EAT YOUR

We should praise veggies for the nutritional blessings they heap upon us. So why do they still make so many of us cringe?

Out of all the advice hurled at us in this age of information overload, few words ring truer than the succinct directive that occasionally resounds around the dining-room table: "Eat Your Vegetables!" Call it mom's no-brainer mandate, a three-word mantra for the masses who cringe when confronted with the thought of munching a mouthful of cauliflower. Ah, but the frowning faction fearful of that bitter bite should take note: Mom is right. Vegetables are good for you. But unless you're a vegan, vegetarian, passionate vegetable connoisseur, or fanatical follower of the Food Guide Pyramid, chances are you can count the servings of vegetables you ate today on fewer than three fingers. On any given day, in fact, 27 percent of Americans eschew eating any vegetables, according to a national health and nutrition survey. "People tend to say, 'Oh, no problem. I eat way more than that,'" says Susan Crockett, dean of the College for Human Development and a professor of nutrition. "But when they actually look at it, they often realize they are overestimating."

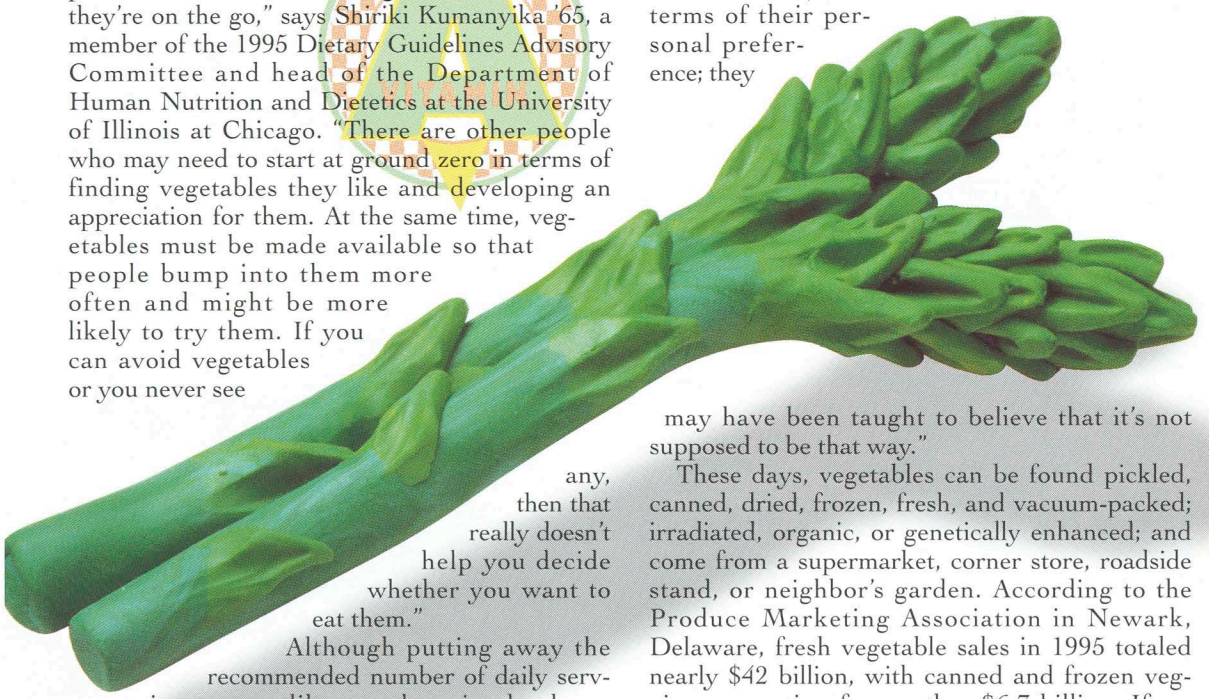
Vegetables can not, and should not, be ignored: They fuel us with many essential nutrients and, as stacks of studies show, contain a host of phytochemicals, such as carotenoids, that can tangle with carcinogens and may protect us from disease. That's why chomping on carrots shouldn't seem like such a bad idea, especially when you consider that 35 percent of the cancer-related deaths in this country may be connected to diet, according to the National Cancer Institute. "When you get down to it," says Kim Dittus, professor of nutrition at Syracuse University, "the bottom-line nutritional message is to eat a minimally processed plant-based diet."

Vegetables

By Jay Cox

The now ubiquitous Food Guide Pyramid became part of a national public health initiative in 1992 because it was apparent that we were feasting on too much fat and neglecting to pile enough fruits, vegetables, and grains on our plates. In 1991, the National Cancer Institute and the Produce for Better Health Foundation, a nonprofit consumer education organization, introduced the 5 A Day for Better Health program to improve public awareness of the benefits of eating fruits and vegetables. The goal: increase consumption from the current national average of 4.4 servings per day (it was 3.9 in 1991) to at least five by the year 2000. According to the 1995 report *Dietary Guidelines for Americans*, issued by the U.S. departments of Agriculture and Health and Human Services, that means two to four servings of fruit and three to five servings of vegetables.

