

A

Acid

A water-soluble agent able to produce positively charged hydrogen ions (H⁺). Compounds that have a sour taste, turn litmus paper red, and react with a base to form a salt. On the pH scale from zero to 14, an acid ranks 0–7. Healthy skin is slightly acidic, pH between 5.5 and 6.5 (See Alkaline & pH Scale)

Acne

A multi-factorial inflammatory skin disorder, often the result of hormones acting on the skin's oil (sebaceous) glands causing clogged pores and breakouts. Oil from the glands and dead skin cells block the hair follicles, leading to bacteria buildup beneath the blocked pore. This causes visible inflammation in the form of pimples, whiteheads, or blackheads. The most common form of acne is known as *Acne vulgaris*, which means "common acne." (See Blackhead, Comedone & Whitehead)

Activation

In biology, to stimulate a cell in its resting state to become active.

Active Ingredient

The ingredient agent primarily responsible for the intended benefit of a product.

Age Spots

Small, flat, pigmented spots most often seen on areas of the body that have been exposed to the sun over a period of years. Age spots usually occur after the age of 40. These brown spots found on the skin are visible evidence of accumulated long-term sun damage, known to as "liver spots."

Algae

Primitive, chiefly aquatic plants. Includes kelp and other seaweeds. Used in skin care products as conditioning, water binding and antioxidant agents.

Alkaline

Refers to a substance with a high pH having properties of a base. On the pH scale from 0 to 14, a base ranks 7–14. Any pH over 7 is considered alkaline. Skin irritation could be caused by products with high alkalinity, pH 8 or higher. (See Acid & pH Scale)

Allergen

A substance that can produce a hypersensitive reaction or trigger an allergic response in the body. An allergen can cause a reaction if eaten, touched, or inhaled. An adverse reaction could manifest in sneezing, coughing, rash or irritation.

Alpha Hydroxy Acid (AHA)

Group of water soluble acids that appear naturally in fruit. They are weak hygroscopic acids that absorb atmospheric moisture. On the skin they accelerate exfoliation, cell

renewal, even out pigment and tone and hydrate.

Amino Acid

An organic compound that is a basic structural unit of peptides and proteins. Used in skin care products as water-binding agents, pre-cursors and antioxidants.

Antibacterial

Hostile to bacteria and germs, therefore able to fight infection. Also known as bactericides.

Antimicrobial

An agent which destroys or inhibits microbial growth.

Antioxidants

Agents that inhibit or neutralize potentially harmful compounds known as free radicals. Well-known antioxidants include vitamins C and E, beta-carotene, and CoQ10.

When topically applied, antioxidants help prevent skin aging by protecting cellular components like collagen and elastin. (See Free Radicals)

Free-radical damage can be caused by the presence of oxygen or any compound that contains an oxygen molecule, sunlight, and pollution. Any substance that impedes or slows free-radical damage by preventing the oxidative action of molecules is referred to as an "antioxidant."

Theoretically, when free-radical damage originates from natural environmental factors and fails to be cancelled out by antioxidant protection, then wrinkles appear.

Antioxidant protection, either from our own body's production, from dietary sources, or from other sources (including antioxidants we put on our skin), reduces free-radical damage which causes cells to break down and impairs or destroys their ability to function normally. Free-radical damage destroys collagen and other skin components.

Aromatherapy

The treatment of the skin and body through natural oils and aromas.

Bacteria

One-celled living organisms, typically about one micron in diameter. They are among the oldest, simplest, and smallest types of cells. Some cause infections and disease in animals and humans and are a key element in organic decomposition.

