

# Food Sense

BY RANDALL C. ROLFE

In spite of the general preoccupation with weight-watching, we don't eat as much as we used to. Today, a diet of 2600 calories is recommended for a man of 154 pounds who engages in light activity, such as standing in a lab or behind a counter most of the day. But according to anthropologists, when we were hunter-gatherers of our food, before agriculture and industrial development, we consumed at least 3190 calories per day, or 23 percent more. For every pound, the difference was even greater because those early people were a good deal smaller than we are, as are hunting peoples today all over the world.

The difference is chiefly a result of our relative inactivity today, not of any genetic difference. A sedentary person needs about 16 calories per pound a day, while an active person, who engages in dancing, skiing, construction or farm labor regularly, for example, can use 26 calories per pound per day, or 63 percent more.

In a hunting society, three calories were used for every four produced from food. In an agricultural society, this was reduced to one for every four. Today, we use only three calories of human energy for every 100 calories of food produced. Most other essential activities—getting from here to there, making shelter and clothing, raising children—require less activity also than in former days.

This reduced activity requires less energy from the body. With reduced energy needs, less food is needed, since energy production is the prime purpose of food. The three major constituents of food, aside from water—carbohydrate, fat, and protein—are used to produce energy. Because of this close relationship between energy and food needs, we usually measure food quantities by a unit of potential energy production—the calorie (the amount of heat needed to raise one kilogram of water one degree centigrade.) But in accounting for the energy values of the three major energy-producing substances in food, caloric value fails to take into account non-energy producing substances: cellulose and other fibers, water, vitamins, minerals, enzymes, and others unknown. It also fails to distinguish between the three energy-producing substances, even though their proportion to each other can make a lot of difference to healthy energy production, and even though they serve various other specific purposes in the synthesis and repair of body tissue, cells, antibodies, enzymes, hormones, blood, and nucleic materials.

To avoid excessive calories while facilitating the smoothest metabolism, the energy-producing nutrients are recommended in these proportions: 10 to 12 percent of calories should be accounted for by protein, 55 to 65 percent by carbohydrates, and 20 to 30 percent by fats. Since a gram of protein or carbohydrates, can produce four calories and a gram of fat can produce nine calories, the National Research Council recommends 56 grams protein, 87 grams fat, and 390 grams carbohydrate for that 154-pound man.

But some populations live quite healthily on very different proportions. Most notably, the Eskimos eat very little carbohydrate and much fat but have been in the past very healthy and strong. Anthropologists believe that the Eskimos have no basic biological quality different from other peoples, but that they have made minor adaptations to their special living conditions. Such scientists emphasize the nutritional adaptability of man as one of his strengths as a species.

But if we were to increase our fat consumption to 50 percent of our diet, there would be severe health consequences. High incidences of all degenerative diseases have been associated with diet patterns of the developed Western countries, distinguished from other patterns by a high fat content (42 percent of calories in the U.S.), a high sugar content (24 percent according to the U.S. Dept. of Agriculture), and a high proportion of refined foods (over 50 percent in the U.S.)

Here the role of non-energy producing nutrients comes into play. Our need for these nutrients did not necessarily go down when our energy needs went down, because many of these are used primarily in metabolic processes other than energy production. The ratio of these nutrients to calories should ideally go up, as each food consumed must account for more of these nutrients with the smaller total of dietary calories.

But at the same time that our foods should be especially rich in these nutrients, two other factors are exerting contrary influences. First, refinement and processing of foods removes most of these nutrients. Speaking to the press in connection with Senate Hearings on Nutrition, Dr. D.M. Hegsted, Harvard Professor of Nutrition, stated that "total sugar use has remained relatively constant for a number of years. We would emphasize, however, that our total food consumption has fallen even though we still eat to much relative to our needs. We might be better able to tolerate this diet if we were much more active physically, but we are a sedentary people. It should be emphasized that this diet which affluent people generally consume is everywhere associated with a similar disease pattern—high rates of ischemic heart disease, certain forms of cancer, diabetes, and obesity."