"There are people who like a variety of different vegetables, but either can't afford them or don't take the time to prepare them. They eat in places where there are no vegetables available, or they're on the go," says Shiriki Kumanyika '65, a member of the 1995 Dietary Guidelines Advisory Committee and head of the Department of Human Nutrition and Dietetics at the University of Illinois at Chicago. "There are other people who may need to start at ground zero in terms of finding vegetables they like and developing an appreciation for them. At the same time, vegetables must be made available so that people bump into them more often and might be more likely to try them. If you can avoid vegetables or you never see any, then that really doesn't help you decide whether you want to eat them."



Although putting away the recommended number of daily servings seems like a rather simple chore, often lurking in the shadows is a complex maze of eating habits embedded in an array of social, cultural, environmental, political, economic, and personal influences. "A lot of different factors determine what makes people eat food," Kumanyika says. "I don't think you can oversimplify and just say it's an individual preference. It's influenced by a lifetime of social and cultural exposures."

As an example, Kumanyika cites the traditional one-pot cooking method for vegetables used by African American agricultural workers in the South. Since they were up early and worked away from home all day, one-pot meals—cooked low and slow—served as a practical answer to returning at day's end to a ready supper. "Because of this practice, that is the version of vegetables that many older African Americans are accustomed to because they have been influenced by it either directly or through their parents passing it along," she says. "Now we're trying to get people to eat fresh or partially cooked vegetables. That's raw to them and maybe they don't want it raw. And it's not just raw in terms of their personal preference; they may have been taught to believe that it's not supposed to be that way."

These days, vegetables can be found pickled, canned, dried, frozen, fresh, and vacuum-packed; irradiated, organic, or genetically enhanced; and come from a supermarket, corner store, roadside stand, or neighbor's garden. According to the Produce Marketing Association in Newark, Delaware, fresh vegetable sales in 1995 totaled nearly $42 billion, with canned and frozen veggies accounting for another $6.7 billion. If we want to give vegetables a job description, body-

Sizing up servings

Here's what constitutes one serving of vegetables:

- One cup of raw leafy vegetables
- One-half cup of other vegetables, cooked or chopped raw
- Three-quarters cup of vegetable juice
- Recommended: Three to five servings daily—eat dark-green leafy and deep yellow vegetables, dried beans, peas, and lentils often; also starchy vegetables, such as potatoes and corn; prepare and serve with little or no fats.

Nutritional sources

Following are examples of nutrients commonly found in a variety of vegetables.

Protein: Soybeans; benefits: building and upkeep of tissue, replacing regular losses such as hair, skin, nails, and blood cells, making hormones, antibodies, and enzymes.

Fiber: Lima beans, green peas; benefits: adds bulk to diet, helps prevent constipation and diverticulitis.

Vitamin A: Carrots, spinach, broccoli, sweet potatoes; benefits: helps eyes adjust to dim light, helps keep eyes and lining of nose, mouth, throat, and digestive tract moist and resistant to infection.

guard might be appropriate. Most are low in fat and bless us with a bundle of nutrients, from complex carbohydrates and fiber to an assortment of vitamins, minerals, and other components. Although no one vegetable is held aloft as the supreme provider of heavenly health, consuming a variety can keep the body engine in gear and energized. They are, according to the *Dietary Guidelines* report, "excellent sources of vitamin C, vitamin B-6, carotenoids—including those that form vitamin A, and folate." As the guidelines also note, plant foods contain antioxidant nutrients, such as vitamin C, carotenoids, vitamin E, and certain minerals. Antioxidants grapple with free radicals, unstable oxygen molecules that are released during the energy-burning process and bounce around cells. Unless they're neutralized, the radicals can wreak havoc in cellular communities, damaging membranes, interrupting communications, and other activities that might lead to disease. "Most people think of oxygen as totally necessary, nothing bad about it. But think about fire," says Sarah Short '46, G'70, G'75, an SU professor of nutrition. "Think about rust."

