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Alternative Medicine and Natural Therapy

Some time ago a patient I had been caring for began selling a line of skin products that contained extract from melaleuca—tea tree oil. She brought me glossy literature in which major claims were made about the benefits of this herbal product on skin. I couldn't scientifically evaluate all the claims, but evidence exists that tea tree oil does have antibacterial effects. There are many naturally occurring compounds that may provide benefit to the skin. The trick is in identifying the ones that work and knowing when to take advantage of them.

Alternative medicine, now often referred to as complementary medicine, has earned newfound respectability in conventional medical circles. Once an area of knowledge scoffed at by traditional doctors, it has now become an aspect of the healing arts in which the public and many physicians place increasing faith. Indeed, it has become such an important area of investigation that the National Institutes of Health (hardly a radical arm of the federal government) has established a division specifically devoted to the study of alternative forms of medical therapy. In my field, the *Archives of Dermatology*, the oldest scientific dermatology journal in America, recently devoted a whole issue to alternative medicine in dermatology.

When we talk about alternative medicine we are usually referring to herbal or natural therapies. Alternative medicine also includes a whole range of preventative and treatment strategies, from natural products to psychological interventions, such as hypnosis (which probably has a place in dermatology), and disciplines like yoga, massage, aromatherapy, and acupuncture.

A dynamic tension now exists in the world of medicine between those people who believe the only way to decide if a treatment works is through the scientific method and those who believe that other measures are adequate to determine the usefulness of a therapy. The scientific method involves testing a drug and measuring the results of its use. For example, to determine whether an acne medication works, a group of people apply a medicine in a rigorous program and the number of acne lesions are counted. If the number of lesions decreases in the study group compared with the people who use a placebo (in this case a plain unmedicated cream), this suggests the experimental treatment works. The proof of whether a medication works is in the comparison of the effects of the treatment with a group that is getting the placebo.

The burden of proof is particularly elusive in the realm of alternative medicine. Therefore it stands to reason that until enough trials are set up to test the medical value of particular remedies, the debate will continue regarding the true effectiveness of herbal and other therapies in medical treatment.

Because skin is so available, and because the medications and agents we use are frequently applied topically, a huge body of knowledge has developed over the centuries about a host of skin treatments. For instance, when we survey the liniments, poultices, and treatments used to treat skin disease since the time of the Egyptians, we discover that we are still using many of the same active ingredients, albeit designated by different names and often available in different formulations.

In fact, the world of medicine is rife with examples of herbal therapies. For example, digitalis, a mainstay of cardiac treatment (sold as the drug digoxin) is derived from the purple foxglove plant. Dermatology is more interconnected with herbal remedies or treatments than any other field of medicine. Self-medication is easier and more products are readily accessible than when treating the internal organs. Many people experiment or embrace whatever they can to improve their skin, and this includes all that the health food store or alternative medicine shop may have to offer—and new products appear there to tempt the consumer all the time. It's no wonder dermatologists must pay attention to the rise of complementary treatments.

Herbal remedies are a huge business in the United States today—

Americans spend over \$12 billion annually on alternative medications and vitamins. Interestingly, more than half of all physicians comfortably recommend herbal treatments to patients and almost half of us admit to using some type of alternative therapy ourselves. The purchase and use of herbal treatments differs from conventional medication in one important way. The Food and Drug Administration does not require manufacturers to prove efficacy, safety, or adherence to production standards. If something proves dangerous to the public, as L-tryptophan supplements did in the mid-1990s, the FDA can pull the product from the shelves, but that occurs only after the harm has been done. In general, there is a much longer history of herbal therapeutics in Europe, and many well-established German companies have a reputation for the production of quality herbal remedies.

In the realm of non-melanoma skin cancer, a particular form of alternative therapy surfaces every now and then. Every few years I get a mailing from someone around the world or a patient comes in with a newspaper clipping about a natural compound alleged to cure skin cancer. It contains as its active ingredient a compound called *solasodine*. From my point of view, one of the problems with studies claiming that some agent cures skin cancer is that often no biopsy diagnosis is made prior to treatment. No controlled research studies are done. In the end, a particular salve or cream may be used successfully, but it wasn't treating cancer or precancer—it might have simply been curing a patch of dry skin. Be suspicious of any treatment that alleges it can cure skin cancer yet doesn't require a prescription. In addition, if you have a spot that doesn't heal, or matches the description of skin cancer provided in Part IV, get it biopsied and treated properly. Don't mess around with creams that are not proven to work and stay away from miracle cures you discover on the Internet.