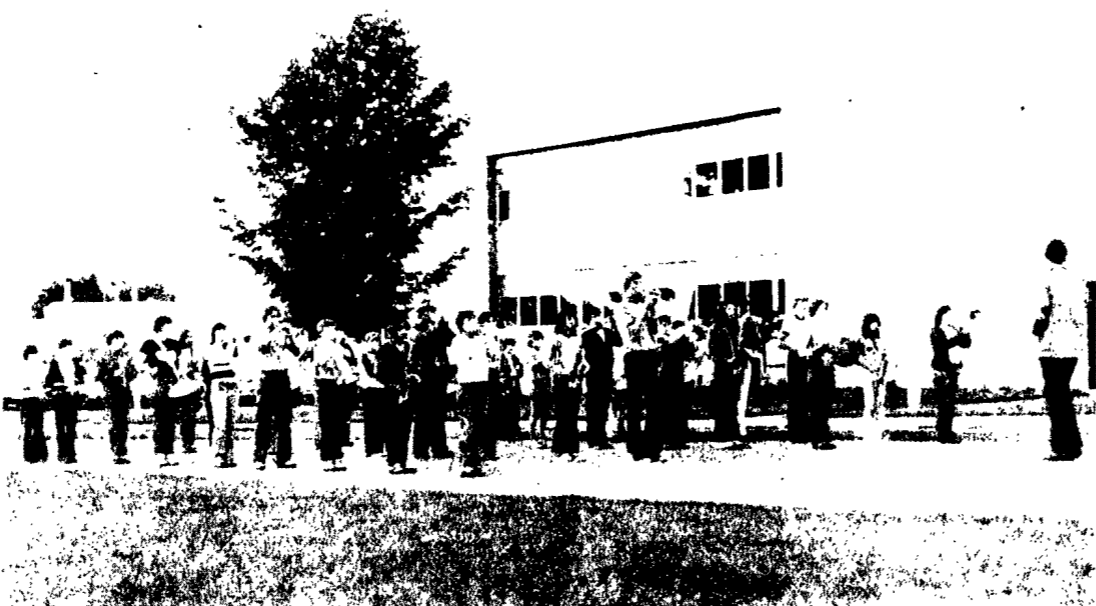
Second the same industrial development which promotes our inactivity and refinement of our foods exposes us to innumerable chemical pollutants in our food, air, water, homes, and clothes. These foreign substances actually increase our needs for those non-energy producing nutrients which are used primarily to counteract foreign substances or altered metabolism in the body. The Vitamins C, E, and A have been shown in numerous experiments to reduce the effects of pollutants. Calcium, selenium, and other minerals are similarly involved. It is likely that other needs are also increased. Even the mental stresses of today, which may or may not be worse than in prehistory, do not have the releases in physical activity which they once had, and result in higher nutritional needs, especially for the B-vitamins. Other stresses of civilization—alcohol, smoking, noise—have similar effects.

Because of our reduced total food needs, the difficulty of getting whole foods of high quality, and the pollutants and stresses of modern life, it is understandable that a healthy person today may need to supplement his diet with certain nutrients in order to stay healthy. But first we should try to get as much physical activity as possible, to eat as wholesome foods as possible, and to avoid pollutants and artificial stresses. Supplements are an unfortunate interference necessary in the case of a normal person only because of prior interference with natural processes. No one—scientist, vitamin company, food processor, government, or naturalist—knows better than the body how best to nurture itself and to keep the innumerable biological balances balanced.

## People

### SUNDAY VISIT

Mr. and Mrs. Loren VanSchaick, Lakeland, Florida, spent Sunday, August 14 at the home of Mr. and Mrs. Ray Sullivan, Sanfordville.