Barrier Function

Refers to the role the skin plays in protecting the body from infection and water loss. The protein-lipid molecular structure of the epidermis is crucial to the maintenance of this important barrier. (See TEWL)

Basal Layer

Deepest or lowest layer of skin epidermis; it borders the dermis and other epidermal layers. This layer is only cell deep and connects the epidermis with the rest of the body. Here keratinocytes (skin cells) proliferate and melanocytes produce melanin or skin pigment. (See Epidermis, Keratinocytes & Stratum Corneum)

B

Beta Hydroxy Acid (BHA)

An oil-soluble exfoliant derived from fruit and milk sugars used in skin care to treat wrinkles, blackheads, and photoaging. Salicylic acid is a beta-hydroxy acid. While alpha hydroxy acids are water soluble, beta hydroxy acids are lipid (oil) soluble and better able to penetrate, exfoliate, and unblock pores. Also, helps renew aging skin.

(See Alpha Hydroxy Acid AHA)

Biological Aging

The process of getting older due to natural biological changes that happen with the passage of time and genetics. Also known as intrinsic aging.

(Also see Chronological Aging)

Blackhead

A non-inflammatory acne lesion that is filled with excess oil and dead skin cells. Also called an “open Comedone” because the hair follicle or pore remains open. Blackheads form when skin pores get clogged with oils/impurities and become dark by oxidation or contact with air. Blackheads differ from whiteheads because the follicle remains open, where as whiteheads are covered with a layer of skin and are more likely to become infected. Deep cleansing of the skin can help prevent blackheads.

(Also see Acne, Comedone & Whitehead)

Botanical

Refers to substances derived from plants or plant parts. A plant-based product.

Brightness

The perceived intensity of a radiating object. In skin care, this term describes luminous skin tone free from discoloration and dark patches.

Broad Spectrum Protection

In sun protection products this refers to a sunscreen with both Ultra Violet A (UVA) and Ultra Violet B (UVB) rays.

Carotenoids

Natural, oil soluble pigments ranging in color from yellow to red. There are more than 600 known natural carotenoids, all of them synthesized only in plants. Lycopene and beta-carotene belong to this family. Carotenoids are antioxidants. When plants are exposed to sunlight the carotenoids absorb light, capture the energy, neutralize the free radicals and protect the plant.

Cell Membrane

The outer boundary of the cell. It is a permeable envelope comprised of phospholipid bilayer that regulates the flow of material into and out of the cell.



Cell Renewal

The continuous process of new cells being created to replace dead cells. Skin cells are constantly shedding and being renewed. As new skin cells are produced at the basal layer of the epidermis, they push up older cells. As these skin cells, or keratinocytes, migrate to the skin's surface, they flatten and harden. The outermost skin cells slough off as younger cells rise through the layers below. The rate of cell renewal slows as we age.

Cellular Oxidation

Reaction of a cell with oxygen, usually resulting in degradation. Cellular oxidation by free radicals contributes to skin aging.

Cellular Repair

Process by which the cell restores, reconstructs, or renews parts for the purpose of maintenance. For example, proteins are used and new ones are constantly being synthesized. Lipids and carbohydrates are also continuously being recycled into simpler components.

Cellulite

A cosmetic defect caused by the breakdown or thinning of connective structure beneath the surface of the skin in fat tissue making fatty deposits that cause a dimpled or uneven appearance of the skin, usually around the thighs and buttocks.

Ceramides

Naturally occurring skin lipids (fats) that act as intercellular mortar. They make up the bulk of the lipid layer which holds the skin's cells together in a firm, smooth structure and help protect the skin from water loss by forming a protective barrier. Ceramides naturally decline with age resulting in dry, less flexible skin. (See Barrier Function)

Chelate

Also called sequester, it is the process of preventing metals in the water from combining with other components.

Chemical Exfoliation

The process of removing the top layers of dead skin cells using chemical agents. Exfoliation encourages skin renewal by smoothing wrinkles and evening texture.

Chronological Aging

The process of getting older due to natural biological changes that happen with the passage of time and genetics. Also known as intrinsic aging. (See Biological, Environmental & Mechanical Aging)

Clay

A generic term for firm, finely ground earth that often contains minerals. It is plastic when moist and usually hardens as it dries. Used in cosmetics for exfoliation, conditioning, and removal of impurities from skin.