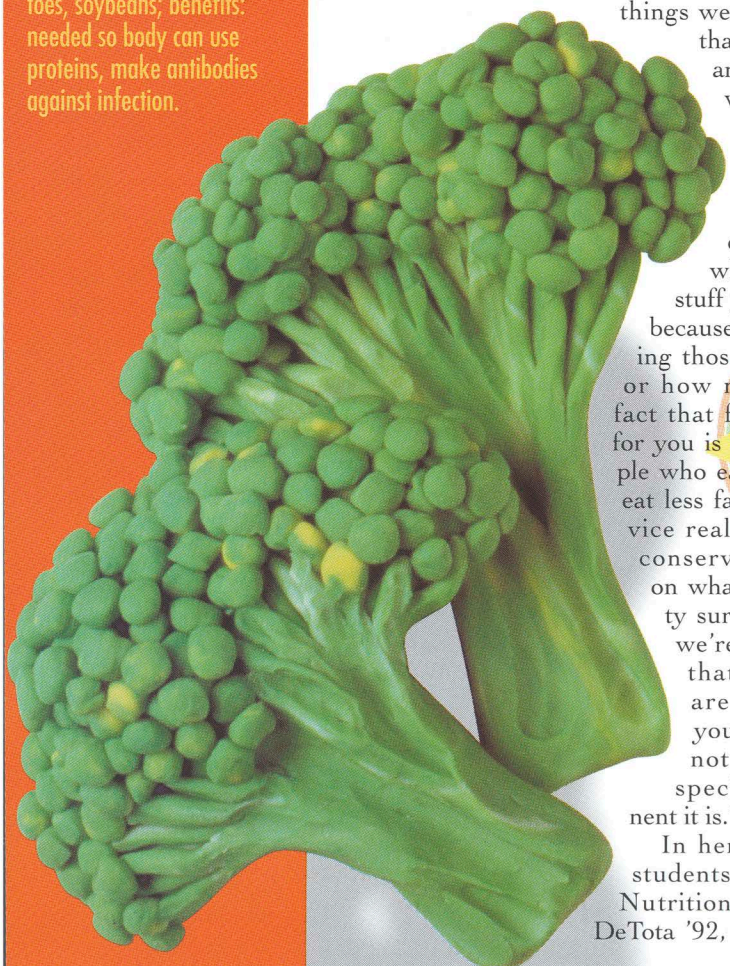
When pondering the nutrients that vegetables bestow, keep in mind that there seems to be vegetable gestalt at work. Phytochemicals are a conundrum to scientists who continue to try not only to identify these compounds, but also how they interact. What a person eats, or doesn't eat, in combination with vegetables may also have an impact. "Most foods carry several things we know about that might help, and there is no way to ever separate them," Kumanyika says. "We don't know whether it's the stuff you don't eat because you are eating those vegetables, or how much of the fact that fiber is good for you is because people who eat more fiber eat less fat. Public advice really has to be conservative based on what we're pretty sure about, and we're pretty sure that vegetables are good for you. We're just not sure which specific component it is."

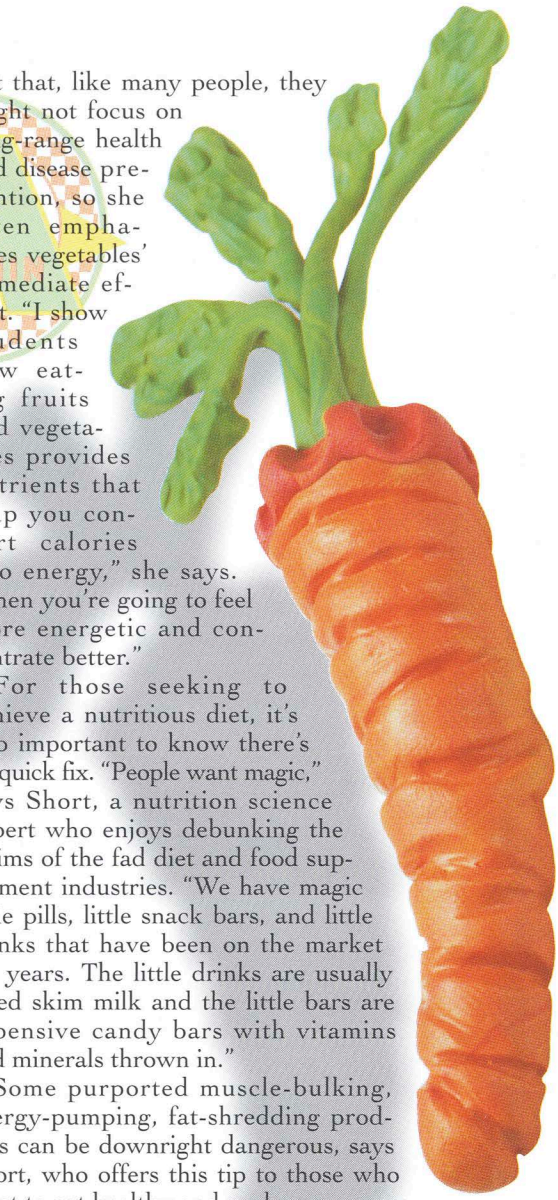
In her work with students, University Nutritionist Cynthia DeTota '92, G'95 points out that, like many people, they might not focus on long-range health and disease prevention, so she often emphasizes vegetables' immediate effect. "I show students how eating fruits and vegetables provides nutrients that help you convert calories into energy," she says. "Then you're going to feel more energetic and concentrate better."

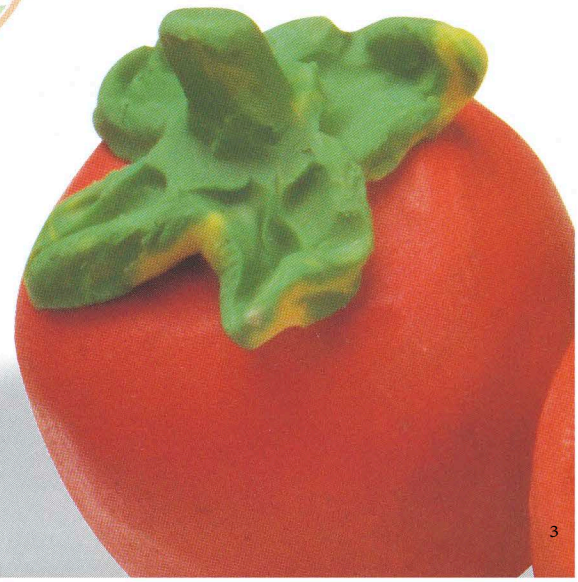
For those seeking to achieve a nutritious diet, it's also important to know there's no quick fix. "People want magic," says Short, a nutrition science expert who enjoys debunking the claims of the fad diet and food supplement industries. "We have magic little pills, little snack bars, and little drinks that have been on the market for years. The little drinks are usually dried skim milk and the little bars are expensive candy bars with vitamins and minerals thrown in."