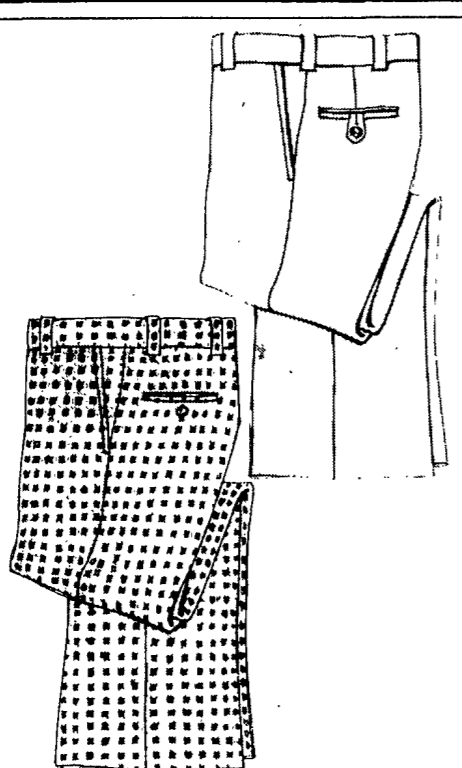
THE ST. LAWRENCE Central School band (shown here practicing for the State Fair) placed twelfth at the fair among schools representing all sections of New York State. The twelfth place finish marked a seven place improvement over the band's showing last year - it's first in competition. (Jud Butler Photo)

## Adult programs at Seaway Tech

Seaway Area Tech will be starting their adult occupational programs the week of September 19. Registration for the courses will be held on Tuesday, September 13, from 3 - 9 p.m., and on Thursday, September 15, from 3-9 p.m. Classes are held one night per week for twelve weeks from 6:30 - 9:30 p.m. The classes are usually held on Tuesdays and Thursdays.

Courses being offered this year are: Large Engine Mechanics; Small Engine Repair (2 and 4 cycle); Surveying; Basic Bookkeeping; Advanced Bookkeeping; Basic Typing; Advanced Typing; Computer Programming; Key Punch Operation; Office Machines; Advanced Office Machines; Basic Shorthand; Advanced Shorthand; Auto Mechanics I, II, III; Auto Body Repair I, II, Carpentry I, II; Cake Decorating I; Beginning Sewing; Advanced Sewing; Refrigeration I; Residential Wiring I, II; Welding I, II, and Plumbing. The Sewing Classes will be registered at Seaway Tech but the classes will be held at the Potsdam Central School.

For further information, please contact the Center at 353-6624.



20% off. Handsome savings on men's handsome slacks.

**Sale 11.20**

Reg. \$14. Men's flare leg dress slacks of textured polyester. Stretch Ban-Rol® waist and sticky shirt grippers. Solid fashion colors. Waist 30 to 42. Also available in straight leg, continental and contemporary styles.

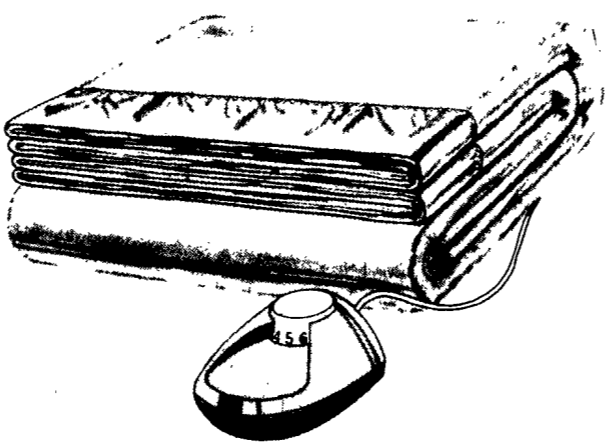
**Sale 8.00**

Reg. 9.99. Fancy polyester doubleknit slacks for men. Flare legs, belt loops. Blue, green or brown. Waist 32 to 40

Western jeans. Great colors.

**Sale 8.80**

Reg. \$11. Men's western jean, traditionally styled. Cotton/polyester brushed sateen in lots of colors. Waist sizes 29 to 38.



# 20% off our electric blanket.

Turn down the house heat and warm up to the savings.