Collagen

The main structural protein of skin, bones, tendons, cartilage, and connective tissue. A tough fibrous protein with great tensile strength. Has the ability to resist the forces of stretching and maintains the structural skin integrity. Collagen degradation associated with age, exposure to sunlight and pollutants results in lines and wrinkles.

Collagenase

A type of enzyme (proteolytic) that breaks down the collagen protein. It acts as a catalyst to hydrolyze the collagen (add water and break protein bonds).

Comedone

Commonly known as blackheads or whiteheads. Hair follicle becomes plugged with sebum. When the lipid or sebum is exposed to the environment it is oxidized and turns black (blackheads). When the follicle is closed and not exposed to the environment it is cream colored. (See Acne, Blackhead & Whitehead)

Complexion

The overall natural texture and appearance of the skin of the face.

Corneocytes

Dead cells of the stratum corneum which contain keratinized horny material. Good at providing an external environmental barrier and preventing water loss.

(See Epidermis, Keratinocytes & Stratum Corneum)

Crow's Feet

Term used to describe fine lines and wrinkles that appear at the outer corners of the eye, sometimes referred to as laugh lines.

Cumulative

Effects of repeated exposures. In cosmetics, increasing benefits by successive addition or application of product.

Defense Mechanism

Term used to describe ways the body protects itself from different forms of attack. Often the immune response to offending substances such as bacteria, allergens, microbes, and pain.

Degradation

A progressive decline of a substance. In skin care, it refers to breakdown of structural skin components such as collagen, elastin, and cell membranes.

Denature

To alter or structurally change a protein usually by heat, acids, bases, or detergents.

Dermal Crease

Area of the skin where repetitive mechanical muscle movement causes protein (collagen and elastin) to breakdown and skin to collapse along certain lines—typically around the mouth, nose, eyes, and forehead—with time forming deep lines and wrinkles.

D

E

Dermis

The sensitive layer of skin (below the epidermis and above the subcutaneous layer) made up of connective tissue, sensitive nerve endings, blood and lymph vessels, hair follicles, sweat glands, collagen bundles, elastin fibers, and fibroblasts.

(See Epidermis & Subcutaneous)

Dermatitis

An inflammation of the skin caused by an allergic reaction or contact with an irritant. Sometimes called eczema. Typical symptoms of dermatitis include redness and itching. Often broken into subcategories: (1) contact dermatitis—irritation that arises from direct contact with a material (this can be an immune response, such as an allergic reaction to latex), (2) atopic dermatitis is often found in the face, elbow, and knee flexures of infants; symptoms tend to disappear with age.

Dilate

In biology, term used to describe the relaxing or expanding of blood vessels that open or speed up blood flow. When blood vessels dilate or open in the skin, for example, blushing appears.

Discoloration

In skin care, it describes uneven skin tone, brown spots, blotchy skin, freckles, or age spots due to accumulation of melanin. Caused by UV damage, hormones, acne, disease, or stress.

Eczema

A chronic skin condition characterized by inflammation and red, crusty, scaly, and itchy patches of skin. Atopic dermatitis is often found in the face, elbow and knee flexures of infants; symptoms tend to disappear with age. (See Dermatitis)

Efficacious

Having the ability or power to produce a desired effect. In cosmetics, refers to products that provide benefits.

Elasticity

The degree to which the skin is capable of retaining or returning to its original state in the midst of aging, weather, biological events (e.g. pregnancy) and other factors.

Elastin

A coiled protein in the dermis that gives the skin its elasticity and ability to return to its original shape.

Emollient

An externally applied agent that softens or soothes skin and helps prevent water loss.

Environmental Aging

The process of getting older due to daily exposure to sunlight, pollution, and weather extremes. Also known as extrinsic aging. (See Biological & Mechanical Aging)

Environmental Stress

Disruption or upsetting of the skin's natural balance in response to adverse environmental conditions such as UV radiation, extreme weather conditions, and pollution, causing premature aging, discoloration, acne, and other skin conditions.

Enzyme

Proteins produced by the body that function as catalysts to speed up and direct natural chemical reactions within the body. Without enzymes, chemical reactions would take place at such a slow rate that organisms would not be able to execute normal life functions.