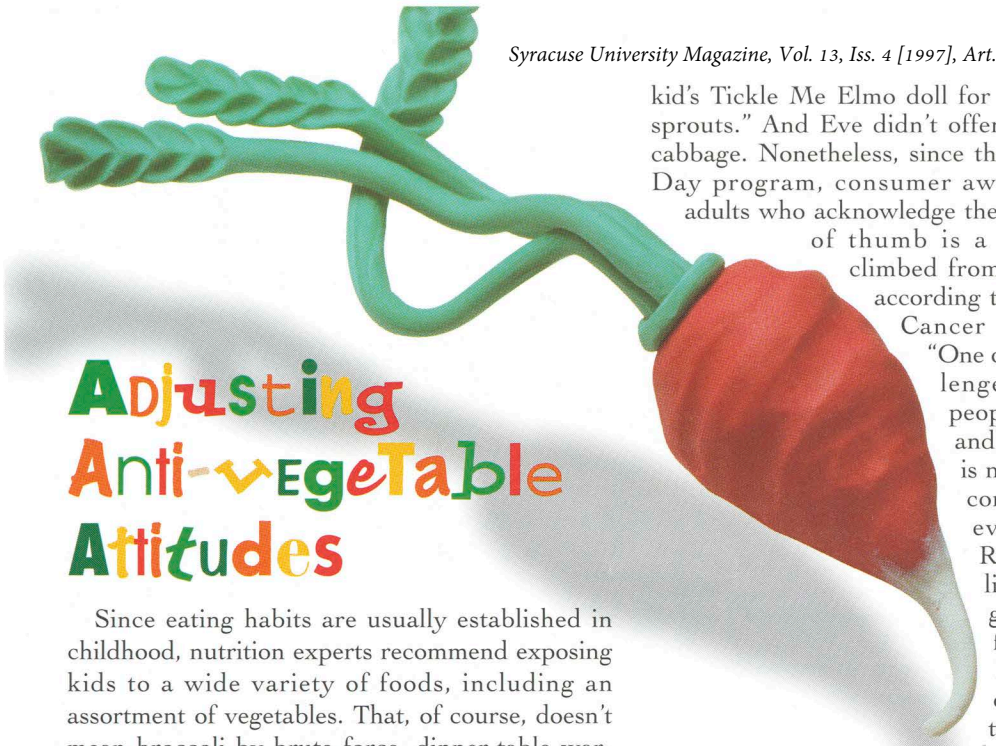
Some purported muscle-bulking, energy-pumping, fat-shredding products can be downright dangerous, says Short, who offers this tip to those who want to eat healthy and peel away excess poundage: "Eat half as much, move around twice as much." Remember, too, that very few vegetables are high in calories "until you come to the part of the salad bar where you put the salad dressing on," Short says. "I tell people who really have to worry about calories to build their salads with the juicy stuff, like beets and low-cal cottage cheese, on top and let it soak down through. Then you don't need as much dressing."

Vitamin E: Vegetable oils (except coconut and olive oil), spinach, broccoli; benefits: protects cell membranes from oxidation destruction.
Vitamin C (ascorbic acid): Raw green peppers, tomatoes, broccoli, cabbage; benefits: needed for healing wounds, to make the protein that holds cells together (collagen); helps with tooth and bone formation, iron absorption.
Vitamin B-1 (thiamin): Dried peas and beans, green peas, lima beans; benefits: aids in the metabolism of carbohydrates to produce energy, helps keep nerves healthy.
Vitamin B-2 (riboflavin): Leafy green vegetables; benefits: helps cells use oxygen to release energy from food, helps keep eyes healthy.
Vitamin B-6 (pyridoxine): Spinach, lima beans, potatoes, soybeans; benefits: needed so body can use proteins, make antibodies against infection.









Adjusting Anti-vegeTable Attitudes

Since eating habits are usually established in childhood, nutrition experts recommend exposing kids to a wide variety of foods, including an assortment of vegetables. That, of course, doesn't mean broccoli by brute force, dinner-table warfare with lima beans, or peas as punishment. Children fuss about certain foods for all kinds of reasons, Crockett says, including taste and rebellion. "If they get a big fat rise out of their parents when they throw asparagus across the room, that's the way to get attention," she says. "If you reward children—either with negative or positive reinforcement for aberrant food behavior—then it will tend to persist. It's generally good advice for parents not to overreact to those situations, just consistently provide the food, don't force it, and it will work out in the end."

OK, but here you are in adulthood and your idea of vegetables is a bowl of potato chips and ketchup. Not exactly what dietitians consider a balanced meal. But, as Short says, quoting a famous Harvard nutritionist: "'It's easier to change your religion than your eating habits.' And I'm inclined to agree with him."