▪ MEDICAL TREATMENT AND THE MIND

It has been common knowledge for a very long time that how we think affects how we feel and vice versa. Somewhere in the last fifty years, however, our romance with all things technological gave humankind a false sense of supreme power and control. We came to believe that with the use of our advanced procedures and our state-of-the-art technology, we could “cure” anything, as if medicine were a war, rather than a healing process.

Well, thankfully, our thinking is evolving. Some of us are beginning to see that to cure everything is impossible. The best medicine is practiced in partnership with the patient and with respect for the relationship between

the body and mind. Thomas Edison, one of the greatest technology pioneers, predicted long ago, “The doctor of the future will give no medicine, but will interest his patients in the care of the human frame, in diet, and in the cause and prevention of disease.”

Now, here we are in the new millennium. Where do we stand when it comes to alternative treatments and our health? There is no reason to eschew the many, very real strides Western medicine has made in improving the survival rates of those who suffer from cancer, heart disease, and diabetes, just to name a few major killers.

When it comes to skin disease, from cancer to Lyme disease or venomous bites, I need to state unequivocally that you should not go it alone. The treatment your doctor provides can save your life. In other situations that are not life-threatening, your own input at home and the use of alternative therapies may well solve your skin problem without additional investment of your time and money in expensive treatments that may be only partially successful. In addition, the sense of control you feel when you can take action yourself (after consulting with your physician, of course) can help relieve stress when coping with a serious skin condition—and relieving stress is always good for your overall health and the health of your skin. Psoriasis, eczema, and seborrheic dermatitis are among the common skin conditions that can be triggered by excessive stress.

In reviewing the most well known alternative therapies in dermatology, I’ll try to cite evidence for what works, as measured in good studies, as well as any formal trials that have shown what doesn’t work. If you are a devotee of alternative treatment, you will probably know about other options already. Please let me know your thoughts by email through the website www.totalskinmd.com.

▪ ACUPUNCTURE

Over five thousand years ago in China the practice of acupuncture became an important aspect of medicine. Acupuncture takes its inspiration from *qi* (pronounced chee). Qi is the vital life energy considered to be present in all living organisms; it must be kept in balance within the living system. Acupuncture aims to remove obstructions to the free flow of healing energy. In acupuncture, a fine needle is used to stimulate the body’s healing process through body lines of energy. The needle is inserted at an acupuncture point, the exact anatomic location where that healing energy can be contacted.

It is believed that acupuncture works by stimulating immunity and the

body's own endorphins, by affecting serotonin and adrenaline (two compounds that help transmit impulses in the nervous system), by constricting or dilating blood vessels, and by stimulating alternative pathways in the nervous system, which might close off impulses from other areas of the body. Acupuncture theory holds that there are twelve major energy pathways, or meridians. All of these are linked to specific organ systems and internal organs. On these meridians, there are thought to be over one thousand locations that can be stimulated through acupuncture to increase the healthful flow of qi.

One of the few skin conditions upon which acupuncture is thought to have a positive effect is acute urticaria, also known as hives. This condition, which affects 15 to 20 percent of the population, is usually a reaction to food or drugs, but it may also come from a viral, bacterial, or parasitic infection. In Western medicine, acute urticaria is treated with antihistamines or a short course of corticosteroids, but acupuncture evidently can help. In a study of psoriasis, however, no significant benefit was found for people treated with acupuncture.

▪ AROMATHERAPY

Aromatherapy has become extremely popular as a means of promoting health and improving our sense of well-being. Rooted in herbalism, aromatherapy involves the use of oils extracted from plants, which are usually massaged into the skin. Although many claims are made about the benefits of this therapy, few studies have been done to actually prove any psychological or physical benefits. Interestingly, though, the use of sandalwood oil has been shown to inhibit the growth of wartlike tumors in mice. Similarly, tea tree oil has an antibacterial and antifungal effect. On the other hand, certain essential oils can affect the surface of the skin and cause a contact dermatitis similar to that of poison ivy.