Epidermis

The outer protective layer of skin consisting mostly of keratinocytes (skin cells). Can be divided into sublayers based on keratinocyte "birth to cell death" morphology. The deepest layer or basal layer is home to melanocytes that produce melanin and continuously dividing cells that form new keratinocytes. The next layer is the spinous layer, where mature keratinocytes stop dividing and begin to change shape and move to the granular layer, where the keratinocytes begin to breakdown and form keratin granules. The top layer or stratum corneum continually sheds dead, cornified keratinocytes and provides a protective keratin protein barrier. The keratinocyte migration from basal layer to stratum corneum takes about 14–30 days.

(See Basal Layer, Dermis & Keratinocyte)

Exfoliant

A small inert particle or chemical agent known to accelerate dead skin cell removal from the skin's surface.

Exfoliation

The process of removing the top layers of dead skin cells using chemical or mechanical agents. Exfoliation encourages skin renewal.

Extracellular Matrix

The shapeless substance that bathes the structural components of the dermis (collagen, elastin, fibroblasts.) It is composed mostly of glycosaminoglycans (GAGs). A complex, multi-molecular material that surrounds cells. Composed mostly of ceramides, cholesterol esters, and fatty acids helps to maintain soft and healthy skin. Also known as intercellular matrix.

Extract

A concentrate of desired constituents taken from a plant through physical and/or chemical means. Used in cosmetic formulations for healing properties, or other benefits.

Fatty Acids

A basic unit of fats required for the health of cell membranes and the moisture barrier of the skin. As ingredients of skin care, essential fatty acids can replenish skin with essential lipids and restore barrier function.

F

Fibroblast

A specialised cell within the dermis that produces the structural proteins elastin and collagen in connective tissue.

Formula

A recipe of ingredients in specified proportions producing the composition of a product.

Fragrance-Free

A product that contains no fragrance or perfume ingredients.

Free Radicals

Molecules or ions with unpaired electrons that are highly reactive and can oxidize other molecules. These oxidants can cause cellular damage and contribute to a disease process. Free radicals occur in the body through normal aerobic respiration, metabolism, and inflammation; environmental factors outside the body that can cause free radical production include pollution and sunlight. Antioxidants are thought to combat the negative effects of free radicals. (See Antioxidants)

Free Radical Chain Reaction

The continuing process in which one free radical causes a stable atom to become another free radical and so on. This cycle continues perpetuating potentially harmful levels of free radicals.

Germ

Term used to describe micro-organisms that cause disease or illness.

Herbal

Refers to substances derived from herbs or herb parts. Herb-based products are often used for its aroma and/or healing properties.

Humectant

A substance that absorbs or retains moisture. An ingredient that helps the skin retain moisture. Glycerin is one of the more typical and effective humectants.

Hydration

The process of restoring or maintaining water balance. Hydration is important in skin care products because moisture is essential for good skin and hair health.

Hyperpigmentation

Increased coloration or melanin of the skin often seen as dark spots or areas. Can be caused by UV exposure, stress, or hormones and may be related to inflammatory response, skin irritation, trauma, or some disease process.

Immune Function

Production and action of cells that fight disease or infection. The system that fights infection and assaults to the body.

Inflammatory Response

Complex response of tissues to injury, characterized by immune system activation and local production of inflammatory mediators. The reaction is characterized by pain, redness, swelling, and sometimes itching in an area of exposure.

G

H

I

K

Inorganic

Substances that are of mineral or non-biological origin, whereas organic substances are usually of animal or plant origin. Composed of matter other than hydrocarbons and their derivatives, or matter that is not of plant or animal origin. Typically, chemicals that do not contain carbon atoms.

Intercellular Matrix

See Extracellular Matrix.

Irritant

A substance that consistently and predictably produces an adverse response. It can be a chemical that causes tissue inflammation at the site of contact such as reddening, swelling, itching, burning, or blistering or a physical agent causing chafing, soreness, or inflammation. Irritants are not to be confused with allergens, which induce a different cascade of reactions.

