MANAGERIAL VERSUS PUBLIC PREVENTIVE MEDICINE*

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"ISCHAEMIC heart disease, or coronary heart disease, has reached enoromous proportions, striking more and more at younger subjects. It will result in coming years in the greatest epidemic mankind has faced unless we are able to reverse the trend by concentrated research into its cause and prevention."[1]

This warning, issued before the Executive Board of the World Health Organization (WHO) in Geneva, 1969, places the problem squarely before those dedicated to the control of disease. Epidemics are not usually controlled by treatment but by prevention. Coronary care units, artificial hearts, and coronary shunt operations have their uses but they are no answer to this terrible outbreak. Only prevention, the control of risk factors, can hope to give us eventual control. In the control of risk factors the managerial side of public health is clearly the most useful strategy to employ.

There are essentially five strategies through which public health programs are developed in our society. These are particularly pertinent to our form of democracy and especially relevant to the way in which this nation finds it possible to deliver medical and health care.

1) *The provision of services.* The provision most immediately effective, the one through which we must ultimately succeed relates to the provision of the actual health services utilized by the population. This includes such items as training manpower, construction of the needed facilities, organization of programs, and provision of the necessary drugs and biological agents. All the other strategies are aimed eventually at making these services effective and used.

2) *The motivation of people to use these services.* All health-care

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services are associated with a certain demonstrated degree of willingness on the part of people to use them. We can increase the use of these services among the population by increasing the motivation. Various methods such as health education, public relations, and the findings of marketing research are useful in this connection.

3) *The repackaging of health-care services.* The strategy opposite to motivation involves our rearranging the health-care services so that they fit in more realistically within the *existing* motivation of the intended individual. This process can be called repackaging or, if you will, the managerial side of public health. When we add fluoride to the public water supply we repackage dental health-care for the population in a way that accomplishes far more than efforts to motivate people to reduce the intake of carbohydrates, brush their teeth three times a day, or ingest fluoride tablets daily. When we pasteurize milk we make it unnecessary for each individual to boil milk in his own kitchen. When we take chest x rays of all adult patients admitted to a general hospital the patient is no longer required to visit a clinic to obtain a routine chest film. When we apply this principle to change in the content of foods without necessitating a deliberate effort on the part of the consumer, we may make it possible for him to avoid the development of coronary heart disease.

4) *Research.* When our services do not fit adequately within the existing motivation of the consumer, when we are unable to motivate him by our health-education programs, and when we lack the required knowledge to repackage the program in an acceptable form, then our strategy must deal heavily with research. Basic research permits us to find the new knowledge which might make possible new ways of repackaging health care. Certainly, the discovery of poliomyelitis vaccine did more for the control of that disease than the millions spent for the reconstruction of hospitals, rehabilitation clinics, and the training of skilled physiatrists. The discovery of a safe cigarette would obviously make possible a highly effective control package for the control of deaths caused by cigarettes such as fatalities caused by lung cancer or heart disease, and would be far more effective than our major national educational programs against smoking.

5) *Public opinion and lack of acceptability.* Geoffrey Vickers said that progress in public health involves a "redefining of the unacceptable." When the public is finally convinced that the possibility of a

disease or condition is unacceptable then priority is given to an attack upon it, pressure is put on the cause-effect disease systems, more research is undertaken to develop ultimate repackaging for the control of disease, and more health education is made available to entice persons to use available knowledge for health.

As we approach many major health problems today, we might do well to consider what we can accomplish under each of these five strategies. While these programs are not mutually exclusive, neither are they all generally or immediately effective, particularly as they relate to our present major causes of death and disability. We must be prepared to utilize them all. If my remarks here deal primarily with the managerial, the repackaging of public health, please do not forget that these activities cannot stand alone, that they are an important part of a mass attack on heart disease. The future success of these managerial efforts depends heavily on our ability to undertake effective research to find real answers as well as the continuing need to make the present epidemic of coronary heart disease publicly unacceptable.