For over a hundred years lavender, thyme, cedarwood, and rosemary oils have been used to promote hair growth. Until a recent clinical research study, there were no scientific trials to prove that they actually are effective in this way. The specific research was conducted on 84 subjects with *alopecia areata*, a type of hair loss that occurs when the body's immune system attacks its own hair follicles (see p. 159). This condition affects about 1 percent of the population and is very distressing. Alopecia areata can result from stress and the course of the condition is unpredictable. In this aromatherapy study, the active group massaged their scalps with

essential oils such as thyme, lavender, and cedarwood, while the other group used only a placebo oil. Of the patients in the active group, 44 percent showed improvement in their alopecia areata, compared with only 15 percent in the group who did not get the active oils. This was a significant finding, but actually raises some legitimate questions. Did these patients grow hair because there was an active ingredient in the oils? Or was it some other factor?

▪ VITAMIN THERAPY

These days we consume a bumper crop of vitamins, having been told they can do everything from cure disease to prevent aging. Our fascination with vitamins derives from an almost magical thinking that by consuming a special “missing” ingredient, we will enhance our health. The fact is that our notions about what vitamins do and which ones are good for us under certain circumstances derive from studies of conditions that result from deficiency of particular vitamins.

In so-called pharmacologic doses, which are sometimes thousands of times greater than what our bodies need, certain vitamins behave not as nutritional supplements but like drugs, to the extent that they can help alter a disease state rather than just restore a natural deficiency condition. For example, chemical derivatives of vitamin A are important anticancer medications, but excessive vitamin A itself can cause serious side effects.

A vitamin D derivative is used to treat psoriasis in a compound called Dovonex. Why? It turns out that psoriasis, a condition in which cells of the epidermis divide too rapidly, can actually be slowed down by forms of vitamin D. Excess vitamin D itself, however, can be toxic and cause illness.

A healthy person needs only small quantities of vitamins and minerals. Don't assume that if a little B-complex vitamin is good, a lot is better. In the case of vitamin B, any excess passes right through your kidneys and out of your body. By contrast, fat-soluble vitamins like A, D, E and K are retained in the fatty tissues of the body and can build up.

VITAMIN C

Vitamin C has antioxidant effects that are popularly thought to make it beneficial to combat skin aging. An antioxidant is a compound that sucks up or otherwise neutralizes the harmful oxygen molecules that result from normal chemical reactions in the body. It is true that in the test tube vita-

min C can function as an antioxidant. However, claims of clinical benefit in skin are not based on any legitimate scientific studies. Many continue to be convinced that vitamin C is good for colds, although there is no hard evidence for that, either. True, the idea of smearing this vitamin on our skin in the hope that it will make us look younger does seem attractive in a simple sort of way. Nonetheless, the evidence is not there to support this use. A study done at Duke University on pigs suggested that adding vitamin C and vitamin E to sunscreens protected the animals against damage from UVB radiation (the kind that causes sunburn). But since there are enough effective sunblocks the added cost of vitamin C sunscreens or compounds doesn't seem justified. As to reversal of damage that has already taken place, I eagerly await scientific proof.

VITAMIN E

Vitamin E is widely believed to help improve scars and assist in general wound healing. It's a fascinating phenomenon: somehow the idea that vitamin E assists wound healing has become part of the conventional wisdom about health, and nothing can budge it. Since it generally can cause no harm and since massage of healing wounds may be helpful, I advise my patients to use it on surgical scars if they are so inclined. If the suture line is long enough I sometimes offer a friendly challenge: apply the cream to just half of the scar, but don't tell me which half. After six to eight weeks I then try to guess where they used it. In more than a dozen years of surgical practice, I've yet to be able to tell at the follow-up visit where they applied the vitamin E cream. There is also no evidence that cocoa butter helps healing but the associated massage may in time flatten raised scars.

