that result when our bodies transform food into energy. The build up of these by-products over time is largely responsible for the aging process and can contribute to the development of various health conditions such as cancer, heart disease, and a host of inflammatory conditions like arthritis.

Antioxidants work in several ways: they may reduce the energy of the free radical, stop the free radical from forming in the first place, or interrupt an oxidizing chain reaction to minimize the damage caused by free radicals.

Atopic Dermatitis: A chronic (long-lasting) disease that affects the skin. "Dermatitis" means inflammation of the skin. "Atopic" refers to a group of diseases that are hereditary (run in families) and often occur together, including asthma, allergies such as hay fever, and atopic dermatitis. In atopic dermatitis, the skin becomes extremely itchy and inflamed, causing redness, swelling, cracking, weeping, crusting, and scaling. Atopic dermatitis is often referred to as "eczema," which is a general term for the many types of dermatitis.

Astaxanthin: A powerful antioxidant that is derived from the natural colorant of red gold sea creatures. Its effectiveness is 10 times stronger than vitamin C and E.

B

Beta Hydroxy Acids: Maintains exfoliation which helps reduce the appearance of wrinkles.

Benzoyl Peroxide: Proven ingredient for fighting acne.

Beta Glucans/Xylitol: An ingredient combination that pulls moisture from the air and locks it into the skin.

Bioenergetics: In our body, foods must be broken down into simpler compounds that are available to the cells. Cells, in turn, manufacture chemical energy, allowing the body to exert physical energy. The science of how the body extracts and uses energy from food is referred to as energy metabolism or bioenergetics.

Bio-Solv: Hydrosoluble softgels, which enable quick and optimum absorption of vitamins, minerals and herbal extracts.

Bisabolol: A compound derived from the chamomile plant. It is used as an anti-irritant (soothing agent).

Borage Oil: Omega 6 Essential Fatty Acid which helps to fight inflammation and add emolliency.

Botox: Botox is the brand name for injectable botulinum toxin type A, a protein created by the bacterium *Clostridium botulinum*. This bacterium can be found in some spoiled food and releases a potent neurotoxin that can be fatal if consumed. However, injecting the synthesized protein into muscles weakens them only temporarily. The muscle-weakening action of Botox can smooth facial wrinkles and treat movement disorders of the eye and head, spasticity, migraines and excessive underarm sweating. Injecting Botox directly into muscles that control the eyelids reduces spasms in patients who suffer from blepharospasm, or rapid, uncontrollable blinking. When the condition is severe, patients can become functionally blind because their eyes never stay open long enough for them to see. In one small study of 14 such patients, 73 per cent of the treated eyelids returned to normal after Botox injections. Botox is also successful in its cosmetic uses; namely, reducing facial lines and wrinkles. As skin loses its elasticity with age. By relaxing the muscles that cause lines to form, botulinum toxin corrects the underlying cause of wrinkles and furrows. The effects of botulinum toxin fade after about three months. When used to treat eye movement disorders, some patients develop a droopy eyelid, while patients with neuromuscular disorders can have trouble swallowing.

C

Caffeine: A natural stimulant that reduces edema (puffiness) in the skin.

Carbohydrates: A large group of sugars, starches, celluloses, and gums that contain carbon, hydrogen, and oxygen in similar proportions.

The primary function of carbohydrates is to provide energy for the body,

especially the brain and the nervous system. The body breaks down starches and sugars into a substance called glucose, which is used for energy by the body.

Catabolic: The effect of muscle shrinkage - the reverse of anabolic which means to build up muscle tissue.

Cell Plasma Membrane: The cell plasma membrane is a fatty environment of two layers of phospholipids which protect the integrity of the internal mechanisms of the cell.

Collagen: Collagen (from kolla, which means glue in Greek) is an important component in the structural tissues of the human body. Collagen, a protein that occurs naturally in the body, makes up the structure underneath the skin. It holds together our cells and is used by the body to repair itself on a daily basis. As we age, we make less collagen, leading to wrinkles, less supple skin and brittle hair.

Cortisol: A hormone secreted by the adrenal glands. It is released when we're under stress. High levels of cortisol can depress the immune system, thin the skin, are toxic to the brain, and can decrease muscle mass and increase fat storage.

Cosmeceutical: While the Food, Drug, and Cosmetic Act does not recognize the term "cosmeceutical", the cosmetic industry uses this word to refer to cosmetic products that have medicinal or drug-like benefits. The Food, Drug, and Cosmetic Act defines drugs as those products that cure, treat, mitigate or prevent disease or that affect the structure or function of the human body. While drugs are subject to a review and approval process by FDA, cosmetics are not approved by FDA prior to sale. If a product has drug properties, it must be approved as a drug.