Kelp

Large brown seaweed (brown algae) with high mineral and nutrient content. Used in skin care products as conditioning, water binding and antioxidant agents. (See Algae)

Keratin

A tough protein that is the primary constituent of hair, nails, and skin.

Keratinocyte

A skin cell that comprises 90% of the epidermis (the top layer of skin). They form and divide in the epidermal basal layer. As mature cells they migrate to the epidermal spinous layer where they change shape and no longer divide. Then, they move to the epidermal granular layer and stratum corneum where they break down, die and are shed. This last step is called cornification and is where the keratinocytes are finally transformed into keratinized horny material. It takes 14–30 days for a keratinocyte to make the transition and transform to tough keratin in the top layer before being shed. (See Basal Layer, Epidermis & Stratum Corneum)

L

Lecithin

A naturally occurring phospholipid emulsifier, emollient and antioxidant. A major component of cell membranes.

Lipid

Descriptive term for fat or fat-like substance such as cholesterol found in the blood and cellular membranes. Can be an energy source for the body. Important lipids include fatty acids (saturated and unsaturated) and phospholipids (main component of biological membranes) and sterols like cholesterol. Lipids are water insoluble (hydrophobic) and used on the skin as moisturizer and emollients to help protect from harsh environmental stressors.

Luminous

In skin care, a description of a clear, radiant complexion, a fresh glow.

M

Mechanical Aging

The process of getting older due to habitual muscle movements, either stretching or compressing the skin repeatedly, including squinting, smiling, scrubbing or rubbing your face with force, and sleeping on your side. Most notable in deep lines and wrinkles in the forehead and nasolabial folds of the face. (See Biological & Environmental Aging)

Mechanical Exfoliation

The process of removing the top layers of dead skin cells using physical agents. Exfoliation encourages skin renewal by smoothing wrinkles and evening texture.

Melanin

The pigment that gives skin, hair, and eyes their color. Melanin synthesis occurs in the melanocytes found in the basal layer of the epidermis. Production is triggered when UV light and other aggressors stimulate release of irritation, stress, or hormone initiators that bind to melanocyte receptors and stimulate melanin production. Through a series of chemical conversions, one of two forms of melanin is made: eumelanin (black or brown pigment) and pheomelanin (yellow pigment).

Melanocyte

A skin cell found in the basal layer of the epidermis that produces melanin when triggered by factors such as UV light, effecting skin discoloration. (See Melanin)

Metabolize

Process of breaking down substances in cells to obtain energy. (See Cellular Energy & Cellular Respiration)

Microalgae

Another term for algae. (See Algae)

Microbial Resistance

The ability of micro-organisms to resist being killed by an anti-microbial agent. Over time microbes develop immunity or a resistance to antibacterial agents, such as overuse of antibiotics.

Moisture Barrier

See Barrier Function.

Moisturisation

In skin care, the process of providing and helping barrier function, softness, and health. (See Barrier Function)

Molecular Weight

The sum of the atomic weights of all of the elements in the compound

Molecule

Two or more atoms joined together by chemical bonds.

N

Nanoemulsion

Most of the conventional vehicles are inefficient to deliver their active ingredients into the skin because of their failure to penetrate the horny layer. On the other side, nanoemulsions efficiently penetrate into the skin and release the encapsulated actives. Nanoemulsions can build up a substantial reservoir of actives in the stratum corneum. Nanoemulsions are nontoxic, biodegradable vesicles and can be prepared on a large scale with different loadings.

Nucleus

In biology, it is an organelle found in most cells that contains genetic material or DNA. It has two primary functions: to control chemical reactions within the cell and store information for cell division.

O

Oil Glands

Produce an oily substance called sebum, which is secreted to the skin surface via a duct. Called sebaceous glands, they are found in hair follicles throughout the body except in the soles of the feet and palms of the hands. Sebum helps keep skin soft and supple. Excessive sebum production promotes development of acne. (See Acne)

Organic

Class of chemical compounds having a carbon basis, often plant or animal derived. In consumer products, regulations stipulate that "organic" consumables are grown without chemical fertilizers or pesticides.

