

Next time you are floored by the afternoon slump, drained from overwork, or feeling just plain pooped, reach for some vitamin C instead of your usual pick-me-upper.

But why even wait? Avoid those peepless predicaments altogether by tanking up daily with healthy doses of C.

This is the word from some of the world's leading authorities on ascorbic acid. They are saying that among its many contributions to well-being, vitamin C also cuts fatigue.

"The No. 1 anti-fatigue vitamin," declares Fred R. Klenner, M.D. of Reidsville, N.C., the senior medical practitioner of vitamin C therapy. "It's more effective than any drug in the Pharmacopeia."

To show how effective, some years ago Klenner ran an experiment with the Philadelphia Eagles football team.

"One week we gave them placebos and the next week we'd give them ascorbic acid. We found when they took the ascorbic acid their fatigability was less in the final quarter of play.

"Anyone who takes vitamin C will notice that their endurance will increase," says Klenner.

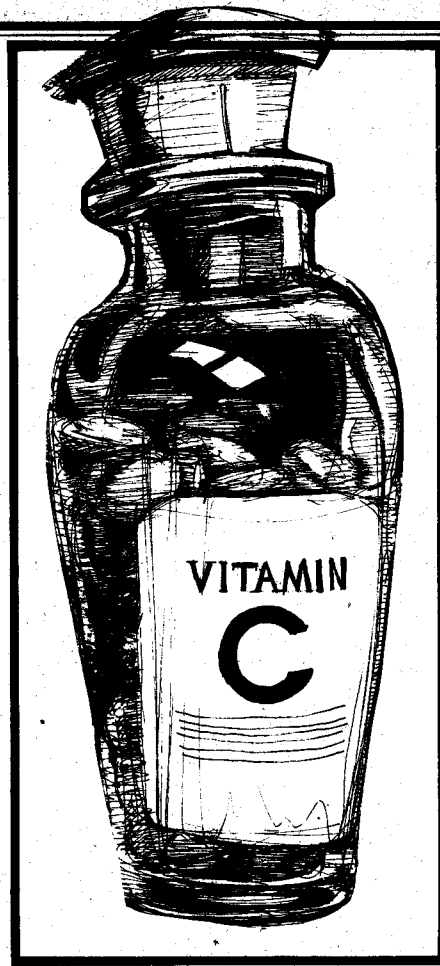
ENERGY

A study conducted by the University of Alabama's Department of Oral Medicine demonstrated this unheralded power of ascorbic acid. Dr. Emanuel Cheraskin, Dr. W. M. Ringsdorf, Jr., and research assistant F. H. Medford examined the vitamin C intake of 411 dentists and their wives.

There were 81 subjects who consumed less than 100 milligrams and 330 who took more than 400 per day. "We found that the group taking larger amounts of C had fewer fatigability complaints than those who took less," says Dr. Cheraskin, who has authored several books on nutrition and disease.

"The mean number of fatigue symptoms among the low users was double that among the relative high users. The difference was statistically significant.

"Subsequently," he added, "those individuals who increased vitamin



Vitamin C and Fatigue

By Martin Zucker

C intake, tended to eliminate some of their fatigue problems."

It might surprise and shock you to know what fatigue is all about.

CHRONIC

W.D. Currier M.D., a former professor at the Harvard and USC Medical Schools who now has a large preventive medicine practice in Pasadena, puts it short and not so sweet:

"Many things can cause chronic fatigue. People who have nervous and emotional stresses are invariably fatigued. If you had to select one symptom as the most important signal for impending illness or catastrophe, it would have to be fatigue."

Cheraskin agrees. "There are

many reasons why people become tired and indeed fatigue is an early complaint that leads in any number of directions and can spell disaster later on. One can become scorbutic, get diabetes, cancer, or any number of things.

"One of the most common complaints in America is tiredness. Everybody is tired. The usual treatment plan is that you need iron and if you don't need iron, you need a face lift or extra-marital sex. Some excitement.

"But people seem to have overlooked vitamin C.

"The British Navy cured scurvy among its sailors two hundred years ago by giving them citrus fruit, even without knowing that it was the ascorbic acid in the fruit that was the remedy.

"The sailors didn't first drop dead. They first got tired. And it has been this much overlooked fact that inspired us to examine the relationship of vitamin C and fatigue.

"Our study suggests that it may not be just an iron deficiency and that it may not be just caused by emotional factors, but that vitamin C, along with some other known and probably unknown factors, plays a role in reducing fatigue.

"We don't say that vitamin C is the whole answer, but likely part of an answer. The point is that vitamin C may help abort the early signs of a whole series of diseases."

CLUE

For Dr. Irwin Stone, the biochemist who began investigating ascorbic acid in 1934 and hasn't stopped yet, the vitamin C-fatigue connection is the central clue to much of man's suffering, past and present.

During his 40 years of research, Stone reached the conclusion that 100 percent of the human population suffers from a potentially fatal liver enzyme defect that prevents us from manufacturing our own ascorbic acid.

"All the mammals are designed to synthesize ascorbate in their own bodies," he says. "It is produced in large amounts in the mammalian liver. A goat the size of an adult can produce 13,000 milligrams of ascorbate a day and will make much

more under stress."

