

Adventists and the New Vegetarians

Dramatic benefits from a vegetarian diet are substantiated by group comparisons, cross-sectional studies, and clinical trials.

by Patricia K. Johnston

IN THE 1970s, THE FIRST MORTALITY STUDIES ON California Seventh-day Adventists reported lower mortality rates compared to other Californians. Since approximately half the study population were vegetarians, scientists evaluated the risk of dying among those who ate meat as compared to those who did not. Even after controlling for cigarette smoking, the researchers found lower death rates among the vegetarians for coronary heart disease and major types of cancer. Vegetarian males lived some six years longer than non-vegetarians.

Since that time, considerable attention has been directed to the health benefits of vegetarian dietary practices. The hundreds of thousands of research dollars spent by govern-

ments around the world imply that vegetarian nutrition deserves careful scientific investigation. A survey reported at the Third International Congress on Vegetarian Nutrition of the scientific literature from 1960 to 1995, found a steady increase in published research relating to vegetarian diets and vegetarian populations. The survey also found that the nature and design of the studies has changed. Whereas earlier reports were more likely to be case histories, more recent reports describe group comparisons, cross-sectional studies, and clinical trials.

The Scientific Benefits Are Dramatic

Studies from around the world have demonstrated the benefits of vegetarian diets. Researchers continue trying to learn what it is about such diets that provides protection against disease. One recently reported study investigated vegetarians in England. Investi-

Patricia K. Johnston, a graduate of Walla Walla College, after receiving master's degrees from Loma Linda University and the University of Washington, received her Dr.P.H. in nutrition from the University of California at Los Angeles. A former chair of the department of nutrition of Loma Linda University, she is currently associate dean and professor of nutrition in the School of Public Health. For more information about the proceedings of the Third International Congress on Vegetarian Nutrition, which Johnston chaired, contact her at Loma Linda University, Loma Linda, CA 92354.

gators reasoned that if the decreased mortality rate was due to the vegetarian diet, lower rates would also be found among non-Adventist vegetarians in England. Some 6,000 vegetarians were recruited for the study, and they, in turn, recruited about 5,000 friends or family members who were meat eaters, but similar in other aspects. After adjusting for smoking, body mass index, and social class, the researchers found that vegetarians had lower death rates, partially for coronary heart disease and for all cancers. These findings are particularly impressive because the entire study group of both vegetarians and non-vegetarians had a mortality rate about half the general population of England and Wales.

Further analysis of the data showed that intake of meat and cheese was positively associated with higher cholesterol levels, while greater intake of fiber was associated with lower cholesterol levels. The researchers concluded that increasing fiber and limiting meat and cheese intake had beneficial effects on cholesterol levels. They also concluded that excluding meat from the diet could result in a 15 to 25 percent reduction in risk of coronary heart disease. When they divided subjects into three equal tiers by intake of animal fat, they found that subjects in the upper tier had a greater than three-fold increase in risk of dying from coronary heart disease compared to subjects in the lowest tier.

Because all studies are necessarily limited in size, one way of learning more is to combine and analyze the data from several studies. This was recently done with five prospective studies of different vegetarian populations. Results from the combined studies showed that vegetarians consistently had a lower body mass index and a higher percentage of high exercisers. Although there was no difference between vegetarians and non-vegetarians in risk of mortality from cerebrovascular disease or various kinds of cancer, there was a reduction in risk of dying from coronary heart disease.

This reduction in risk was greater at younger ages and was found only in those who had been vegetarians for at least six years. Further, the researchers found that, compared to regular meat eaters, mortality was reduced by 17 percent in occasional meat eaters, by 36 percent in those who ate fish but not meat, by 34 percent in lacto-ovo vegetarians, and by 30 percent in vegans. (Vegans consume no animal products of any kind, including dairy products or eggs; some use no animal products in any form, including leather.) The researchers suggested that a major factor in the lower mortality from ischemic heart disease may be the consistently lower serum cholesterol levels found among the vegetarians.

Although the data are less clear regarding the relationship of meat eating to different types of cancer, evidence from a variety of different populations certainly suggests that there are health benefits from following a vegetarian diet. It was the desire to know more about those benefits that brought more than 630 individuals from nearly 40 countries to the Third International Congress on Vegetarian Nutrition held at Loma Linda University in March of 1997.