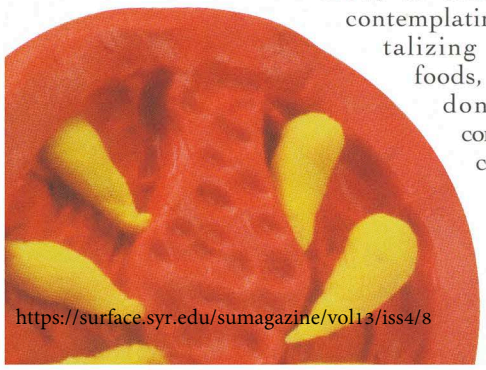
What we're talking about here then is attitude adjustment, jettisoning lame excuses for vegetable avoidance and going green. First off, Short advises, "keep away from vegetables that you absolutely can't stand." Another consideration is that eating vegetables is about consuming food, not having an anxiety attack over counting calories and fat grams, a popular practice in some camps. "If you're focusing all your energy on consuming a certain percentage of calories in a low-fat diet, that's adding to the stress level," Dittus says. "Food is to be enjoyed and we often lose touch with that."

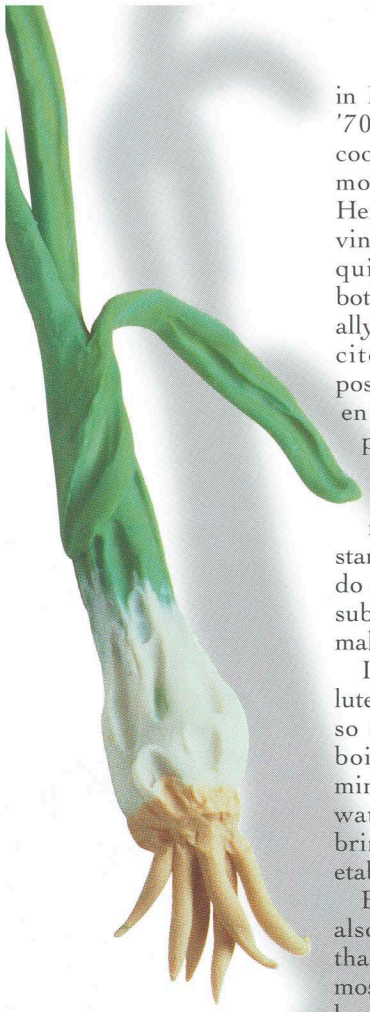
Now, of course, when contemplating the tantalizing taste of foods, vegetables don't exactly conjure up decrees like "Wow, I'd trade my kid's Tickle Me Elmo doll for a pot of Brussels sprouts." And Eve didn't offer Adam a head of cabbage. Nonetheless, since the start of the 5 A Day program, consumer awareness—among adults who acknowledge the five servings rule of thumb is a good idea—has climbed from 8 to 38 percent, according to a 1996 National Cancer Institute survey. "One of our biggest challenges is to convince people that preparing and eating vegetables is not tough, not time consuming, and can even be fun," says Robb Enright, public relations manager of the Produce for Better Health Foundation. "A lot of people are set in the frame of mind that vegetables take too long to prepare and are too much work to eat, but you can say that about any other type of food too."

SU nutritionist Dittus believes proper preparation is an important—yet often overlooked—aspect of improving consumption habits. "Vegetables," she says, "don't have to be yucky."

Nor do you have to be a culinary wizard to prepare them. Actually, if you can tear open a bag of high-fat, salt-laced snack food from the vending machine, you can probably master cooking vegetables. After a thorough washing, they can easily be steamed on the stovetop or zapped in the microwave oven. A little dicing or slicing and they can be added to casseroles, slipped into soups, offered as hors d'oeuvres, and, in the case of bite-sized bagged carrots, pulled from the pocket. "People really think eating a minimally processed plant-based diet takes too much time," Dittus says. "I don't think it takes any more time than opening up that box of unidentifiable food."

As the owner-operator of Tina Wasserman's Cooking & More, the only private cooking school





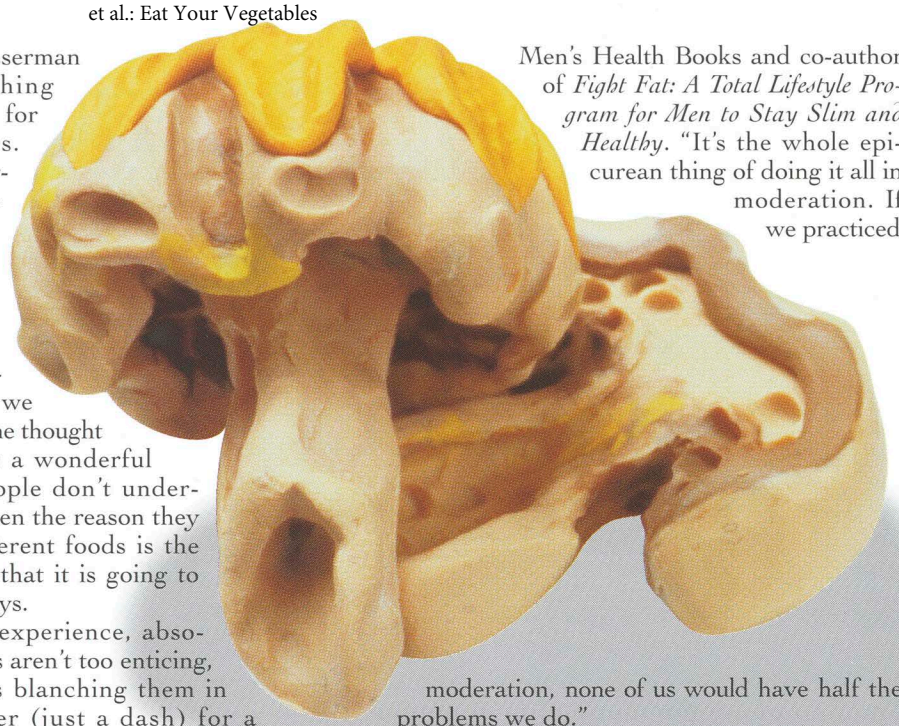
in Dallas, Tina Wasserman '70 has been teaching cooking techniques for more than 27 years. Her approach to serving vegetables requires them to be both tasty and visually appealing. She cites fear of the post-cooking kitchen clutter catastrophe as one reason we might waffle at the thought of whipping up a wonderful meal. "What people don't understand is that very often the reason they do not prepare different foods is the subconscious belief that it is going to make a mess," she says.