Stone theorizes that a defective gene caused by a mutation about 60 million years ago in a primate ancestor is the reason we can't synthesize ascorbate. The apes were left equally defective.

The result of this evolutionary lapse is what Stone calls the CSS Syndrome—Chronic Subclinical Scurvy. The missing enzyme, he says, "has been responsible, either directly or indirectly, for more deaths and disease, more human suffering and shortened lifespans than any other factor.

"In the past, CSS was the forerunner of classical scurvy and other diseases. Classical scurvy was the terminal symptom. Today, with scurvy in check, CSS still sets the stage for all disease and aging problems.

"It is present from birth and contributes to and accompanies our serious medical problems. It is ever-present and associated with heart disease, cancer, infectious bacterial and viral sickness. A patient coming to a doctor's office with cancer, arthritis or a heart problem brings with him also a second condition: CSS.

"But even though it is our most common and widespread disease, CSS is overlooked by doctors. It is hardly ever recognized. That's because it is insidious, rather asymptomatic, difficult to detect.

"The most recognizable feature of this genetic deficiency and something which is not really noticed too much since it is a rather casual symptom, is tiredness. That's the first sign.

"After having years of seemingly good health, now you don't feel right anymore. You don't feel alive. You're just tired all the time. This is CSS in action."

Stone is emphatic about how to cure the CSS Syndrome.

"You can't do it by your food. It is not a nutritional disturbance. You can, on the other hand, eat the wrong kind of food. This is a stress and anything that increases a person's stress exacerbates CSS.

"We are dealing with a genetic condition and we have to treat it that way. Everybody has it in more or less serious degree unless they are taking big doses of ascorbate to correct it. That's the prevention. By

taking the big doses you can conquer the CSS problem."

What's a big dose? Let's start with what isn't a big dose.

The Food and Nutrition Board of the National Academy of Science, "the nutritional Vatican" as some call it, recommends 45 milligrams of vitamin C as adequate for adults. This is the RDA—Recommended Daily Allowance.

Argues Stone: "This is proportionately 300 to 400 times less than the mammals produce each day to satisfy their needs. Is it any wonder that the CSS Syndrome is our most widespread disease?"

Says Cheraskin: "What we found in our study was that when you look at people taking approximately 10 times the recommended amount of vitamin C, they seem to have half the amount of complaints as those who are taking the recommended amount or even twice the RDA."

What then, we asked the experts, is a good, healthy daily dose of vitamin C to fend off fatigue and other infernal challenges to the body?

Currier: "In my practice I give a general diet and supplement program, but along with that for those who are fatigued I will give two or three or four times the amount of vitamin C.

"I think people who are fatigued should have 10 to 20 grams of vitamin C a day."

Klenner: "I myself take 20 grams a day but if I am going to put in a long work day of say 15 or 16 hours, then I boost my intake to 30, 40 grams.

"Everybody differs in their requirements for vitamin C and so there are variations in the amount that people need. But basically we think people need 10 grams a day.

"If you are taking low doses of vitamin C, maybe only a half gram or a gram a day or even less, try going up to five grams. In a matter of a few days you will notice your endurance and alertness has picked up tremendously. Fatigue is almost gone when you go up into those higher doses.

"We tell people to take 10 grams for 30 days and then drop back to five or eight grams and see what the difference makes. And then try up to maybe 15 grams or so and see how much better they feel."

Stone: "I take 10 to 20 grams of ascorbate every day and in times of

heavy stress, I may reach 30 to 40 grams.

"If humans had the liver enzyme for making ascorbic acid, this is likely the amount they would be programmed to produce.

"Dr. Klenner recommends giving children one gram per day for each year of age up to age 10 and then 10 grams every day thereafter."

Cheraskin: "In our studies we have taken an approach where you have a group of people and progressively throw out of the group those who have problems and fatigue complaints. You are left with a progressively healthier group. In doing that we found that the minimum one should take is 500 milligrams (half gram), which is 10 times the RDA.

"But we should be taking even more than that. There are two reasons: First, because we aren't getting enough vitamin C in our diet, and secondly, because we are doing so much to louse up our vitamin C, such as by smoking.

"The sad part is that you don't even have to be a smoker. You just have to live with a smoker or be in the same room with a smoker and you louse up your vitamin C. The nicotine in the urine of non-smokers can be four-fifths of that of smokers.

"In addition, drugs louse up vitamin C. Aspirin absolutely decimates vitamin C levels. People living next to freeways are having their C zapped by the lead.

"Our requirements for C may be higher than a million years ago because then they didn't have freeways, aspirins and cigarettes. Somewhere between a half gram and 2,500 (mg.) is a minimum for living in our crazy world.

"But if you're having your teeth pulled, or going through sickness or stress; then Klenner's 10 or maybe even 40 grams is indicated."

In going up to higher doses of C, individuals may encounter gas and diarrhea. This can be generally avoided by beginning with smaller doses and then gradually increasing until the optimal level is reached.

And the best way to take the higher amounts, the doctors agree, is to space the doses throughout the day. Taking them several times a day, including with meals, will avoid a yo-yo effect in absorption. □