The strategy of repackaging is particularly useful when it does no harm, even when all the scientific proof of its validity is not yet available. This is especially pertinent with factors such as diet. When we are criticized because the last word on the cause-and-effect relation between diet and coronary heart disease has not yet been spoken, we can reply that the repackaging arrangement we recommend does develop a healthful nutritious diet. The high P/S ratios (polyunsaturated fats/saturated fats) are part of a traditionally "natural" diet with lower levels of cholesterol and triglyceride. Hence there is no reason for our not being willing to use such diets now. This is somewhat different from introducing a drug such as Atromid S to maintain a lower level of serum cholesterol. Such a drug, which is foreign to our environment, must first be tested carefully on various groups to assess its total effects upon man over a period of time. Hence, when one is concerned with coronary heart disease and recommendations are made to adjust certain risk factors among large groups of the population, one should be concerned not only with the product's effectiveness but also with proof of its harmlessness. It would indeed be intolerable to subject persons to hazardous environmental conditions in ways that neither they nor we understand with the intent of helping them toward health.

Two decades of international epidemiological investigations of diet

and coronary heart disease and the data emanating from the cardiovascular studies at Framingham and Albany have identified the elevated serum cholesterol level as a prime factor of risk in the development of coronary heart disease.[2] It becomes difficult to escape the conviction that the high levels of serum cholesterol observed in males 40 to 59 years old warrant prevention by avoidance of the rapid increase in serum cholesterol. High levels of serum cholesterol, associated as they are with increased risk of developing coronary heart disease, can hardly be considered "normal" or "desirable." It would appear logical that a diet believed responsible for a disease as serious and prevalent as coronary heart disease cannot be condoned if it also has little inherent justification. A proposal to change the national diet pattern in some strange way requires profound study and involves great responsibility. However, the so-called prudent diet and its variants which lower the risk factors in coronary heart disease are highly physiological diets that utilize commonly available palatable foods.

Most Americans eat so "well" that the suspicion has been growing ever stronger that many of us are gorging and lazing our way into heart attacks. Because our diet is rich, tasty, and a comfort to us, growing obesity is one price we pay. Rather than groups of starving children only, we now also have groups of fat children.

The processing of food is a big business, and various groups have organized to forward their own particular interests in it. We cannot jump to the conclusion that they are suspect because they have organized. Certainly persons in a common endeavor who are faced with problems naturally team up to find a joint solution. What the consumer winds up with very often, however, are individual foods or classes of foods that are pushed on him without regard to his dietary needs.

The controversy on the role of diet and nutrition in the prevention and treatment of cardiovascular disease—coronary heart disease and stroke—is not new. We do know, however, through epidemiologic studies, that coronary heart disease is more likely to occur when certain risk factors exist—alone or in combination. Since we have not yet proved a common denominator among the risk factors—that any of them are directly causal—the need for more extensive research is paramount. There is continuing emphasis on the role of drugs as a means of lowering serum-lipid levels and possibly of lowering the incidence of coronary heart disease.

While we are very much preoccupied with the prevention of heart disease and stroke we must also consider the factors that could affect prolonged survival among those who do not die of these afflictions the first month. We know that high blood pressure and obesity carry an adverse prognosis.[3] What is needed is knowledge of the factors which affect long-term survival, and of these, I fear, we know shockingly little. There is certainly preliminary evidence to indicate that altering the risk factors , i.e., stopping smoking, a decrease in the fat content of one's diet, and certain types of physical activity, can be beneficial. The question is whether these are cumulative in effect. If it is true that the cessation of smoking reduces the incidence of coronary heart attacks twofold or threefold, would there be added benefits from physical activity and reduction of one's dietary intake?

There will never be complete agreement on the subject, but it would seem that most scientists would agree that diet certainly plays a major role in a disease that kills 40% of our adult male population. We must produce foods that taste good and are optimally nutritious. These goals can be accomplished by the American food industry. This latter group has often been confronted with the question of whether improved nutritional content will be an inducement to buy. Probably not, unless a new approach to informing the public is found. On the other hand, other things being equal, good nutritional content need not detract from the sale of foods!