If you do use vitamin E topically, however, keep in mind that it can cause allergic reactions. Early on, before the availability of creams, many patients would break open a soft gel capsule and massage the liquid into their skin. The type of reaction that could sometimes develop was similar to that of poison ivy: itchiness, redness, and oozing clear pimples. A hydrocortisone cream, along with cessation of the treatment was all that was needed to get back to normal. The true allergic potential of vitamin E was brought home very clearly in the early 1990s. A plethora of rashes caused by a new line of cosmetics occurred throughout Switzerland. When all the cases were reported, it turned out that at least 3 patients for every 1,000 units of cosmetics sold developed contact dermatitis. The offending agent was vitamin E linoleate, a mixture of tocopheryl esters. Symptoms developed any-

where from 1 to 160 days after people started using the cosmetics. Itching was severe and the rash took one to four weeks to disappear.

Some doctors have developed allergic contact dermatitis from using soaps and hand lotions that contain vitamin E. Also remember that vitamin E can accentuate the blood-thinning effect of Coumadin and aspirin. So patients who are on those compounds and who are about to undergo surgery need to stop taking vitamin E orally at least a week before surgery.

▪ WHAT CAN NATURAL THERAPY HELP?

Let's look at some specific skin conditions and the natural therapies that have been touted to treat them.

HERPES

The herpes simplex virus that causes the common cold sore and genital herpes can plague a person for a lifetime, which is reason enough to research alternative methods of treatment. There are superb antiviral agents. Denavir is a topical cream you can apply at the first tingling sign of a cold sore outbreak and Valtrex, an oral medication, is effective in reducing the duration of genital herpes as well. If you prefer not to use prescription medications, there is some evidence that certain essential oils are helpful. Lemon balm (*Melissa officinalis*) is an herb found in the eastern Mediterranean with the distinct odor of lemon. Its main ingredient is citronella. Lemon balm has been shown to have antiviral properties in the test tube. When lemon balm was used in patients with cold sores, healing time was faster than in a control group using a placebo cream. Still, prescription medications designed to block the virus remain the most predictable treatment for cold sores. Lysine and other natural remedies have not been proven to work.

LEG VEIN INSUFFICIENCY

Lower leg vein insufficiency can result in swollen legs and ulcers. Horse chestnut seed extract contains a compound called *escin*, thought to prevent the activation of white blood cells, which can be an underlying problem in lower leg vein insufficiency. A review of medical studies suggested that taking this extract orally was actually superior to taking a placebo. Using this alternative therapy for sixteen weeks was as effective in con-

trolling the swelling effects of venous insufficiency as was wearing compression stockings.

WARTS

One area where alternative forms of therapy have been used for centuries is in the management of common warts. In one study, children with warts were treated with different homeopathic preparations, while another group received a placebo. When the results were compared, there was no difference in success between the group that received the pure placebo and the group that received the homeopathic remedy. (For more on warts see Chapter 25).

PSORIASIS

Hydrotherapy (treatment with hot or cold water or steam to restore health) at the Dead Sea is recognized as a good treatment for psoriasis. Dead Sea water contains a natural tar called bitumen. Elements in tar have been shown repeatedly to benefit psoriasis patients by slowing down the rapid turnover of skin cells, which is the hallmark of the problem. In addition, the ultraviolet radiation from the bright sun probably serves a therapeutic purpose as well. Dead Sea products are available to be added to your bath at home, but it is unlikely that this will simulate the effects psoriasis patients experience in the Dead Sea.

ECZEMA

In a research study in London a remarkable benefit was demonstrated in children with eczema who were treated in an alternative fashion. Using a combination of ten herbs, redness (an indicator of how active the eczema was) decreased 91 percent in children treated with the active herbs and only 11 percent in patients treated with placebos. There were no significant side effects from the herbal treatment.

ACNE

Witch hazel and oak bark are topical astringents that alternative practitioners recommend to patients, but there are no controlled studies showing effectiveness in this condition. Moreover, so many effective conventional

treatments are now available that these should be used first to control what can, at times, be a skin condition that can lead to permanent scars.

DERMATITIS

Chamomile (*Matricaria recutitia*) is a member of the daisy family. It is used to treat dermatitis and other minor irritations of the skin. It contains compounds that appear to inhibit inflammation. In one study, it was found to be 60 percent as active as a topical corticosteroid cream. In a study of patients with atopic dermatitis, it was found to be about as effective as hydrocortisone.