In Wasserman's experience, absolutely raw vegetables aren't too enticing, so she recommends blanching them in boiling salted water (just a dash) for a minute or two, and then plunging them in ice water. "Adding salt to the water is a must for bringing out the natural sweetness of the vegetable," she says. "It will enhance the flavor."

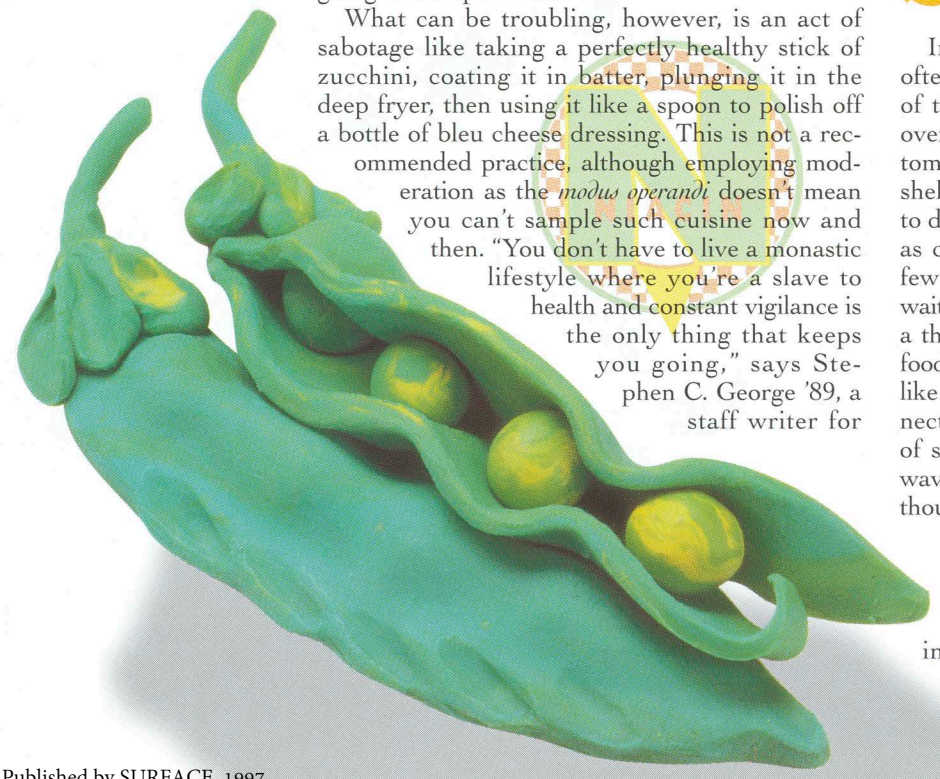
Blanching—like microwaving and steaming—also brings out the vegetable's color. Not only that, but don't forget the visual aesthetics. "The most important thing to do with vegetables is to have a variety of colors on the plate and make it appetizing that way," Wasserman says. "If you cook a green vegetable properly, it's bright and cheery as opposed to gothic gray-green."

Nor will you be hanged in effigy if you dab a bit of butter on your baked potato or broccoli. "If you like the flavor of butter," Dittus says, "a little on vegetables really makes a difference and isn't going to be a problem."

What can be troubling, however, is an act of sabotage like taking a perfectly healthy stick of zucchini, coating it in batter, plunging it in the deep fryer, then using it like a spoon to polish off a bottle of bleu cheese dressing. This is not a recommended practice, although employing moderation as the *modus operandi* doesn't mean you can't sample such cuisine now and then. "You don't have to live a monastic lifestyle where you're a slave to health and constant vigilance is the only thing that keeps you going," says Stephen C. George '89, a staff writer for Men's Health Books and co-author of *Fight Fat: A Total Lifestyle Program for Men to Stay Slim and Healthy*. "It's the whole epicurean thing of doing it all in moderation. If we practiced moderation, none of us would have half the problems we do."



