

FOLK TALES

It's only fair to warn the purists among my readers: this issue is largely devoted to anecdotal stuff that won't pass muster in the professional literature. In nutrition, the gulf between science and folklore yawns wide. Nutrition researchers are determined to protect the status of their field (somewhat dimly regarded by colleagues in the "hard" sciences as a step removed from Home Economics and aproned cooking classes) by maintaining tight standards in their literature. There is no room in it for experiences outside of scientific protocol.

Nowadays, a forum for "folk nutrition" exists chiefly in the pages of popular health food publications. The nutrition department at U.C. Berkeley when I was a student five years ago made it quite clear to us that serious scientists wouldn't touch this literature with a ten-foot pole. As a re-entry with special credentials as mother of grown children and longtime nutrition empiricist, I had read enough of it over the years to appreciate its value as well as recognize its limitations, and I resented, and still do, the elitism implicit in this attitude.

Despite the irritating commercialism of the popular publications, a finer motivation is throughout evident . . . and it stems from one of the more attractive human traits: people happen to feel good when something they've said, done, or written actually helps another person. The writers and editors have turned out a lot of worthwhile stuff and it *has* helped a lot of people. Granted, some of it is as full of holes as Swiss cheese and little of it has been subjected to formal scientific inquiry. The chances are poor that more than a fraction ever will — facilities and funding in nutrition research being what they are. The reader pays his money and takes his chances.

It seems fruitless, however, for nutrition workers to yell "Food faddism!" and run for their battle stations every time a new fashion in popular nutrition emerges. The passing along of folk tales has been going on since those early Campfire Girls, Oonga and Fuzzybum, swapped recipes for dinosaur fricassee. The wisest course, it seems to me, is to look over the information as objectively as possible with whatever parameters are available and attempt to gauge its benefits or risks . . . always with an awareness that (1) we may all be old and gray before formal scientific testing can take place; and (2) a lot of folk nutrition works even though science doesn't know why.

Oil From Fish Liver

The cod liver oil story is typical. Dale Alexander is a writer and lecturer who has been promoting its benefits for a long time. Essentially, his premise is that two such seemingly unrelated conditions as dry skin and arthritis can reflect a common need for better "internal" lubrication which is best provided by natural cod liver oil. In addition to recommending an excellent diet of raw and cooked vegetables, whole grains, good protein foods, fruits, vitamin and mineral supplements, and no junk food, Mr. Alexander suggests, an hour before breakfast, placing two ounces of whole

milk and one tablespoon of cod liver oil (preferably Norwegian and it can be flavored if desired) in a small screw-top jar, and shaking the mixture about 15 seconds till foamy before drinking it. If more convenient, it can be prepared and drunk at bedtime, at least four hours after the last meal.

In addition to the cod liver oil and diet regimen, a key aspect is the timing of liquid intake. Instead of following the common practice of drinking water and other beverages with meals, he suggests waiting three hours after each meal. Drinking of liquids can then take place up to ten minutes before the next meal, but no closer.

Creaking Joints

His rationale is that drinking liquids with meals interferes strongly with the absorption of emulsified tiny oil globules from food directly from the stomach into the lymphatic system. The only exceptions are soups and milk, which he describes as "oil-bearing liquids" that actually enhance the absorption of emulsified oil droplets when taken with food. He maintains that when liquids other than milk or soup are drunk with meals, the small oil globules rupture into each other, coalescing into large pools which can no longer be absorbed directly from the stomach but have to undergo the usual process of emulsification by bile and digestion by pancreatic enzymes in the small intestine. Once reaching the liver after digestion, hardly any of the oils make it to the skin or to the joints, he says, to perform the needed emollient function. Dry skin and painful arthritic joints, he maintains, are results of chronically starving these tissues of oils by a combination of poor diet and the habit of drinking water and other fluids with meals. He believes cod liver oil to be the most valuable oil for relieving arthritic joints and beautifying the skin. Prepared with milk as suggested, it can exert its maximum benefit on these tissues.

Although his theory is not readily borne out by the scientific literature,



Mr. Alexander's book* is full of comforting anecdotes based on long years of experience with his regimen, beginning with his mother's recovery from crippling arthritis many years ago. He describes acne and psoriasis healed, wrinkles softened, and rough, flaky skins replaced by beautiful, moist ones.