The majority of attendees were not Seventh-day Adventists and were unaware of the history behind Adventist lifestyle practices. (Walter Willett, the keynote speaker, did underscore the importance of studies by and about Adventists for his own research.) Surveys among the general public have found increasing numbers of persons saying that they are vegetarians. Others simply limit their intake of red meat. Restaurants, college cafeterias, and even fast food providers are encountering more and more people who want meat-free choices. Manufacturers of vegetarian food products are increasing, as is their availability. Vegetarian diets are no longer considered hippie food or fads.

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edented interest in vegetarian diets. Especially among youth, interest in the environment and regard for animal rights motivates an increasing commitment to the vegetarian diet.

Indeed, the congress, organized by an Adventist institution, attracted outstanding speakers. An example is Walter Willett, M.D., Dr.P.H., professor and chair of the Department of Nutrition at Harvard University's school of public health. He is the principal investigator of the ongoing and widely reported Nurses' Health Study. In his address (see "Vegetarianism—From Negative to Positive," pp. 48-51 in this issue), Willett noted that, although the absence of red meat

likely contributes to lower rates of coronary heart disease and colon cancer, eliminating red meat from the diet does not appear to be the primary reason for the good health found among vegetarians.

In the past, it may have been appropriate to talk of *the* cause of a certain condition or disease. But in today's world, with its steady increase of understanding of physiologic processes, molecular biology, biochemistry, and immunology, it seems inordinately simplistic to think that the better health observed among vegetarians is merely due to the absence of meat.

Willett's comment, "Evidence accumulated in the past decade has emphasized the importance of adequate consumption of beneficial dietary factors, rather than just the avoidance of harmful factors," reminds me of Paul's counsel, "Overcome evil with good."¹ It has long seemed appropriate to me to focus on the vast number of healthful foods available to most of us, rather than on what is "wrong" with a few kinds.

An abundant intake of fruits and vegetables, consuming grains in a minimally refined state, and—perhaps surprising to some—"regular consumption of vegetable oils, including those in nuts," are included in the "beneficial dietary factors" mentioned by Willett. The attention of the scientific community to the importance of plant foods is evidenced in many recent publications and scientific meetings. The entire first day of the congress focused on this theme, with reports from individuals currently investigating the topics of interest.

Greater consumption of legumes may be one of the most distinguishing characteristics

of Western vegetarians and one that contributes significantly to their better health, according to Mark Messina, Ph.D., nutrition consultant and sought after speaker. Legumes are an excellent source of dietary fiber and protein. With the exception of soybeans and peanuts, they are also low in fat. Because of their low glycemic index, legumes appear

to be particularly important foods for diabetics. They also have beneficial effects on cholesterol levels.

James W. Anderson, M.D., chief of the endocrine-metabolic section and professor of medicine at the University of Kentucky, reported to the Loma Linda congress the results of his meta-analysis of 29 controlled clinical studies of the cholesterol lowering effect of soy protein. These studies confirm in humans what has been recognized in animal models for more than 80 years: soy protein exerts a cholesterol lowering effect and helps protect against the development of atherosclerosis.

The accumulating evidence is strong that

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consumption of plant foods is highly beneficial. Recent studies, summarized by Joanne Slavin, Ph.D., professor in the department of food science and nutrition at the University of Minnesota, found that whole grains protect against cardiovascular disease, cancer, and diabetes. According to Johanna Lampe, Ph.D., R.D., of the Fred Hutchinson Cancer Research Center in Seattle, epidemiologic data support the association between a high intake of fruits and vegetables and lower risk of chronic disease.

Even nuts, often maligned because of their fat content, have been shown to be beneficial. Both the Adventist Health Study and the Iowa Women's Health Study found decreased risk of ischemic heart disease with increased consumption of nuts. A randomized, controlled clinical trial, conducted by Joan Sabaté, M.D., Dr.P.H., from the School of Public Health at Loma Linda University, found that eating walnuts resulted in a greater decrease in total and LDL-cholesterol levels than did the typical Step-One Cholesterol Lowering Diet.