Cosmetic Labeling: Federal regulations require ingredients to be listed on product labels in descending order by quantity. Consumers can check the ingredient listing to identify ingredients they wish to avoid. Based on the amount used, an ingredient such as water is usually found at the beginning of the product's ingredient listing while color additives and fragrances, used in small amounts, are normally seen at the end of the ingredient listing. Cosmetic ingredient declaration regulations apply only to retail products intended for home use. Products used exclusively by beauticians in beauty salons and labeled "For Professional Use Only," and cosmetic samples, such as those distributed free at hotels and department stores, are not required to include the ingredient declaration. However, these products must state the distributor, list the content's quantity, and include all necessary warning statements.

Crow's feet: A network of fine lines on the outer edge of the eye.

Cruelty Free: Implies that products have not been tested on animals. Most ingredients used in cosmetics have at some point been tested on animals so consumers may want to look for "no new animal testing," to get a more

accurate indication.

D

Dermis: The lower layer of skin that contains nerve endings, sweat glands, collagen and elastin fibers.

DHEA: Dehydroepiandrosterone - an adrenal gland hormone.

PerriconeMD products do not contain this. They contain DMAE.

DMAE: DMAE (dimethylaminoethanol) helps increase production of acetylcholine, the chemical that causes muscle contraction. Long-term studies show that people who regularly used a DMAE cream had fewer wrinkles and suppler skin. Dimethylaminoethanol an antioxidant membrane stabilizer. A nutrient that improves skin tone and sagging. Mixed with other antioxidants, amino acids and nutrients, it has a dramatic firming effect on the skin. Listed in ingredients as Dimethyl MEA. The DMAE is synthesized from safe sources and is not derived from fish. Some reports have alluded that DMAE is toxic waste – we do not support this notion. Virtually anything can be considered toxic under certain circumstances.

Dioxin: Please see Fish Oil

E

Elastin: Elastin fibers are protein fibers that, along with collagen, are responsible for the strength and texture of the skin.

Electro-Stimulation Therapy: A therapy where a device stimulates the repositioning of muscles in an anatomically lifted position.

Emollient: An ingredient that helps restore skin's moisture balance by forming a protective film, trapping moisture in the skin. One of the primary ingredients of moisturizers.

F

Fish Oil: Fish oil is known for greatly reducing inflammation in the human body, which reverses the effects of aging and ensures a healthy heart, brain, joints, digestive system and immune system.

The supplier certifies the levels of these compounds are less than these specifications.

Flax seed oil: Flax, an ancient but little known seed, has recently gained worldwide recognition for its many nutritional attributes. Flax seed oil is the world's richest vegetable source of omega-3 fatty acids. Oil extracted from flax seed is unique because it contains both essential fatty acids: alpha-linolenic, an omega-3 fatty acid, and linoleic acid, an omega-6 fatty acid, in appreciable amounts.

Folic Acid: In ingredient to improve circulation in the skin.

Fullerenes: A powerful antioxidant that has the ability to carry other nutrients into the cell.

Fragrance: Ingredients that are complex mixtures of natural materials and such materials can exhibit adverse dermatological effects such as contact allergy and irritation. However, oils are pure substances, selected for their safety and other performance benefits.) and synthetic fragrances. Many products are fragrance-free - check labels before answering any product specific customer concerns.

Fragrance Free: Implication that a cosmetic product so labeled has no perceptible odor. Fragrance ingredients may be added to a fragrance-free cosmetic to mask any offensive odor originating from the raw materials used, but in a smaller amount than is needed to impart a noticeable scent.

G

Gaba: An ingredient that controls blood circulation to reduce discoloration.

Green Tea Extract: An antioxidant that has calming and soothing benefits.

Glutathione: Glutathione, a tripeptide made up of three amino acids, is important in cell defense against free radicals and oxidative stress. The tripeptide regulates the chemical balance of the cell. Whenever a cell is under severe oxidative stress, glutathione comes to the rescue, but it gets used up quickly and levels drop.

Glycolic acid: Reduces corneum layer thickening where excess dead skin cell buildup can be associated with many common skin problems. Glycolic acid acts by dissolving the internal cellular cement responsible for abnormal keratonization, facilitating the sloughing of dead skin cells. A gentle source of Alpha Hydroxy Acids derived from sugar cane. Glycolic acid can actually help bind moisture to the skin. This is an ingredient that can help produce a softer, healthier looking skin.

Grape Seed Extract: A natural antioxidant; supports healthy immune function, protects cells from free radical damage, treats vascular disorders and supports cardiovascular health, supports healthy inflammatory response.