We must continue to emphasize research, for we are now on the threshold of real knowledge of the basic mechanisms of nutrition, and the pressure to uncover the unknown must be maintained. Findings in research do not of themselves solve health problems; they first must be applied. Uncovering information has been socially acceptable; putting it to work is often, to use a current phrase, something else. Some scientists who suggest a reduction in the saturated fat content of the diet have been accused of being faddists. We had a similar situation when vitamins were discovered. In the beginning, we certainly did not have full information, but we acted on what knowledge we had, and as further knowledge came to light, we changed our advice accordingly. We should not necessarily wait for full information before we make recommendations. In science full information never comes. We have to use "good judgment" and be flexible enough to change as needed. Dr. E. V. McCollum used to tell us, at Johns Hopkins, how in the early

1930's he and his scientific colleagues used to meet in solemn convocation to pass "biologic laws" by majority vote: for example, as to the required daily intake of various vitamins. I hold that such practices are part of our developing health-care program and must be continued.

The need for action exists because, in addition to many lives lost as a result of inconclusive proof, the public reacts with apathy to advice on new dietary habits based on inconclusive evidence. In the search for proof, such studies as Dr. Frederick Stare's "Middlesex study"[4] in a private school for boys in Boston have come to the fore. The 250 boys involved are kept on a special diet comprised of as many of the same foods they have been eating as possible, but the foods are made from fats high in polyunsaturates or, wherever possible, are low in the fat content. In the town nearby, one of the restaurants where the boys take their girl friends also cooperates in the special diet by using its special kind of hamburgers and ice cream. It is Dr. Stare's belief that the seeds of heart attacks may be sown before the age of 21. This study will take the boys through four years in the school, when their blood-cholesterol levels will be compared during the time they are in school on the special diet and when they come back from vacations on which they have maintained the usual diets away from school.

In December 1969 a *White House Conference on Food, Nutrition, and Health* was held in Washington, D.C.[5] In his opening remarks, President Richard Nixon stated:

> . . . in the past few years we have awakened to the distressing fact that despite our material abundance and agricultural wealth, many Americans suffer from malnutrition. All of us, poor and nonpoor alike, must be reminded that a *proper* diet is a basic determinant in good health. Our private food industry has made great advances in food processing and packaging, and has served the great majority of us very well. But these advances have placed great burdens on those who are less well off and less sophisticated in the ways of the modern marketplace. We must, therefore, work to make the private food market serve the citizens as well, by making nutritious foods widely available in popular forms. And for those caught in the most abject poverty, special efforts must be made to see that the benefits of proper foods are not lost amidst health and sanitary conditions. . . . We don't know just how many Americans are actually hungry and

> how many suffer from malnutrition, who eat enough and who don't eat the right things. But we do know there are too many Americans in both categories.

This, indeed, was a true public health managerial statement. At the meetings of this conference further emphasis was placed on what we unfortunately already know: that a great many people are not eating well enough to sustain health. We see, then, that the problem of hunger and malnutrition is, really, two separate problems. One is to ensure that everyone is able to obtain an adequate diet. The second is to ensure that people actually are *properly fed*, where they have the ability to obtain an adequate diet. On the one hand, we are dealing with problems of distribution of income; on the other, with problems of education, habit, taste, behavior, personal preferences and, perhaps above all, the managerial decisions of the food industry and our legislatures.

There has been a good deal written—pro and con—on the effects of diet in the prevention and treatment of the commonest types of cardiovascular disease. Drs. Robert McGandy and Frederick J. Stare agree[6] that "the most important aspect of the relationship between diet and cardiovascular disease is that one can manipulate the diet with some ease. Many of the 'preventive principles' of nutrition can actually be built into manufactured foods. Most of our foods today, and more in the future, will be manufactured foods." So the onus is now ultimately on the consumer if he wishes to stick to a diet with less saturated fat, less dietary cholesterol, and more polyunsaturated fats. We are unreliable. Our intentions are good, but the weight stays on, and the food we have grown to like—and can afford—contain many of the risks that lead toward heart disease and stroke.