Emily's Dry Skin

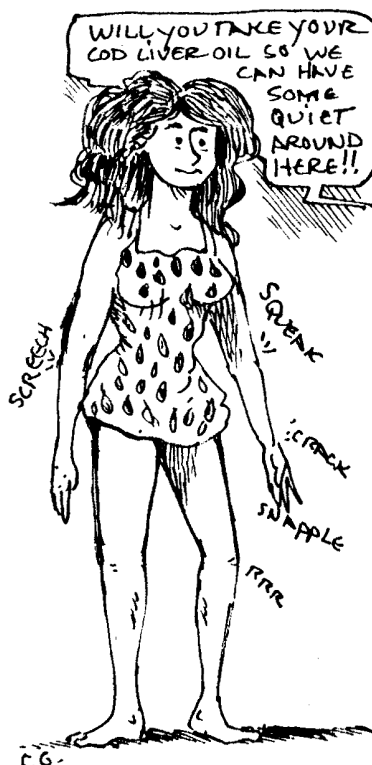
It's easy for trained nutritionists to be tongue-in-cheekish about this kind of information, so I was in for a large surprise when my friend Emily came to visit. I've known her and her family for years. She had been a slender teenager until she went away to college and got suddenly plump on chocolate chip cookies and other unrestricted goodies of dormitory living. After graduation, she made a determined effort to lose weight and succeeded almost too well, becoming reedlike. Over a period of years, Emily's once clear skin became muddy and dry-looking. I had counseled her nutritionally, but she insisted that her diet had good sources of unsaturated fatty acids in the form of vegetable oils, seeds, and nuts. I remained puzzled by the continuing flaky skin on her face and rough, sore fingers, which persisted for a number of years.

I saw her the other day for the first time in a year. She was only a little less slender, her skin was clear and dewy, her fingers no longer parched and rough. Even a group of warts on her hands which had troubled her for years were gone! She owed it all to the cod liver oil regimen suggested by a friend, she said, including not drinking any liquids except milk or soup with her meals. What she had *not* told me, she confessed, during the times in the past when we had discussed her nutrient intake, was that as part of what had become an obsession with her to remain thin, she had regularly been *drinking four or five glasses of water at meals to diminish her appetite.*

As with most folk nutrition, it's difficult to sort out the causes and effects. *Does* drinking water and other beverages with meals diminish the transport of essential fatty acids from oils to the skin and even to the joints? Naturopathic literature usually counsels against drinking with meals

for a different reason: the practice is thought to dilute digestive secretions in the stomach. For most creatures in nature, it seldom happens that eating food and drinking water occur together, and until humans devised vessels to hold water, they, too, had to travel to ponds and streams to drink, quite separate from their eating forays.

In any event, it might be worth experimenting with this concept if skin disorders are an ongoing problem, or even to see if any effect on arthritis can be discerned, since I see no harm in postponing liquid intake until a few hours after meals.



The cod liver oil aspect represents a whole other ball game. Its effectiveness as a natural source of vitamins A and D is well accepted. *Could* it give therapeutic results in as serious a disorder as arthritis? Would these benefits arise from the lubricating effect internally on the joints that Mr. Alexander describes? The physiology seems a little simplistic, but perhaps drinking cod liver oil shaken up with milk *does* increase the supply of essential fatty acids reaching the joints.

My own speculation is that a beneficial effect on arthritis could be related to the fact that cod liver oil is now known to be one of the *best food*

sources for the fatty acids from which certain prostaglandins are synthesized in our tissues. We make around thirty different kinds of these powerful, hormone-like substances. Science's knowledge of their action is still speculative and sometimes contradictory, but prostaglandins are said to affect the function of cells in every organ system and seem to have a finger in many metabolic pies, such as the regulation of ovulatory cycles, digestive secretions, immune responses, blood platelet aggregation. . . even the dilating of small arteries and the normalizing of blood pressure.

Their beneficent effect on the heart and arteries may be one of the reasons I am now seeing regularly in the scientific literature studies that indicate fish oils, and cod liver oil particularly, may have a protective action against cardiovascular disease.

The prostaglandins have also been known to *ameliorate experimental arthritis in animals*, the latest edition of *The Merck Manual* tells us.

In my mind's eye, I keep seeing Emily's creamy new skin. As experimental folk nutrition goes, this one appears to be without harm and may be worth a gamble. ■

A New Marriage

Janet and her new husband were in their late forties when they were married, each for the second time. Hank had been alone a long time, subsisting on sketchy meals and sweet desserts, and my friend Janet was filled with understandable zeal to improve his nutrition. We talked about ways of weaning him gently from his passion for sweets, and about a diet and supplements that would improve the condition of his teeth and gums which he had neglected. "I think Hank has a prostate problem, too," Janet told me, "but he hasn't seen a doctor in years and refuses to go." She said he had to get up many times each night to urinate, as well as having to interrupt his everyday activities very frequently to empty his bladder. It took him a long time each time, the urinary stream coming slowly and in dribbles instead of quickly and forcefully.

