

Oxygen Bathing

Immerse Yourself in Health

Your skin is the largest organ in your body. Most people recognize it as an organ of elimination because of perspiration but it is also an organ of assimilation. It is estimated that we get thirty percent of our daily water and oxygen transdermally or through the skin. One example of this assimilatory capacity of the dermis is evidenced by what happens when one bathes. A 200 pound man will take on four pounds of water during a twenty minute bath. Also there are the precautions that are taken by actors and dancers that use body paint in plays and movies. An actor or actress that uses body makeup must leave a large oval uncovered on their back or they will die of asphyxiation. As oxygen enthusiasts we are interested in oxygenating the body as well as detoxifying it by oxidizing impurities. We are interested in the uptake of oxygen and the medium by which it is delivered to the cells through the blood and interstitial fluid - good clean water. A good deal of this uptake of oxygen and water plus the elimination of toxins takes place through the pores. There are approximately three million tiny holes in the skin that we call pores. By bathing in a dilute solution of hydrogen peroxide you can keep your skin clear for proper assimilation and elimination by oxidizing and emulsifying the substances that clog the pores and impede proper skin function. There are two types of pores in the body. Ninety percent of them are sweat glands. The other ten percent are sebaceous glands. Since they are the predominant glands beneath the pores we will discuss the sweat glands first.

The average person has 2.6 million sweat glands in their skin. We are constantly sweating even though we may not notice it. Sweating is your body's primary way of getting rid of excess body heat that is produced by metabolism or working muscles. The amount of sweat produced depends upon your state of emotion and physical activity. The maximum volume of sweat that a person who is not adapted to a hot climate can produce is about one liter per hour. If you move to a hot climate such as the American desert southwest or the tropics, your ability to produce sweat will increase to about two to three liters per hour within about six weeks. This appears to be the maximum amount that you can produce. When sweat evaporates from the surface of your skin, it removes excess heat and cools you but often leaves the toxins carried to the surface behind to occlude the opening of the pore.

Sweat

Sweat glands are found in almost every part of the skin, forming tiny coiled tubes embedded in the dermis or subcutaneous fat. Toxins accumulate in adipose tissue or fat. Ninety percent of your body fat is located just beneath your skin. The eccrine glands produce sweat which is a mixture of water and salts and are a significant factor in removing toxins from this fat through perspiration. The eccrine sweat gland is a long, coiled, hollow tube. There is a coiled part in the dermis where sweat is produced, and a long portion that acts as a duct to connect the gland to the opening or pore on the skin's outer surface. Sweat plays an important part in regulating the temperature of the body by cooling it through evaporation of water from the skin as well as providing a useful natural method of removing waste products and toxins from the body. If the pores are clogged they cannot eliminate properly. The tiny ducts of the eccrine glands pass through the dermis and epidermis and empty directly on to the skin. They are found everywhere on the skin except on the lips.

Sebum

Ten percent of your pores are hair follicles that are pores with sebaceous glands at the base and a hair growing up through the skin. Approximately three hundred thousand small sebaceous glands lie just under the skin surface. These glands make the oil or sebum that keeps the skin supple and smooth. Sebum is a waxy, oily substance that keeps the skin moist and supple. When it mixes with sweat it gives the skin a moist shiny patina that keeps the skin waterproof. Hair follicles allow the sebum to

come up to the surface of the skin along the shaft of the hair. Sebum collects under pores that are clogged. You can see this as small spots called pimples or papules. As a rule, the more sebum you produce, the greasier your skin feels. Body odor is produced by micro-organisms or germs that grow in particularly moist areas of the skin, such as the armpit. They produce body odor by digesting sebum and can only work efficiently if water is present.

As a result of aging and accumulated sun damage, sebaceous follicles often become clogged with sebum, multiple vellus hairs and dead cells. These follicular retention products can distend the pores, causing the skin to take on a rough texture with large, accentuated pores. As soil and makeup become embedded in the pores, bad bacteria may invade the area and pus can form. Deep cysts form when the swelling from blocked pores known as comedones or pimples become infected with bacteria, usually *Propionibacterium acnes* commonly called *P. acnes* or acne. Sometimes, the follicles can become so distended that they eventually rupture, spewing their contents including bacteria, sebum and dead skin cells into the surrounding skin. This acne process mainly occurs during puberty and through adolescence when hormones cause the sebaceous glands to increase in size, however, it can occur in adults. The medical term for it is acne vulgaris. The whole process causes different types of sores and blemishes, depending on the stage of the cycle. Blocked sebum is an ideal medium for *P. acnes* to live in and multiply. Acne also occurs with prolonged use of cosmetics, due to blockage of sebaceous gland ducts or pores. Small numbers of *P. acnes* normally live on the skin, and do no harm. However, if large numbers develop in the blocked sebum, the immune system may react and cause inflammation.

A certain level of oil production is necessary to support the colonization of the pore by beneficial bacteria, called *C. acnes*. The oil or sebum provides nutrients for the bacteria. As these bacteria populate the pore they produce free fatty acids and glycerol. The free fatty acids can irritate the pore lining if not regularly cleansed. There are other components of sebum such as wax esters which are irritating to the pore also and lead to the impaction of the pores. When this happens the epithelium that lines these pores produce cells at a rapid rate and the cells stick together, almost like a cancer. For these reasons it is critically important to keep the pores clear to allow for an open pore that secretes sebum easily. The bacteria in the skin maintain the "acid mantle" of skin. The pH of the skin is 5.2. This pH barrier protects the skin from other bacteria such as streptococci and staphylococci. In healthy skin they cannot enter into the bacterial flora of the pore.

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Oxygen enthusiasts have long been knowledgeable about the benefits of bathing in a dilute solution of hydrogen peroxide. Peroxide provides an all natural scrubbing agent to kill invading bacteria and dissolve the amalgam of detritus that clogs the pores. It also provides valuable oxygen that is readily absorbed by the skin. Since this is typically done in a bathtub or hot tub where the water is at or near body temperature, the pores are relaxed and dilated to their maximum state of openness thereby facilitating the elimination of toxins and the uptake of oxygen. Store bought peroxide will work in a pinch but contain chemical preservatives and heavy metal stabilizers and are not as prone to release their life giving oxygen as the Food Grade. Food Grade hydrogen peroxide releases the oxygen singlets more readily when it comes in contact with the acid mantle of the skin. Typically, a person will put eight to twelve ounces of 8% Food Grade in a warm tub or one quart per week to maintain a hot tub. The temperature should be between 96 and 100 degrees to get maximum pore dilation. The result is a relaxing soak where the heart, which is the largest muscle in the body, is treated to a gentle rate elevation by readily available oxygen that it shares with the muscles and organs. This surplus oxygen is liberally distributed because your body is at rest and the oxygen demand condition that normally accompanies elevated heart rate from activity does not exist. When one emerges from an oxygen bath the skin should be a rosy pink. The feeling of well being is incomparable. Try elevating your oxygen level by letting your skin breathe.