WOUND HEALING

Pot marigold or common marigold (*Calendula officinalis*) is considered useful for burns, bruises, cuts, and rashes. German health authorities recommend it for topical treatment of minor wounds and leg ulcers, because it is believed to increase collagen metabolism, which aids in healing. It is most commonly used as an ointment or in cream form. In addition, a tea can be made for mouthwash or topical treatment. Although it is generally considered safe, ironically there are some rare reports of allergic reactions that can actually *cause* contact dermatitis.

▪ SOME COMMONLY USED NATURAL REMEDIES

GREEN TEA

The flower of the green tea plant (*Camellia sinensis*) has broad, linen white petals surrounding gently arching golden stamens. The leaves of the plant are used for the tea that is the national beverage of Japan. Green tea itself contains a group of compounds called *catechins*, which are normally destroyed when green tea is converted into black tea. Green tea has special value because catechins generally improve lipid metabolism in the bloodstream and can lower cholesterol. In dermatology its promise resides in its anticancer effects, since green tea contains compounds that have an antioxidant effect. The trick is to determine how to harness the anticancer effect verified in the test tube and convert it to useful application in human disease and prevention.

The promised health benefits of green tea have sprouted a range of

products, including antibacterial soap, skin creams and lotions, shampoos, and even sunscreens. Although its effectiveness as a sun protection product has not been proven in human studies, the presence of antioxidants in green tea raises the possibility that products containing the active compound may be able to inhibit the cancer process initiated by the sun's ultraviolet B radiation. In one series of studies at Case Western Reserve University, administration of green tea resulted in a reduction of the tumors that occurred following exposure to UVB radiation.

WITCH HAZEL

Witch hazel has a long history in both traditional and alternative medicine in the treatment of hemorrhoids, burns, colds, and fevers and it has been an important natural compound for dermatologists as well. This astringent relieves itching and soothes all kinds of skin irritations. The active ingredients are *tannins*. In addition, there is an anti-inflammatory effect of witch hazel, a product which is available over the counter.

The popular astringent is derived from the witch hazel shrub (*Hamamelis virginiana*), which grows wild in the northeast United States. Native Americans brewed a concoction of witch hazel, leaves, bark, and twigs to help heal cuts and scrapes. The shrub, given its Latin name after a Greek word for apple tree, has many medicinal qualities. Witch hazel calms the pain of stings and has antiseptic qualities. The compound is now added to aftershave lotions and other products for soothing irritated skin.

As an astringent, witch hazel has drying qualities, so be alert to drying out your skin—especially in winter or if you live in a dry climate. Allergic reactions to witch hazel are uncommon, but if you use it regularly and develop a rash that doesn't go away it could be the cause. Witch hazel is an excellent example of a herbal remedy for which complicated scientific studies are not really needed. It is low risk, so the user can decide whether it helps or not. It is also inexpensive, which doesn't hurt either.

LICORICE

Licorice is a universally popular flavor, popping up in candies and after-dinner liqueurs alike and used in cooking as anise. Licorice root is a common compound used in traditional Chinese herbal medicine. The active ingredient is glycyrrhizic acid. Evidence shows that licorice extracts can increase the skin's natural steroid hormones (cousins to hydrocortisone)

and so may be beneficial in counteracting the irritation sometimes caused by other skin products. That is why some manufacturers of cosmetics and skin creams are now mixing it in with their primary skin products. Any other claims, such as an anti-wrinkle effect, have not been established. Because it has been found to increase the activity of topical hydrocortisone it may be helpful for skin conditions such as psoriasis and eczema, which normally respond to such corticosteroids.

FRUIT ACIDS

Alpha-hydroxy acids (AHAs) are a family of chemicals found in many fruits, hence the simple name “fruit acids.” AHA products cause shedding of the surface skin cells, or exfoliation. The extent of exfoliation depends on the type and concentration of the AHA, its pH (acidity), and other ingredients in the product. It is also determined by the nature of your own skin. AHAs are derived from a wide range of fruit: malic acid from apples, tartaric acid found in grapes, citric acid from citrus fruit.