"Hank talks about his 'weak kidneys' but my father had an enlarged prostate gland and he tells me his symptoms were just about the same. He eventually had to have surgery

when he was in his seventies, and I'd like to do everything we can, if nutrition can help, to keep Hank from getting to that point."

The prostate gland is located around the neck of the bladder and manufactures the fluid in which sperm cells swim, so is intimately connected with male sexual function. Abnormal enlargement of the gland — commonplace now in men in their forties — causes pressure against the mouth of the bladder, interfering with normal urination and in some cases causing serious obstruction of the bladder outlet. Incomplete emptying of the bladder can lead to cystitis, and sometimes the prostate gland becomes infected and even cancerous. But even in the much more common "benign prostatic hypertrophy" (swelling without infection) there can be lower back pain, discomfort in the pelvic area, and, sometimes, disquieting changes in sexual functioning.

Medical management consists mainly of prostatic massage and hot sitz baths. On the whole, doctors are not optimistic about patients recovering normal gland size and function, since it is estimated that perhaps sixty percent of men in the U.S. over the age of 60 suffer from this disorder, the proportion increasing sharply with age. Generally, modern medicine is skeptical that nutritional factors play a role in the disease, whether as cause or cure. Surgery is often suggested as the only sure "remedy."

A Nutrient Program

Anyway, Hank was a very stubborn guy, and he had made it clear to Janet that she'd have to rope, tie, and carry him on her back to get him to a doctor — so the medical avenue was a closed one. Happily, the health food literature had a wealth of material on this problem** and Janet and I worked out a program that was not difficult to implement, since Hank's stubbornness didn't extend to swallowing supplements or accepting reasonable dietary changes when their rationale was presented to him.

He loved Janet's cooking, and for the first time in years he was regularly eating plenty of steamed vegetables, fresh apples, brown rice, baked potatoes, fish, lean meat, fresh nuts . .



. and his sugar intake was much reduced. To this I suggested adding the following supplements:

- Vitamin C: 1000 to 5000 milligrams (mg) a day, to help heal the spongy, inflamed gingival tissues around his teeth as well as to help in the healing of his prostate tissues.

- Vitamins A and D in the form of cod liver oil capsules (Hank wouldn't take the liquid), 4 or 5 a day to provide the vitamins plus some essential fatty acids.

- Vitamin E: 200-400 I.U. a day, for its protective effect in cell membranes.

- Calcium and magnesium: 3 to 6 dolomite tablets a day, each containing about 130 mg of calcium and 75 mg of magnesium. Hank consumed few dairy products and the poor health of his mouth hinted at a need for more dietary calcium. Magnesium has been used medically, particularly in Europe, for enlarged prostate. A decline in the levels of this essential mineral in male sexual tissues had been noted with aging.

- Folic acid: 2 tablets, 800 micrograms each, per day. Folic acid deficiency is widespread and Hank's diet for a number of years had few daily sources of this vitamin. Supplemental folic acid has been used to heal abnormal uterine cervical cells in women (see *FELIX LETTER* #7, May 1982);

perhaps its healing effects could be utilized by male sexual tissues as well.

- Lecithin: 3 to 6 capsules a day, because I am a longtime believer in its good effects on the cardiovascular system, etc., which I will discuss more fully in future *LETTERS*.

- Brewer's yeast tablets, as a source of the B-complex vitamins and trace minerals, including chromium in its most usable form.

- Mineral tablets containing essential trace elements, including manganese, chromium, selenium, and zinc. More zinc goes into the healthy prostate than into any other human tissue. A reduction of zinc content has been noted in enlarged prostate glands, while a *severe lack of zinc* is seen in cancerous prostate tissue. Hank's new diet had good sources of the mineral, but small supplemental amounts (about 15 mg) daily I thought might speed up the growth of healthy tissue.

Folk Remedies

So far, the supplements were not very different from ones nutritionists use in conjunction with therapeutic diets for a wide range of problems. The next group were chosen because there was intriguing material in the health food literature on their possible usefulness.

- Capsules containing a mixture of glycine, alanine, and glutamic acid. The use of these three amino acids in reducing prostatic swelling was discovered accidentally in the late 1950's by two doctors in the course of treating allergic patients. Additional studies have shown them to be effective, but their use is not widespread in medicine. The capsules are available without prescription in health food stores, and Hank used two after each meal for two weeks, then reduced it to one capsule after each meal.