H

Human Growth Hormone: (HGH) is a true “youth” hormone. When growth hormone is released, many positive things happen in your body. HGH affects your ability to learn and your memory in general. HGH tends to reduce your body fat and increase lean muscle mass. Growth hormone

increases bone density and maintains the health of all our vital organs, including the heart, lungs and kidneys. As we age, our body's normal release of growth hormone decreases, which leads to muscle loss, increased body fat, poor memory and increased susceptibility to degenerative disease. To help combat the loss of growth hormone as we age, do not eat a high carbohydrate meal before bedtime as HGH is released when we sleep and the carbohydrates will inhibit release.

Hyperpigmentation: A common, usually harmless condition in which patches of skin become darker in color than the normal surrounding skin. This darkening occurs when an excess of melanin, the brown pigment that produces normal skin color, forms deposits in the skin. Hyperpigmentation can affect the skin color of people of any race. Age or "liver" spots are a common form of hyperpigmentation. They occur due to sun damage, and are referred to by doctors as solar lentigines. These small, darkened patches are usually found on the hands and face or other areas frequently exposed to the sun.

Freckles, age spots, and other darkened skin patches can become darker or more pronounced when skin is exposed to the sun. This happens because melanin absorbs the energy of the sun's harmful ultraviolet rays in order to protect the skin from overexposure.

Hypoallergenic: Implication that products making this claim are less likely to cause allergic reactions. There are no prescribed scientific studies required to substantiate this claim. Likewise, the terms "dermatologist-tested," "sensitivity tested," "allergy tested," or "nonirritating" carry no guarantee that they won't cause skin reactions.

I

Inflammation: Skin is constantly assaulted from inside and out with elements that create inflammation in the cells: sun exposure, air pollution, harsh soaps and skin-care products, internal disease, stress, lack of sleep, sugar consumption and dehydration. The leading cause of inflammation is sugar and foods that rapidly convert to sugar in the blood stream. Pro-inflammatory conditions are the precursor to many diseases from Alzheimer's to arthritis, heart disease to certain forms of cancer. Inflammation will break down collagen, among other things, which is the first step to creating wrinkles.

L

Licorice Extract: An anti-inflammatory skin lightener.

Light Therapy: A device that emits a color of light to reduce lines and wrinkles or heal acne.

Lipid: Provides conditioning benefits of fatty acids.

M

Melatonin: Melatonin is a natural hormone that regulates the human biological clock. Melatonin is produced by the pineal gland, located within the brain. Levels of melatonin in the body fluctuate with the cycles of night and day. The highest melatonin levels are found at night.

Microdermabrasion: The vacuum stimulation alone from microdermabrasion has been known to stimulate blood circulation and collagen production. A treatment will remove the top layer of the skin and promote new collagen and regrowth of younger-looking skin. Furrows and expression aging are eased, reducing the visual appearance of aging. Microdermabrasion is especially good for under the eyes and crow's feet.

Microspheres: Micro-ceramic beads that act as fillers for the skin.

N

Natural: Implies that ingredients are extracted directly from plants or animal products as opposed to being produced synthetically. There is no basis in fact or scientific legitimacy to the notion that products containing natural ingredients are good for the skin. PerriconeMD products are naturally based, but are not all natural. To be all natural, preservatives would not be present, drastically reducing the shelf life and requiring refrigeration of the products.

N-Acetyl-L-Cysteine: The most effective way to boost Glutathione levels in the body, is a more stable form of L-Cysteine. N-Acetyl-L-Cysteine, known as "NAC" provides powerful immune support and also packs a powerful anti-toxin potential.

Non-comedogenic: Suggests that products do not contain common pore-clogging ingredients that could lead to acne.

NTP Complex: A carrier or "neurotransmitter precursor" of DMAE.

O

Omega-3 Capsules: Norwegian Fish Oil - The Marine Lipid Concentrate is from ocean-caught fish – anchovies and/or mackerel and/or salmon.

Omega-3 Essential Fatty Acids: Fat is one of the nutrients your body requires along with proteins, carbohydrates and vitamins. The building blocks of fats and oils are called fatty acids. The fatty acids, known as essential fatty acids, are those fats we can't make in our body. We have to obtain them from our food. Omega-3 essential fatty acids are found in cold water fish such as Alaskan salmon and also in flax seed and flax seed oil. They dramatically reduce the body's production of inflammatory compounds.

Omega-9: A monounsaturated fatty acid present in all animal and vegetable fats. Oleic acid is the most common Omega 9 fatty acid. Omega 9 is found in olive, canola, and rapeseed, peanut, safflower and sunflower

oils; other sources include avocados, peanuts, peanut butter, nuts and seeds. It is found in most vegetable oils, so most people get much more than the suggested intake.

