

Medical

ENZYMES: Treatments coming into their own!

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My readers have questioned my many references to enzyme treatments over the years. Many assume I am talking about a specific product and several have queried, "Where to I get these products?" Actually I was not referring to any one product but treatments involving one of nature's phenomenons. So, here at last I will explain what I have meant all these years when I write about enzymes.

If there were extraterrestrial beings who come to earth and asked our top scientists to describe the human body at its fundamental level, the scientist would have to say "We are nothing more than a bag of fluids, proteins and amino acids, orchestrated by enzymes and held together by electromagnetic energy!"

It is surprising to me that science has identified only 1300 enzymes that control every molecular aspect of our bodies, I am convinced there are many more. It is not surprising to me that enzymes play an important role in the treatment of the disorders of the skin. It is a series of enzymatic activities that maintain the skin at

its healthiest in the first place.

WHAT IS AN ENZYME?

Enzymes are nature's biological catalysts. Skin therapists and even physicians commonly believed it for many years that enzymes were not suitable for real skin therapy because they were huge, protein molecules--too big to penetrate the skin. The fact is enzymes are not proteins any more than a light bulb is electricity. Skin therapy enzymes USE proteins formed in plant cells to act as organic catalysts in initiating or speeding up specific chemical reactions.

Transferase—a second messenger enzyme for example, initiates many actions inside the skin that can create anti-inflammatory aspects, bring about homeostasis and influence ATP and ADP, the very energy and life force of cells.

HOW DOES AN ENZYME WORK?

Research shows that enzymes combine

temporarily with the reacting molecule. Mutual contact of surrounding molecules is then no longer a matter of chance but a matter of certainty; hence, a faster reaction. As an example, when the body breaks down a carbohydrate, the energy used to hold the carbohydrate is released and immediately used or stored in the body. This is called "metabolism." Metabolism is divided into two functions: anabolism (for synthesis of cell material) and catabolism (for the decomposition of cell material).

These reactions would be very slow unless assisted by proteins orchestrated by enzymes. Without enzymes the entire concept of metabolic function would be lost. Enzymes actually work by joining to the substrate (reactant) to form an enzyme-substrate complex and then produce the products of the reaction. The enzyme itself never changes and is not used up in this reaction but is released for repeated use. Think of an enzyme as a space station in outer space. Around this station could be many different types of space ships flying at random, not interacting with each other at all thus accomplishing no missions. Each space station has a docking port for a SPECIFIC style of space ship. If the ship docks in it's own port and another ship lands in its correct place on the space station--they held in "stasis" and can interact with each other and then things happen. This is how an enzyme works.

ENZYMES AND SKIN REVISION TREATMENTS:

There are many enzyme and coenzyme (vitamin) activities in the skin that regulate its normal functions. For example, the enzyme collagenase helps to regulate the synthesis of collagen fibers. If collagenase is destroyed by invasion of an aggressive treatment--such as the drug Ro-Acutane, normally given to acne patients, the collagen fibers rush to any source of trauma to the skin such as laser resurfacing or acid peels. The result may be a keloid or hypertrophic scar. This is one of the reasons the old time; phenol acid or trichloroacetic acid peels left the patient's skin

looking plastic or waxy. The NORMAL proliferation of collagen fibers was accelerated and rushed to the surface in an effort to participate in repair and remodeling of the skin too quickly.

However, there are many enzymes that can be applied topically to the skin that are extremely beneficial. They can assist in removing the build up of dead skin cells, often misdiagnosed as "dry skin" that manifest in superficial wrinkles. Enzymes can also release gases, impurities and other effluvia from the skin as well. This type of treatment can actually result in a younger and tighter skin. It is not a case of "how many enzymes are used in formulation" to accomplish this, but the stimulation of enzyme activity in the skin itself. If the correct formulations of enzymes are applied to the skin, hydrolysis of the dead cells and the impurities burdening the living cells begins in about twenty minutes.

TOPICALLY APPLIED ENZYMES:

We have found that enzymes are categorized into several groups. Some dissolve dead protein; others digest starches and excess glucose. Still others help to break up solidified oils in the shunts or openings of the skin. A special enzyme, transferase, can send messages across cell membranes. This is called "Transcription".

In this process, a strand of messenger RNA is synthesized according to the nitrogenous base code of DNA. The Enzyme RNA polymerase binds to one of the DNA molecules in the double helix. The other strand remains dormant. RNA moves along the DNA strand reading the nucleotides one by one. The enzyme selects complementary bases from available nucleotides and positions them in an mRNA molecule according to the principle of complimentary base pairing. The mRNA molecule then carries the genetic message to the cytoplasm for protein synthesis. This is vital information for all skin cells as well in an effort to keep them alive longer and healthier--while removing the burden of the dead cuticle.



TYPE OF FORMULATION USED:

I have discovered forty years ago that the best base to store inert, yet still living enzymes was in the zygote base Albumin. Albumin is from the inside membrane of egg shells and makes an ideal storage place for live enzymes who deactivate once exposed to aqueous fluids and air in about 45 to 60 minutes. In addition I add lysozyme and Amylase. Amylase initiates the hydrolysis of glycoside linkages--part of the so-called "cellular glue" that helps bind dead cells to the underlying living cell stratum.