The Scientific Investigation Continues

But the question remains, What is it in plant foods that causes the protective effects? In response, we can add to the dietary fiber that we've all heard about, a whole list of compounds that reads like a page out of an organic chemistry textbook. In addition to being rich sources of vitamins and minerals, plant foods are equally rich in non-nutritive, biologically active compounds, generally classified as phytochemicals. For example, phytic acid, once considered an antinutrient, may function as an antioxidant and thus be protective. Besides serving as antioxidants, compounds in plant foods, according to Dr. Lampe, bind and dilute carcinogens, modulate the glycemic response, induce detoxification enzymes,

stimulate the immune system, alter platelet aggregation, modulate cholesterol synthesis and hormone metabolism, and have antibacterial and antiviral effects.

Unfortunately, as soon as a compound is identified as having health benefits, some company produces it in a pill. This approach fails to recognize the complexity of plant foods or the multiple potential interactions among the compounds they contain. Obviously, no one compound produces all the benefits attributed to plant foods. Complementary and overlapping actions may be inhibitory, additive, or synergistic, both within a given food and with components in other foods.

One topic that is sure to lead to vigorous discussion among nutritionists is how much fat should be consumed. Some suggest that a very low fat diet is necessary to prevent disease, while others say that the total amount of dietary fat can be higher so long as the appropriate type of fat is consumed. Both views, along with evidence supporting them, were presented at the congress, leaving individuals to arrive at their own conclusions. Willett stated, "The notion that fat *per se* is a major cause of ill health has not been supported by recent data." Evidence was also shared supporting the need for properties of certain long-chain polyunsaturated fatty acids.

The multiplicity of views on a given nutrition topic often leaves the non-scientist confused and wondering how to relate to various issues. Perhaps it would help to recognize that there are different kinds of investigations; that is, different study designs and methodologies are used to seek answers to the same question. The results from one may not coincide in totality with another. Second, there are many different investigators, who may not agree on the interpretation of the results of a given study. This is particularly disturbing to the general public, who often want absolute answers to intricate and perplexing questions.

Robert Heaney, M.D., of Creighton University, said it well several years ago: "Nutritional questions have about them an air of simplicity that often belies their inherent complexity."

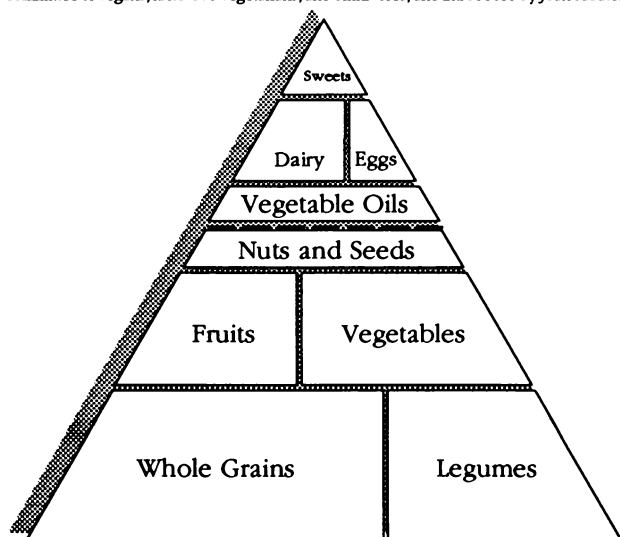
In addition to differences in study design and interpretation, it is important to recognize that we are each individually different in our biologic make-up. As such, we may have somewhat different nutritional needs and may respond physiologically in different ways to a given food. We certainly recognize different likes and dislikes in dietary choices. There may not be one absolute right answer for everyone on every nutrition topic.

The scientific bottom line is familiar to Adventists: Eat fruits and vegetables, legumes and nuts, and minimally refined grain products.

The Theological Debates Are Heated

I frequently introduce a discussion of vegetarian nutrition using two cartoons. The first depicts a man with a parsnip nose, cauliflower ears, carrot feet, and hands that look like roots. He is responding to a child who apparently has asked him a question. He answers, "Yes, I'm a vegetarian. Why?" The

A representation of the new Vegetarian Food Guide pyramid created by an international committee of vegans, lacto-ovo vegetarians, and omnivores, and introduced by Joan Sabaté.



second cartoon shows Dennis the Menace answering his mother's question after his friend Joey has left the table looking very sick. Dennis says, "All I did was tell him he's eating ground-up cow." The purpose of using these cartoons is to illustrate that how we view another's dietary practices is a matter of our own perspective.