It is one thing to advise people to make large changes in their dietary habits, but it is quite another to persuade them to do something which is unappealing to them. The motivation must be there. However, the food industry could make this easy for us by repackaging. I do not believe that if we said that the saturated fatty diet is undesirable this would automatically put an end to the egg and meat industries. The surgeon general's report certainly has not ruined the tobacco industry. But I do think we have to mount some counter-pressures. From the very early years we teach our children to eat two eggs every day. Why two? Why every day? Their grandfathers did not eat two eggs every day. We teach our children to consume vast quantities of ice cream—a lesson

which remains throughout adulthood as proved by the long lines around the local ice-cream stands. There is no pressure against the constant enriching of foods. Some even suggest we must not exert pressure toward discouraging this fatty, rich diet because we must wait 10 more years for more massive data. I am not advocating making ice cream illegal, but I do think that physicians who are prescribing for patients with coronary heart disease such things as dicumerol, bed rest, and oxygen, with rather poor scientific evidence of their effectiveness, could say, "Look, maybe there is something to this diet story. You better start cutting down. Let's not raise our kids so that they are unable to live without huge fatty diets."

We are practicing preventive medicine when we treat the person who has harmful habits such as smoking and lack of exercise and is obese. We can help this man prevent disaster by changing his habits in a fashion he can accept, thus lowering his risk factor to heart disease. We must attempt to interrupt the natural history of disease in favor of the patient. Preventive medicine cannot succeed without the combined efforts of the food industry and the government, and of individual physicians. The tobacco industry in the United States lowered the tar and nicotine content of cigarettes even though they never admitted that criticism of smoking was valid. The food industry could also reduce the content of saturated fat. Abel Wolman once remarked that industry learns how to adapt such pressures even while fighting them vigorously.

We call it "managerial" preventive medicine when the product is changed at its source. It has been well demonstrated that the smoking risk will not be radically reduced until a so-called safe cigarette is developed. One of the problems of malnutrition in our society is that the mass media have never really succeeded in bringing to the public's attention the exact nature of the problems of nutrition. And we must remember that the consumption of food away from home constitutes a large part of the adult male's life, so that we must also involve the mass feeding industry.

The food industry can adapt quite readily and develop a safe diet. Rather than tell us what foods we should avoid, it would be better to make a "safe" lemon chiffon pie, ice cream made with corn oil (which is indistinguishable in taste from the other), meats which are lower in saturated fats, and frankfurters whose stearic acid is replaced with vegtable oil, etc.

The word "imitation" has always connoted inferiority. Many products, therefore, have not been made or sold because the legally required labeling might impose serious risks of commercial failure. "Imitation" could, however, refer to foods which are clearly superior from a nutritional standpoint. Milk and its related problems are a good example.

Milk without any fat content does not quite taste, or "feel," like whole milk; children often reject it. Instant nonfat dry milk is a good budget substitute for high-priced whole fluid grade-A milk, but many reject the taste. There is a theory that because milk is an essential food, more especially for children, and because there is not yet a satisfactory substitute, milk consumption will not change very much whether the price goes up or down. But there is another substitute for whole milk, more expensive than nonfat dry milk, but 5¢ or 6¢ less than the high-priced original. This substitute looks like milk and often tastes and "feels" like milk, and it provides milk's nonfat nutrients in the form of skim or nonfat dry milk, plus a vegetable oil in place of butterfat. Depending on contradictory state laws, the milk is varously labeled and is sometimes called imitation or filled milk. This is not to be confused with milklike nondairy beverages which are sometimes also called imitation milk. "Filled milk" is not new and has been manufactured in quantity since at least 1916. The armed forces have used much of it overseas because of its long-keeping qualities. Yet it is seldom available to the public. The political history, similar to that concerning margarine before it, is a stormy one. Dairymen and their business allies soon recognized the product as a potentially formidable competitor. In 1923 Congress was persuaded to ban filled milk from interstate sales, and it was declared a cheat and menace to the public health. It was not until the early 1950's that lawmakers were able to clear away the massive discriminatory federal and state-tax laws and curbs on artificial colorings that, incidentally, kept margarine from competing favorably with butter.