In *Fight Fat*, George advocates portion control and thinking like a farmer. "Devote most of the real estate on your dinner plate to plants and reserve just a little for livestock," he writes. The problem, he believes, is the American diet is geared toward beef, relegating vegetables to side-dish status. "A lot of people would never think of having a vegetable as an entree. It's like eating dessert first," he says. "But if a lot more people did it, they'd be a lot healthier."



Sprouting Seeds

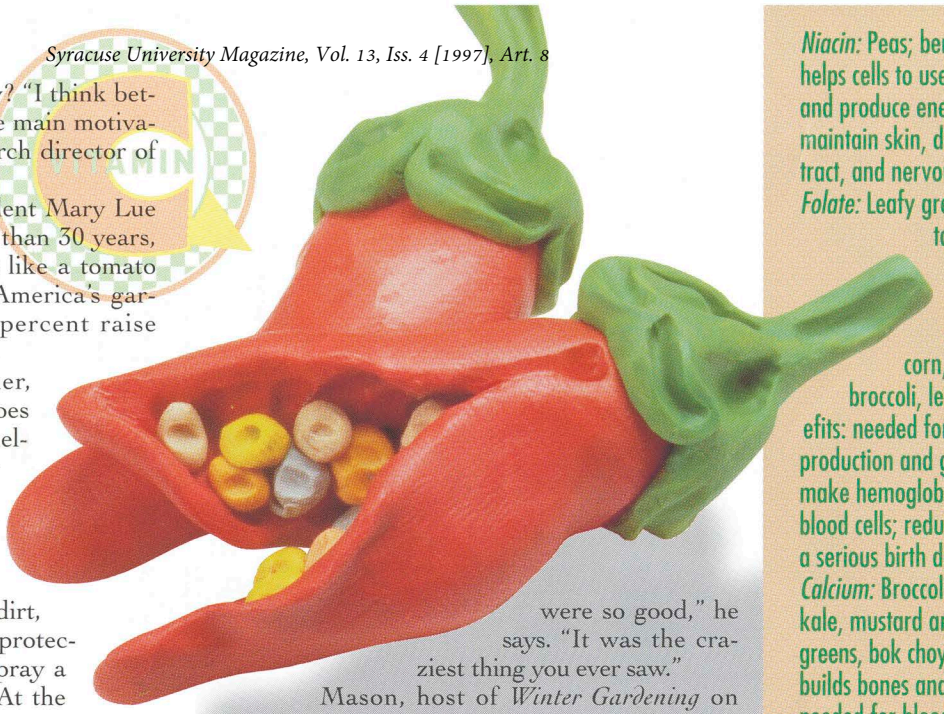
In today's culture—where instant satisfaction often comes out of a can or box with little thought of the food's origins—a vegetable's roots can be overlooked. One way to comprehend that a jar of tomato sauce started its trek to the supermarket shelf as seeds that sprouted into tomato plants is to dig into gardening. This hobby can be as simple as churning up a small patch of soil, dropping a few seeds in the dirt, watering and weeding, and waiting for Mother Nature to deliver the goods. "It's a therapeutic process to be involved with growing food," Dittus says. "By gardening and doing things like going to a farmers' market, you maintain a connection to and appreciation for the food, instead of sticking something processed in the microwave and putting it into your mouth with no thought of where it actually comes from."

According to the National Gardening Association, 28 percent of American households spent about $1.36 billion on vegetable gardening in 1995, an average of $51 per

home. The reason for the popularity? "I think better-tasting, better-quality food is the main motivation," says Bruce Butterfield, research director of the nonprofit organization.

Clifton Springs, New York, resident Mary Lue Mueller '58 has gardened for more than 30 years, and she'll tell you "there's nothing like a tomato fresh from the garden." Most of America's gardeners would agree: Nearly 90 percent raise them, Butterfield says.

Cynthia Teter '80, '81 of Homer, New York, concurs: "Fresh tomatoes—they are the best." Teter and Mueller will rattle off a list of their favorite vegetables in a flash, but invariably the list grows as the conversation continues. They'll veer off into herbs, discuss vegetable idiosyncracies, digging in the dirt, crop rotation, pulling weeds, pest protection, even offer a few tips. "I also pray a lot that it rains," Mueller laughs. "At the right time."