Oxidative Stress

Accumulation of destructive molecules called free radicals that can damage cells membranes, proteins, or genetic material by "oxidizing" them. Fire and rust are both examples of oxidation as is butter (or any fat or oil) turning rancid. Antioxidants inhibit oxidation, and thus protect the oil phase of cosmetics from becoming rancid.

(See Free Radicals)

Oxidize

To combine or cause to combine with oxygen. Loose electrons often produce free radicals.

Oxygen Radical Absorptive Capacity (ORAC)

Measure developed by researchers to describe the antioxidant levels of fruits and vegetables. Berries, for example, have the highest ORAC of any fresh fruit.

P

Peptide

Two or more amino acids bonded together. Can function as a chemical communicator. Small peptides are used in skin care because they can be easily absorbed into the skin.

pH Scale

The scale used to measure acidity or alkalinity of a solution. The pH scale ranges from 0 to 14 (7 being neutral; 0–7 being acidic; 7–14 being alkaline). Healthy skin is slightly acidic, pH between 5.5 and 6.5. (See Acid & Alkaline)

pH Balanced

A substance that has its optimal pH level.

Phospholipids

See Lecithin.

Photo Protective Pigment

A substance that produces a characteristic color and is able to absorb UV radiation and protect cellular structures. Carotenoids, chlorophyll, and melanin are photoprotective pigments.

Phytochemical

A chemical found in plant sources.

Pigmentation

The deposition of pigment in animals or plants or human beings. The natural process of synthesizing and distributing pigment (melanin) to the surface of the skin, giving the skin color and tone.

Pimple

A small swelling of the skin, usually in the form of a whitehead or blackhead. Associated with acne. (See Acne, Blackheads, Comedones & Whiteheads)

Plasticity

The quality of being elastic, pliable and soft.

Pollution

Release of harmful environmental contaminants to air, water, or soil. An undesirable change in the physical, chemical, or biological characteristics of the environment. Unwanted chemicals or other materials found in the air.

Pore

A minute opening in the skin to the pilosebaceous unit (oil gland and hair follicle). Blocked pores can result in acne. (See Acne)

Preservative

A substance added to food and cosmetic products to inhibit the growth of bacteria, mold, and fungus and preserve product freshness and integrity.

Pro-Oxidant Metals

Easily oxidized metals that bind with oxygen. During oxidation, free radicals that damage skin are generated. (See Free Radicals)

Protease (Proteolytic Enzyme)

An enzyme that digests proteins and breaks down amino acids by hydrolyzing peptide bonds. These enzymes are often used to soften skin and clear skin surface of cellular debris. Examples are bromelain (from pineapple) and papain (from papaya).

R

Protein

Amino acids bound together by peptide bonds into one molecule. Proteins are vital to tissue growth and repair.

Radiance

The fresh, youthful appearance of skin, free from dull, dry, dead cell build up.

Refinish

In skin care, refers to the process of removing dry, uneven dead skin to create a smooth, even finished, or refined texture.

Renewable Resources

Naturally recurring sources of energy, elements, and materials, that can be replaced or replenished at a rate equal to or greater than its rate of depletion.

Resilience

In skin care, refers to the skin's ability to recover in relation to aging, wear, and stressors. Also can mean the skin's flexibility or elasticity.

Retexturization

The process where uneven, rough skin is physically or chemically exfoliated to promote smooth, even, soft skin. (See Exfoliation)

Rosacea

A chronic, inflammatory skin disorder that causes flushing and, eventually, permanent patches of red skin on the nose and cheeks and acne-like bumps. Involves enlargement of blood vessels under the skin on cheeks, nose, chin, forehead, or eyelids. Symptoms include redness, increased prominence of the blood vessels, swelling of the tissue, and skin eruptions similar to acne. Occurs most often in fair skinned women, particularly those who blush easily.