These acids are marketed as gentle skin peelers or astringents, and for general “anti-aging” uses. In addition to these claims, products with AHAs are sold to unclog and cleanse pores, fight oily skin or acne, and improve skin condition in general. Many people who use AHAs believe that they

LOOK FOR THESE AHAS IN YOUR PRODUCT'S LIST OF INGREDIENTS

Glycolic acid	Alpha-hydroxycaprylic acid
Lactic acid	Hydroxycaprylic acid
Malic acid	Mixed fruit acid
Citric acid	Tri-alpha hydroxy fruit acids
Glycolic acid + ammonium glycolate	Triple fruit acid
Alpha-hydroxyethanoic acid + ammonium	Sugarcane extract
alpha-hydroxyethanoate	Alpha hydroxy and botanical complex
Alpha-hydroxyoctanoic acid	L-alpha hydroxy acid

(If your AHA moisturizer or treatment stings, it may be too strong for your skin. Consider alternative moisturizers that do not contain AHA.)

make the skin feel smoother and even look better. Studies have shown that products with less than 10 percent AHA are generally safe. In fact, it's important to realize that natural lemon has an "AHA level" of 27 percent. Most products contain AHA levels up to 10 percent. The exfoliation effect of AHAs can help even out the tan, blotchy discoloration that comes from sun exposure. There is no evidence that AHAs permanently reverse wrinkles or fine lines, but it is thought that by causing mild irritation, the swelling in the skin puffs up the tissue around the lines and wrinkles and minimizes their appearance. AHAs are available in many over-the-counter cosmetic products but are also used, in higher and more complex formulations, for chemical peels performed by your dermatologist (see chapter 7).

Because of the irritating effect of AHAs, some people report sun sensitivity. There is indeed some suggestion that their use may make some users more sensitive to UV radiation from the sun. If you are using AHA products, you must use sunscreen (SPF 15 or higher), wear a broad-brimmed hat, and avoid the sun during peak hours.

Two more things to be alert about: don't use AHAs on children and be aware that AHA concentration and pH value are generally not noted on all products, because the FDA does not require it. Consumers should report any adverse reactions such as irritation or sun sensitivity associated with the use of AHAs to their local FDA office, listed in the Blue Pages of the phone book, or to the FDA's Office of Consumer Affairs, 800-532-4440.

BROMELAIN

Bromelain is an enzyme derived from pineapple and sold in capsule form. Taken by mouth, bromelain is said to stimulate healing of soft tissue injuries, like sprains and bruises. In controlled studies bromelain has been shown to speed up the healing of hematomas (collections of blood that sometimes form after surgery). Prior to liposuction surgery, bromelain may help decrease bruising and hematoma formation. A few individuals have allergic reactions to bromelain. Discontinue it if you get any itching.

ONION EXTRACT

For centuries onion extract has been said to offer special health benefits. Recently, a popular new product has been promoted that is said to speed healing and improve the final appearance of scars. Marketed as Mederma, this topical cream contains onion extract.

In the test tube, onion extract has been shown to inhibit the production of collagen, the building blocks of scar tissue. Two controlled studies suggest that in this way Mederma may be of benefit, since it may aid the development of smaller, more flesh-colored, and thinner scars. Medically speaking, that's all that can be said to date

ALOE VERA

Aloe vera is one of about three hundred succulent plants found mainly in sunny climates. The leaves of such plants store large amounts of water. When cut, these leaves release a gel-like material that is thought to be soothing to the skin.

For sunburn, thermal burns, and any areas of skin irritation or inflammation, you can use the healing gel straight from fresh leaves. All you have to do is split a lower leaf lengthwise, score it with a knife, and rub the gel that oozes out directly on the affected skin area.

Since many of the products on the market that advertise aloe vera as a component actually contain very little of it, you may want to keep your own potted aloe vera plant by your kitchen window. There are many species of aloe, and many whose leaves are big enough to provide gel, but aloe vera, the "true" aloe, is the best choice. You can buy the plants at most nurseries. They are easy to grow (they are cactuslike, so do not require much water) and will multiply if properly cared for and given enough light.