The starch-eating enzyme, Agrozyme, is also part of the formulation as well as Grozyme, Rapidase and Superclastase. These enzymes are used for the treatment of sewage and human waste products. These are especially vital in the treatment of acne skin conditions. Lipase is another "message carrying" enzyme that deals with lipids and fats in the skin and in addition to the above-mentioned enzymes I add the following components: Aspartic Acid - a roborant, strengthens the tissues.

Lysine - an amino acid improves protein quality in tissue and is one of the three amino acids necessary for collagen production.

Proline and Glycine - the other two amino acids in collagen production, are energized into action by vitamin C. Glycine is also anti-puritic (anti-itch) which is of great benefit to eczema type skin conditions.

Lecithin - rich in linoleic acid.

Copper Chlorophyll - promotes healing and phyto synthesis of any active botanical used in formulation.

Other enzyme treatments bring about a "plasmatic action" in the skin by dilating all of the peripheral capillaries. This brings about improved oxygen uptake from INSIDE the body. This increased oxygen is deposited in the correct amounts into the mitochondria, which requires oxygen for the production of sufficient ATP for anti-aging results. You can literally see this effect on the skin of the neck, face and decollate following an enzyme treatment. There is very little, if any, superficial erythema, but the capillaries stand out like a road map--proving the effects of the enzymes treatment goes deep enough for total dilation of the peripheral capillaries. This is true oxygen therapy as opposed to the dangers or lack of positive results from applying oxygen cremes (merely peroxide) or spraying the skin with compressed oxygen.

FACIAL AND BODY MUSCLES AND ENZYMES:

The fragile, underlying facial muscles can be pumped up to a stronger level much as any muscle in the body can with regular weight training and exercise. However, facial exercises are tedious and require a religious daily routine to achieve and maintain results. Most patients will not devote the appropriate time to this type of a regimen. Electrical stimulation with the so-called face-lift machines offers only about a 20% result in muscle stimulation. Research of this modality has shown that treatment every day using specific micro-current results in the 20% muscle increase and has to be maintained nearly on a daily basis.



VOLUNTARY contraction of facial muscles using enzyme treatments has a much more natural and lasting effect inasmuch as the muscles themselves are moving on their own accord against resistance. This is also known as isometric exercise. In a voluntary reaction of a muscle there is an asynchronous firing of motor neurons in a smooth contraction. The more units involved, the further increase of muscle force being achieved.

If you apply very strong enzyme "bands" to the skin from motor control point to motor control point, you can accomplish this voluntary action. Most facial, neck and decollate muscles are lateral, horizontal or vertical. These can be worked with predictable results. The oris oculi and oris obicularis (muscles of the mouth and eyes) however, should not be treated in this manner inasmuch as they are round and unpredictable as to the direction they may contract.

THE MEAT EATING ENZYMES:

There are three crude enzymes commonly used in skin therapy for many years. Of all groups, these are the most aggressive as far as sensitizing the skin. These types of enzymes are also used in ordinary cooking in several countries under the label "Meat Tenderizers." Once sprinkled on a tough, inexpensive piece of beef, they will soften the meat almost to the point of desquamation in a few hours.

Likewise, if applied to the skin more than 15 minutes, they will irritate the skin and the mucous membranes of the mouth, nose and eyes. These are bromelain (pineapple source) papain (Papaya source) and pancreatin (hog belly source). I use these only in cases of very thick, greasy type skins that have a lot of congestion and thick, dead cell build up.

Probably the best feature of enzyme therapy is that it has no real pH factor, either extremely acid or extremely alkaline. Therefore, contraindications are must less prevalent and/or severe. But enzyme therapy formulation is not an easy process from the manufacturing level. It can be costly and time consuming in production. This alone does not make it attractive to most manufacturers of skin treatment products. I have depended upon the art of enzyme therapy as my primary form of skin revision and find its uses to be applicable in nearly every skin disorder or aging skin situation.

ENZYMES AND LYMPH DRAINAGE:

The Doctor Voddar method of Lymph Drainage has been an acceptable form of detoxification therapy internationally for many years. Many American therapists are under the impression that lymph drainage therapy is accomplished with broad, sweeping massage movements from the lymph node areas of the neck

down to the clavicle or breastbone. The true application in fact, is a very precisely timed series of minute "pumping" manipulations that can be performed anywhere on the body. Elizabeth Stenvik of Trondheim, Norway, now teaching and living in Spain, one of Northern Europe's top research therapists and a teacher of the Voddar method, is absolutely convinced that the Enzyme Muscle Contraction Therapy is another high tech approach to lymph drainage.

After researching this project in a series of in-clinic test trials a few years ago the proved promising look promising. This would explain why clients who undergo enzyme therapy have a much clearer, brighter and better-toned skin for many days following the treatment. The body naturally wants to rid itself of toxins and while the actual Vodder method does work—the manual process is time consuming and sometimes tedious if the therapist or practitioner is offering multi treatments. ■



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