Oxidative Stress: Oxidative stress is the damaging condition that occurs when there is an excess of free radicals, a decrease in antioxidant levels, or both.

P

Palmitoyl Carnosine: A peptide with anti-glycating qualities to firm skin and reduce wrinkles caused by sugars in the system attaching to protein fibers rendering them still and inflexible.

Panthenol and Panthethine: B vitamins that work synergistically to provide humectant and moisturizing benefits. Used generally in hair care products.

Phosphatidylcholine: A natural compound that delivers emolliency to the skin. It is synthesized to mimic the lipid layer surrounding cells so the skin accepts it as its own for better penetration.

Pomegranate: An antioxidant.

Pycnogenol: A centuries-old healing compound from the bark of the maritime pine tree that is known for its antioxidant, anti-inflammatory, and brightening benefits for the skin.

R

Retin-A: A prescription Retinol product. Can be applied before applying our anti-aging products. We do not recommend the customer change their prescribed application without consulting a doctor.

Retinol: A retinoid considered a skin revitalizer. Retinol is reported to enhance skin radiance and treat conditions associated with chronological aging such as wrinkles and fine lines. It also is considered necessary for normal epidermal cell growth and differentiation, for regulating collagen synthesis, and for maintaining a more youthful skin condition.

Reservatrol: Antioxidants derived from the skin of grapes.

Rosacea: A chronic (long-term) disease that affects the skin and sometimes the eyes. The disorder is characterized by redness, pimples, and, in advanced stages, thickened skin. Rosacea usually affects the face.

S

Salicylates: These are found in most plant products, especially willow bark, wintergreen, and meadowsweet.

Saturated Fats: Fatty acids that increase your risk for heart disease. They're found primarily in animal fats such as dairy products, butter and red meat. Eating too many saturated fats is pro-inflammatory.

Sebum: The skin's natural oil.

Sodium Hyaluronate: A powerful hydrating ingredient.

Soy Protein: Used for the maintenance of healthy keratin such as hair.

SPF (Sun Protection Factor): Measures the length of time a product protects the skin against reddening from UVB, compared to how long the skin takes to redden without protection. If it takes 20 minutes without protection to begin reddening, using an SPF 15 sunscreen theoretically prevents reddening 15 times longer - about 5 hours. (It may take up to 24 hours after sun exposure for redness to become visible.) To maintain the SPF, reapply sunscreen every two hours and right after swimming. The Skin Cancer Foundation recommends SPFs of at least 15, which block 93 percent of UVB. While SPFs higher than 30 block only 4 percent more UVB, they may be advisable for sun-sensitive individuals, skin cancer patients, and people at high risk of developing skin cancer.

T

Taurine: An antioxidant that possesses anti-glycating benefits which reduces the risk of sugars attaching themselves to protein fibers there by rendering them stiff and inflexible causing loss of firmness and wrinkles.

Tetrahexyldecyl Ascorbate: (Vitamin C): A premium and potent form of vitamin C that stimulates collagen and elastin production within the cell.

Tocotrienols (Vitamin E): A premium and more powerful form of vitamin E that protects and defends the cell against damage as well as making the surface of the skin appear healthy and smooth.

Tranexamic Acid: Controls blood circulation to reduce discolorations.

Trans Zinc Oxide: A mineral found in zinc oxide that deflects sun's rays.

Tocopherols: Antioxidants found in vitamin E that disarm free radicals.

Tocotrienols: A natural derivative of palm fruit and rice bran. This is an extremely potent fraction of vitamin E, also known as "high potency E" (HPE). It is a much more powerful antioxidant than vitamin E components currently available as supplements or in topical preparations.

V

Vitamin B 3: A powerful antioxidant that helps to purify the skin.

Vitamin C (Ascorbic Acid): Vitamin C is a water-soluble vitamin needed for the growth and repair of tissues in all parts of the body. It is necessary in the formation of collagen, an important protein used to make skin, scar tissue, tendons, ligaments, and blood vessels. Vitamin C is essential for the healing of wounds, and for the repair and maintenance of cartilage, bones, and teeth. Vitamin C is one of many antioxidants. The body does not manufacture vitamin C on its own, nor does it store it. It is therefore important to include plenty of vitamin C-containing foods in one's daily diet. Large amounts of vitamin C are used by the body during any kind of healing process, whether it's from an infection, disease, injury,

or surgery. In these cases extra vitamin C may be needed.

Vitamin E: An antioxidant that protects cells against free radical damage.

Vitamin K: A vitamin that helps to reduce dark circles around the eye area.