Ruddy

Description of coarseness or redness in the complexion.

Sallow

Unhealthy looking. A dull, yellowish complexion hue, possibly due to poor nutrition, exposure to UV light, or decrease in skin cell turnover.

Sebaceous Gland

See Oil Gland.

Sebum

Oily substance produced by sebaceous (oil) glands in the skin. Composed primarily of fat, keratin, and cellular material. (See Oil Glands)

Sensitive Skin

Description of skin highly responsive to particular agents/stimuli. Also known as allergic skin. Recommend careful adoption and monitoring of new skin care products to daily regimen.

S

Skin

The largest organ of the body, which consists of two main layers—the epidermis and dermis—that function to protect the body. (See Epidermis & Dermis)

Skin Barrier Function

See Barrier Function.

Skin Cancer

A harmful, malignant growth on the skin, which can be caused by repeated severe sunburns or long-term exposure to the sun. There are three common types of skin cancer, each named after the skin cell type: basal cell carcinoma, squamous cell carcinoma and malignant melanoma.

Skin Type

Typically refers to texture and complexion of skin such as sensitive, normal, dry, oily, combination, sensitive, etc. Cosmetic products cannot change skin type, but can be formulated to benefit specific skin types. Dermatologists use the Fitzpatrick Classification for Sun-Reactive Skin Types to analytically determine potential sensitivity to sun exposure. The Fitzpatrick scale goes from I to VI, where I is caucasian, blonde/red hair, freckles, fair skin, blue eyes, very sensitive to sun, always burns easily, never tans, very fair skin tone; and VI is dark-skinned, least sensitive to sun, never burns, deeply pigmented, very dark skin tone.

Sloughing

In skin exfoliation, it is the shedding of dead skin cells.

Soap-Free

Term used to describe mild cleaning agents that are not produced from a reaction of fat and alkali (soap). Soap-free cleansers have pH levels closer to skin whereas soap has an alkaline or high pH. (See Acid, Base & pH Scale)

SPF

Sun Protection Factor (SPF) is a world-wide rating system for measuring the amount of protection offered by a sunscreen lotion. It indicates how long an individual can remain in the sun using sunscreen without burning. SPF usually allows exposure to the sun for longer without burning. For example, if an individual normally begins to burn after 10 minutes in the sun, they would be able to remain in the sun 150 minutes before beginning to burn when using a SPF 15 sunscreen ($10 \times 15 = 150$). SPF is not a linear scale so sunscreens with SPF's over 30 do not give any measurable protection higher than 30. (See Broad Spectrum Protection, UVA & UVB)

Split-Face Study

A clinical test where the human subject tests one material on half of the face and a different material (or nothing if side is baseline control) to the other half of the face.

Stimuli

Agents or conditions that cause physiological activity or response.

Stratum Corneum

Also known as the horny layer, the stratum corneum is the top layer of the epidermis

that contains continually shedding, dead keratinocytes called corneocytes. (See Corneocytes, Epidermis & Keratinocytes)

Stress Initiators

External or internal factors that disrupt balance and equilibrium. In skin, these factors can cause an inflammatory or irritation response.

Subcutaneous Layer

Lying below or under the dermis (cutaneous) tissue. Refers to the layer of connective tissue and fat cells beneath the skin. (See Dermis & Epidermis)

Sunscreen

A substance that helps protect skin from the sun's harmful rays. Sunscreens reflect, absorb, and scatter both ultraviolet A (UVA) and ultraviolet B (UVB) radiation. Sunscreen products specify SPF, and dermatologists recommend using a broad-spectrum sunscreen with at least SPF 15 on all exposed skin, including the lips, even on cloudy days. Sunscreens cannot protect from all negative effects of the sun. (See SPF, UVA & UVB)

Surfactant

A surface-active agent that reduces the surface tension of two liquids. Usually an organic compound that contains a hydrophilic (water-loving) group and a lipophilic (fat-loving) group, giving it the ability to surround and rinse away dirt, oil, and pollution. Also known as wetting agents, surfactants provide spreading or emulsification due to lower surface tension.