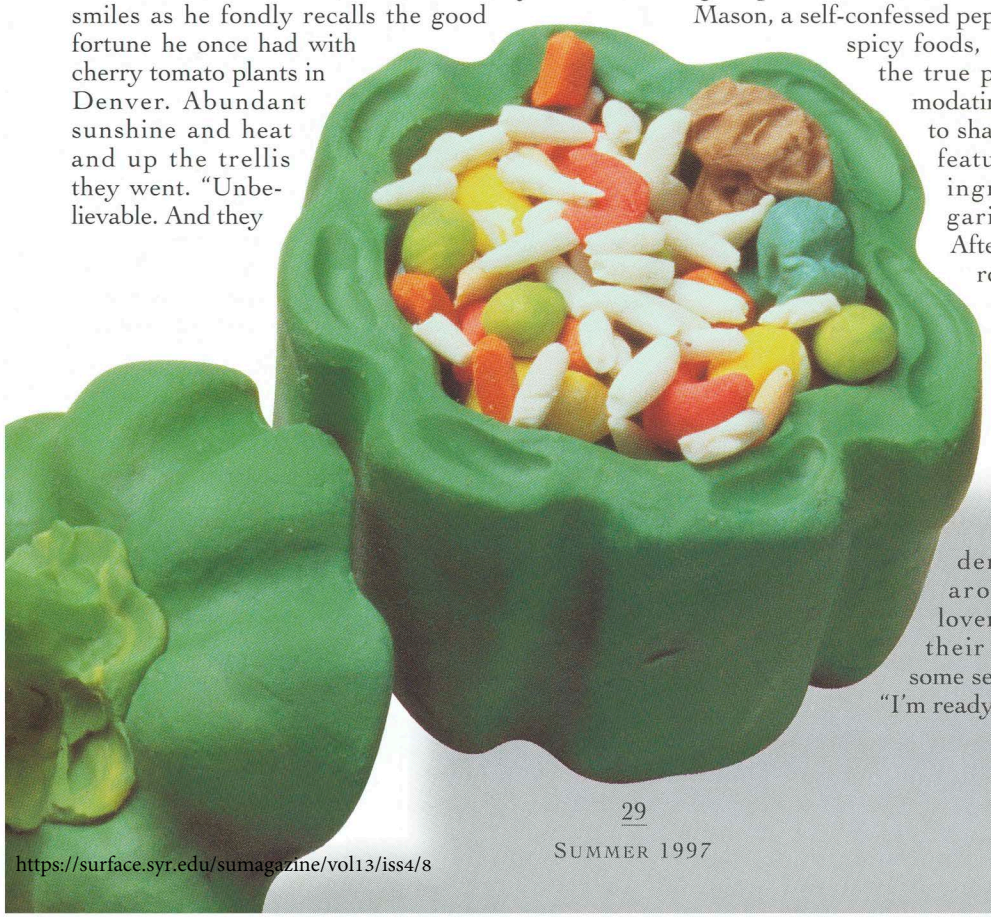
Teter, a fan of fresh produce since childhood, loves raising garden vegetables and herbs and cooking with them—interests she attributes to her parents and grandmother, who shared the tradition with her. Today, she enjoys strolling out back with her young daughter and picking a handful of sugar snap peas to munch on or gather for dinner. "It still amazes me how you can throw those little seeds in and something actually comes up. By spring I'm desperate for gardening, so it's always really a charge," she says. "I like to experiment and try something different every year. This year it's eggplant."

In his office at the S.I. Newhouse School of Public Communications, Professor Larry Mason smiles as he fondly recalls the good fortune he once had with cherry tomato plants in Denver. Abundant sunshine and heat and up the trellis they went. "Unbelievable. And they were so good," he says. "It was the craziest thing you ever saw."

Mason, host of *Winter Gardening* on Home & Garden Television, says people often think he lives in the garden, but admits to being a "low-maintenance kind of gardener, indoors and out." The key to good vegetable gardening, he says, is knowing your soil chemistry, which requires having it tested and then fertilizing accordingly, and water. Since he often travels, Mason uses a slow-drip irrigation system under his mulch that allows tomato and pepper plants to endure any drought conditions. "Many people need to get their hands in the soil and dig around and feel that pride of being a provider of vegetables on the table," he says. "I know there's great satisfaction and, as the world becomes more complex, I think we need to escape into something simple."

Mason, a self-confessed pepper man who loves spicy foods, also acknowledges the true pleasure of accommodating friends' requests to share homemade salsa featuring such garden ingredients as Hungarian wax peppers. After harvest, they are roasted, peeled, deseeded, and frozen in sealed plastic bags for future use. "Hopefully," Mason says, "I freeze enough to last through the winter."

And once the gardening season rolls around—vegetable lovers hold destiny in their hands. "I've got some seeds," Mueller says. "I'm ready to go."



Niacin: Peas; benefits: helps cells to use oxygen and produce energy, helps maintain skin, digestive tract, and nervous system.
Folate: Leafy green vegetables, okra, peas, sweet corn, beets, broccoli, lentils; benefits: needed for cell reproduction and growth, to make hemoglobin in red blood cells; reduces risk of a serious birth defect.
Calcium: Broccoli, spinach, kale, mustard and turnip greens, bok choy; benefits: builds bones and teeth, needed for blood clotting, helps nerves, muscles, and heart function properly.
Phosphorus: Legumes; benefits: forms part of bones and teeth, needed for energy metabolism, essential in every body cell.
Iron: Leafy green vegetables, legumes, green peas, dried beans; benefits: needed to produce hemoglobin, needed by cells to use oxygen.
Potassium: Avocados, beet greens, lima beans, dried beans, peas, lentils, potatoes, sweet potatoes, broccoli, spinach, Swiss chard; benefits: needed for water balance within the body, acid-base balance, normal nerve function, and muscle activity, including the heart muscle.
Magnesium: Legumes, dark-green leafy vegetables; benefits: needed for bones, and to maintain nerves and muscles.
Carotenoids: Dark-green leafy vegetables such as spinach and kale, broccoli, carrots, red pepper, sweet potatoes, tomatoes; benefits: may help reduce the risk of cancer.

Compiled from various sources.