This is a classic case of private interests versus protection of the consumer. The consumer does not require the banishment of new products but rather their free access to the market under conditions that assure him that they are safe to use, clearly labeled, and priced at the levels of the free market. For instance, in the last two years Americans drank 6½ fewer quarts of whole milk per person and 1½ fewer quarts of cream than in 1950. Yet our consumption of various dairy products that contain nonfat milk has held steady. There is no doubt that the

American public has become increasingly weight conscious and worried about cholesterol levels which, combined with high prices, contribute to the trend away from butterfat.

Supermarkets have long been considered the least expensive places to shop for large families; because they have "everything" the one-stop feature is very appealing. But if milk is any example, one must shop with great care in the supermarket chains. Of all the supermarket weekend specials, milk is seldom included because the shopper will likely buy his milk at the same time he gets his other groceries rather than hunt elsewhere for bargains in milk. Filled milk represents lower profits to the supermarket than whole milk and, even if they had it, the grocers probably would not display it prominently. Moreover, even the intelligent shopper cannot readily understand the nature of products whose labels are unfamiliar and unattractive because they are unadvertised and undisplayed.

There have recently appeared some completely ersatz "imitation milk" products made of such things as corn-syrup solids, vegetable fat, water, artificial thickeners, colors, and flavors, etc., which are packaged in milk-type quarts or half-gallon cartons. The consumer views this product with much trepidation although in fact, in time, it is this imitation milk which may loosen the legal restrictive bonds, for a ban has never been imposed on true imitation milk. Belated efforts of the dairymen have succeeded so far in four states only. In May 1968 the Food and Drug Administration published a proposed standard of identity for imitation milk which will take many months, perhaps years, to be finalized and adopted. Basically, the proposal derives from the nutritional values of whole milk and, in its present form, is still crude and in need of more review.

One thing is certain. Manufacturers do possess the ability to develop a product virtually identical in flavor and texture to milk. Infants with no problems of allergy probably need whole milk up to age two. But older children and adults will no doubt find instant nonfat dry milk the most economical substitute. It offers the same nutrition as does ordinary milk except for the absence of certain fats and, under a new federal rule, it may now be fortified with vitamins A and D. Wherever filled milk is available, it will be attractively low in price. Those families who do not like reconstituted nonfat dry milk will probably find filled milk as palatable as whole milk. Imitation milk is still in an experimental state.

It is not at present sufficiently standardized to be recommended in place of whole milk or the substitutes for milk. However, we should watch for this product on the market and study carefully the nutritional claims on its labels.

In dealing with the fats that go into our diets we must consider economics. When the meat packer trims fat off his meat he sells it; he does not throw it away. Therefore the fat comes into the diet through pastries or by way of some other food. The newest single factor in the diet, one that involves us all, is soybean oil. In the last 15 to 20 years production of this oil has grown tremendously. In total, it has considerably reduced the percentage of saturated fat that we eat. However, this is a by-product of the meat industry, because in the production of soybean oil, there is far more protein than fat. The protein is largely consumed in feeding young animals before slaughter. Soybean oil and animal fats are really coproducts of the meat industry. The food industry possesses the ability to make bread and cake mixes, for instance, with oil—at one time there was a popularly labeled biscuit and cake mix with liquid oil on the market, but it was dropped because it did not sell even though there was no obvious difference in flavor and performance of the mix. There are actually many products on the market today which, if the consumer were only aware of their benefits, could be selected with more intelligence. In the case of margarine, for instance: there are many good corn-oil margarines, but there is a difference in the extent to which the corn oil has been hydrogenated. The consumer is aware that corn oil is somehow beneficial, but he does not know the difference between liquid corn-oil margarine and a hydrogenated corn-oil margarine. These should be labeled in such a way as to make the "desirable" products obvious.

But there is more the food industry can do to help. Salt packaged for consumer use should all be iodized unless specifically labeled otherwise. Medical reports of the increasing prevalence of abnormal thyroid conditions, especially among the less literate groups in the United States, have coincided with the increasing sales of noniodized salt at the retail level. Iodized salt remains the easiest and most economical method of introducing adequate iodine into the human diet—a true managerial answer to endemic goiter.