A Coffee Connection?

I don't know the biochemical reason why these capsules may work. Recently, however, I read something which may provide a clue. There has been some association of prostate problems statistically with countries where heavy coffee consumption takes place. Hank had lived with a coffee cup in his hand from the time he was a young sailor until he gave up the habit shortly before he met Janet. In addition to caffeine, coffee contains a number of natural acidic and phenolic substances that are harmful but can't

**Two that were especially helpful: *The Prostate* by J. I. Rodale, Rodale Press, Inc., Emmaus, PA, 1977; and *The Encyclopedia of Common Diseases* by The Staff of Prevention Magazine, Rodale Press, Inc., Emmaus, PA, 1976.

be excreted by the kidneys until they are detoxified in the liver, where they are combined with the amino acid, glycine, to form compounds that can then be safely eliminated. If there isn't enough glycine to detoxify these irritating substances, they continue to circulate throughout the body. Is it possible that prostatic tissue is particularly vulnerable to their effect? Is that a possible reason why the capsules containing glycine appear to be beneficial? Sometimes there are more questions than answers in nutrition.

The second supplement with folk medicine overtones was a preparation of raw bovine prostate concentrate. Raw glandular substances from animals, dried at very low heat, are used by a number of nutritionally oriented physicians as adjuncts in healing. The concept is a very old one. American Indians of the Northwest used to divide the little adrenal glands just above the kidneys of the moose or deer they had killed into enough pieces for each member of their family. The adrenal glands are the richest source of vitamin C in animal tissues, and Indians had learned they could prevent scurvy this way. Eating the organs of animals has been used traditionally in many cultures to bolster the vigor of the corresponding organs in humans.

The Marvelous Seeds

The highest recommendations in the health food literature were reserved for the last items on Hank's therapeutic program. These were foods, not bottled supplements. Raw pumpkin and sunflower seeds are not only fine sources of magnesium, zinc, and vitamin E, they also provide essential fatty acids, thought by a number of physicians to have a curative effect on prostatic swelling. The folklore on these seeds is bountiful: they have a long association, in many countries, with freedom from prostate troubles and with continued male virility into great old age.

Hank's nutritional program was by no means an instant success, but over a period of months Janet began to be aware that Hank was having to interrupt car trips and other activities

less and less often to relieve his bladder. One morning, a little more than a year after the program had started, she realized that for several nights in a row, he hadn't gotten up at all. Since then, the other symptoms have markedly lessened . . . no miraculous overnight recovery, but good indications that a healing process has taken place. We have no way of knowing in Hank's case if medical intervention might have speeded it up, nor can we single out the individual nutrients most responsible for the major effects. Perhaps they all worked together. In any event, they helped to reverse a disease that doctors are not very hopeful about curing.

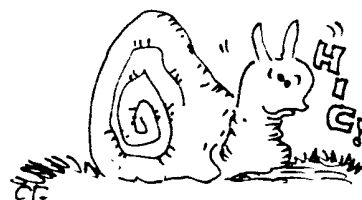
I'm very fond of folk-nutrition tales with happy endings — especially if they're true! □

ALCOHOLICS AGRONOMOUS

We have a little garden which, for three springtimes in a row, we have succeeded in turning into a riot of color and blooms that take the breath away. Our relationship with assorted sowbugs, nematodes, earwigs, and other dwellers is an amiable, live-and-let-live one, but we have been driven to killer frenzy by hordes of snails and slugs *who don't know how to play fair!* Other creatures nibble here and there, perhaps making a few lacy patterns in a solid leaf, or fraying the edge of a blossom. Snails and slugs devour remorselessly, easily flattening in one nighttime raid a row of freshly planted baby plants. To give our flowers and strawberries a chance, we've had to form a nightly brigade of our own, flashlight in one hand and murder-weapon in the other. Recently, however, we found an ally: beer. My daughter suggested it, and it works, especially with slugs which are much harder to find and hunt down at night than snails. We place six-ounce cans (tuna fish size) filled with beer in strategic spots, and in the morning — *voila!* there are many dead (pickled!) slugs in them and even a few small snails. Every few days we empty the cans and pour in fresh beer, and the slugs arrive afresh.

We're developing a problem, though. A bunch of our neighbor's snails are beginning to come over every night . . . I think they've sort of started a little club. They arrive sober and go home drunk. That's not exactly what I had in mind, but at least they're leaving the plants alone. □

SNAIL WARS!



Illustrations are by Clay Geerdes.