It is, however, unlikely that an individual whose beliefs are based on a certain theological approach will be convinced by mere scientific argument. As some wise sage said, "A man convinced against his will is of the same opinion still." Personal viewpoints, whether cogently defined or not, undoubtedly have a great deal to do with how one approaches the issues of life.

Few topics among Adventists can engender more animated discussion and downright disagreement than questions related to diet. Yet often the views expressed are those of theology rather than science. This is not to say that a religious basis for lifestyle practices is wrong, but to recognize that scientific and religious bases may differ. Having said that, it must also be recognized that there are often as many interpretations of a given research report as there are of a given biblical text. Thus, differing scientific and theological views affect lifestyle practices.

The Civil War was raging when Ellen White saw that "it was a sacred duty to attend to our health, and arouse others to their duty."² Since then, Adventists have at times taken pleasure in what they knew about a certain health topic and at other times chafed under the knowledge that some practices, which they were not particularly inclined to follow, were more healthful than others.

During the years prior to the "memorable vision," attention had been called to "the injurious effects of tobacco, tea, and coffee," to the importance of cleanliness, and to the benefits of a simple diet.³ But it was not until June 6, 1863, that the subject of diet and health

was given special emphasis. Many more messages followed, some of a more general nature and others speaking to very specific circumstances and individuals. The compilation of many such messages, *Counsels on Diet and Foods*, first published in 1938, has been used to encourage, and to chide, with varying degrees of success and frustration. For many Adventist young people, this small volume was enforced reading in an academy or college health class. As a result, some rebelled at its messages while some simply ignored them; others followed them with rigid adherence; and some sought what they considered a middle-of-the-road approach.

Careful and broad reading from her counsels would suggest that Ellen White applied principles in different ways to differing conditions and that she recognized biologic individuality. Just as scientists listen carefully and ask questions when colleagues report results that differ from their own, so Adventists must learn to listen to views differing from their own, asking questions with respect for the other's view. Only such dialogue develops true understanding.

Ironically, Adventists have given little attention to the moral demands of the environment and the rights of animals. Clearly, humans were to care for the earth. God said, "Let us make man in our image," and "let them have dominion . . . over all the earth."⁴ After humans were created and even before their diet was described, God said, "fill the earth and subdue it."⁵ And when God placed man in the Garden of Eden, he told him to "till it and keep it."⁶ Consider also: "Thy wrath came . . . for

destroying the destroyers of the earth,"⁷ and "They shall not hurt nor destroy in all my holy mountain."⁸ What do these texts mean in today's world? Aside from giving attention to matters relating to diet and health, I believe it is time for Adventists also to consider their responsibility to the earth and its creatures.

Mervyn Hardinge, M.D., Dr.P.H., Ph.D., dean emeritus, and U. D. Register, Ph.D., professor emeritus in the school of public health at Loma Linda University, were honored at the congress for their pioneering studies of vegetarian nutrition. Both encountered resistance to their early research at what was then the College of Medical Evangelists. As time went on, attitudes changed, and Dr. Hardinge noted, "Excessive negativism marked by ridicule gradually gave rise to tolerance, then acceptance, and more recently acclaim."

When I was growing up, my grandmother had a large wood stove. In the heat of the summer it was stoked hot for canning the green beans, corn, peas, tomatoes, peaches, and other produce from the garden. There was a portion at the back of the stove where the temperature was not as hot. A pot of beans often simmered there. And there was a shelf just above, where the milk was left to clabber for cottage cheese. Both the beans and the clabbering milk were away from the highest heat of the flame. We must be willing to put a particular question on the "back burner" if you please and let it simmer while we wait for more information. This is true in the area of nutrition. It is equally true in the area of theology. Now, more than ever.

NOTES AND REFERENCES

1. Romans 12:21, RSV.
2. Ellen G. White, *Selected Messages* (Washington, D.C.: Review and Herald Publ. Assn., 1980), book 3, p. 280.
3. D. E. Robinson, *The Story of Our Health Message* (Nashville, Tenn.: Southern Publ. Assn., 1965).
4. Genesis 1:26, RSV.
5. Genesis 1:28, RSV.
6. Genesis 2:15, RSV.
7. Revelation 11:18, RSV.
8. Isaiah 11:9, RSV.