**Sale 17.60** Twin

Reg. \$22. Fluffy, soft-napped acrylic/polyester with durable nylon binding has snap-fit corners for stay-put fit. UL listed. Full, single control; reg. \$27. Sale 21.60

20% off sleeveless knit top

**Sale 3.60**

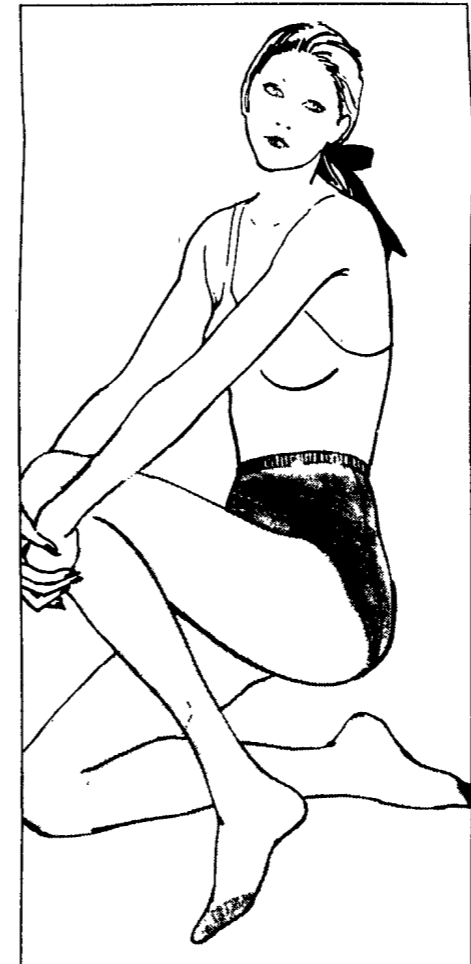
Reg. 4.50. Misses' sleeveless mock turtle knit top is 100 percent polyester and comes in basic fashion colors. Sizes S, M, L, XL.



20% off Ultriana® cowh necks. With the looks you love.

**Sale 4.80**

Reg. \$6. Solid Ultriana® knit polyester in white parchment, more S,M,L,XL



Sale! Flexxtra® pantihose with just the support you want.

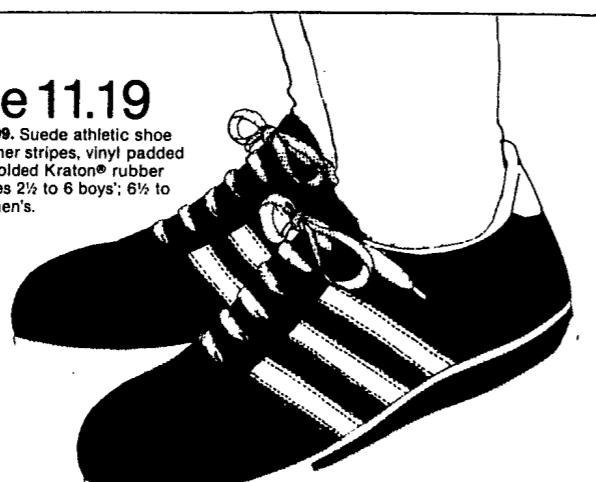
**Sale 3 for 9.00**

Reg. \$4 each. Total Support with contour control top. Flexxtra® nylon legs. S,Av,L. Queen size Total Support; reg. \$5. Sale 3 for \$12

## 20% off men's and boys' athletic shoes.

**Sale 11.19**

Reg. 13.99. Suede athletic shoe with leather stripes, vinyl padded collar, molded Kraton® rubber sole. Sizes 2½ to 6 boys'; 6½ to 11,12D men's.



**Sale 9.59**

Reg. 11.99. The JCPenney Version for men and boys. Nylon with triple leather stripe, padded collar, and cushion insole arch support. Sizes 2½ to 6D boys'; 6½ to 11,12D men's. Sale prices effective through Saturday.



# JCPenney