Sweat Glands

Located in the dermis. Helps regulate body temperature by manufacturing and excreting sweat onto the skin's surface. Found all over the surface of the body.

Synergistic

The action of two or more substances achieving an effect greater than that possible with any of the individual components.

Synthetic

Substances artificially produced by chemical or biochemical means. Often man-made, but having the same physical, chemical and optical characteristics as the natural material.

Tan

A darkening of the skin caused by increased melanin production. A browning of the skin resulting from exposure to the rays of the sun. Often considered the skin's defense.



Texture

The characteristic appearance of a surface having a tactile quality. In skin, it describes the surface appearance— rough, smooth, thin, thick, scarred, etc.

Therapeutic

Pertaining to treatment. Relating to the remediation or cure of a disorder or disease. Having a quality of healing.

Tone

Quality of color and elasticity with regard to skin. The act of using a toner product.

Toner

Product designed to diminish the appearance of pores and restore ideal pH level to the skin.

Topical

A product that is applied externally to the skin.

Trans-Epidermal Water Loss (TEWL)

Trans-epidermal water loss (TEWL) is the water release from the skin layers (epidermis).

Toxin

A substance that causes injury to the health of a living thing on contact or absorption.

Ultraviolet Radiation

Ultraviolet radiation from the sun consists of three bands: UVA, UVB, and UVC. UVC rays are mostly filtered out by the atmosphere, but UVA and UVB rays reach the earth strongest between 10 a.m. and 2 p.m. These rays can affect people directly as well as through reflection (off of water, snow, cement, grass, etc.). (See UVA & UVB)

UV Light

UV or ultraviolet light has wave lengths shorter than visible light and longer than x-rays. Ultraviolet literally means beyond violet—violet being at the top end of visible light's color spectrum. UV light exposure can damage skin over time and cause skin cancer. Sunscreen can reduce the impact of exposure by blocking some of these rays and is rated by SPF (see Sun Protection Factor). UV light may be responsible for as much as 75 percent of skin aging.

UVA

Ultraviolet light type A (UVA) are rays of light from the sun which are not visible but can cause damage to the skin. They are thought to be the most harmful UV rays and are the main cause of photo aging, eye damage, and skin cancer. They have short wavelengths—320 to 400 nanometers—and can also pass through glass to impact skin. Some sunscreens do not block UVA rays. (See Broad Spectrum Protection, SPF & UVB)

U

UVB

Ultraviolet light type B (UVB) are rays of light from the sun which are not visible but can cause damage to the skin. UVB rays are the UV rays associated with sunburn. Many UVB rays are filtered by the ozone layer and cannot pass through glass. Most sunscreens will protect skin from UVB rays and therefore provide protection from sunburn. They have short wavelengths—280 to 320 nanometers—and are readily affected by ozone levels. Decreases in ozone levels lead to increase UVB radiation reaching the earth. Increased UVB leads to a variety of skin problems including sunburn, skin cancer, and premature aging.

(See Broad Spectrum Protection, SPF & UVA)

Vitality

The youthful properties of health or skin. Full of life.

Vitamin

A group of organic micronutrients (present in minute quantities in natural foodstuffs) that are essential to normal metabolism.

Water-Soluble

A substance that can be dissolved by or rinsed away with water without other agents.

Wax

Material made from a mixture of hydrocarbons or derivatives. Harder, less greasy and more brittle than its close relatives, fats, and is resistant to moisture, oxidization, and microbial attack.

Whitehead

A non-inflammatory acne lesion that is a collection of sebum and keratin plugging the opening of hair follicle or pore. Also called a “closed Comedone” because oil and skin cells block the opening of a hair follicle. Often painless, small, white bumps occurring around the nose, cheeks, or eyes. Whiteheads differ from blackheads because the follicle is closed, covered with a layer of skin and more likely to become infected. In blackheads the follicle remains open to the air. (See Acne, Blackhead & Comedone)