As a result of the *White House Conference on Food, Nutrition and Health* the scientists who made up the various panels made recommen-

dations which require government action. It was recommended that the Filled Milk Act be repealed since many nutritionists and consumers desire to obtain the nutritional benefits of milk in a fluid milk product in which vegetable fats, preferably polyunsaturated, are substituted in whole or part for the milk fat. Modern technology has proved these blends are not harmful. The same holds true for butter, which could be made more nutritious. Also, cheese products that contain, for example, vegetable fat, are desirable; therefore, the Filled Cheese Act should be repealed. In addition, it should be made possible for nonfat dry milk solids to contain fortification of vitamins when found necessary for public health.

Many more products could easily be manufactured by the food industry with proper motivation. Because of archaic laws, these products cannot be labeled or advertised in a way that would help sales. Therefore the industry is not motivated to make the change. Why cannot we tie the economics of the milk industry to the protein content of milk instead of to its butterfat? Baked products can certainly be just as good in quality when made from fats that are high in polyunsaturates as from those low in polyunsaturates. Someone ought to be working on the problem of developing eggs that are decholesterolized.

There is no reason why those making fabricated meat products cannot consider putting some vegetable fat in them, which can be done now—for the technology exists. Frankfurters, for instance, could be made more nutritious.

Coronary heart disease is of immense importance to public health: as you know, 600,000 persons may die of it per year. We must attempt to understand why there is such a disparity between the amount of information available on diet and heart disease, and the lack of public action.[7] True, coronary heart disease is one of multiple etiology not fully understood even by physicians, not to mention the general public. Coronary heart disease is a relatively new disease. We must understand that the amount of evidence that correlates lipids to coronary heart disease is really quite extensive, but that studies that reveal a negative correlation between diet and heart disease are also underway. The word "diet" carries with it prejudices which are not overcome by the public easily. The fact is that the prudent diet is a better way of eating, a more varied way, and that it is consistent with dietary principles that nutritionists have been teaching and agreed upon for many years.

There must be a proper relation between pressure for more research studies and for application of the best feasible interpretation of existing evidence. I quit smoking cigarettes in 1951 because, even though the evidence was still circumstantial, the studies looked pretty conclusive to me. At that time there had been no prospective studies: yet the data were so clear on the basis of so many different kinds of studies in the same direction that the conclusions appeared inescapable. Many of us in the fields of epidemiology, thoracic diseases, and public health then began giving up smoking. The number of lives that could have been saved between 1951 and publication of the surgeon general's report of 1965, had the authorities not been so fussy about the data, would have been enormous—undoubtedly in the millions! Granted the Framingham data; granted studies like the one in New York City which showed a one-third reduction in coronary events on a prudent diet, even though the controls were not identical kinds of persons; granted the studies among particular groups such as the Bantus, the Japanese, and the Italians, who all have lower serum cholesterol levels than we do and have lower death rates from coronary heart disease; granted all these—are we not ready to say to the American people: cut down on saturated fats; if you have high serum cholesterol, cut down and lower your serum cholesterol particularly? Hence should we not say to the food industry: replace butterfat with margarine and help us to legalize corn-oil ice cream? If we do not say these things, then we say something else. By default we are saying to the consumer: continue to eat all the steak, ice cream, eggs, and hydrogenated fats you now are eating; we are not prepared to make recommendations at this time. We are going to do a series of difficult studies and are going to add little pieces to the evidence. Maybe 20 years from now, we shall have the answer—and we hope that most of you will still be alive to receive it, even though it may then be too late for you to benefit from it!

During the White House conference, the president emphasized to the conference members the need to identify the undernourished and malnourished groups as basic to any corrective program. Three panels dealt with various aspects of the surveillance of the state of nutrition of the American people. The system of surveillance they designed can also be used for the monitoring of the effectiveness of federal, state, and local corrective programs. It was recommended that prime responsibility for such a system of surveillance be placed in the Department

of Health, Education, and Welfare. Hunger and malnutrition in a land such as ours is intolerable.[5] Millions of Americans are too poor to feed their families properly, so for them there must be, first, sufficient income for food. But this alone would only begin to solve the problem, for what matters finally is *what* people buy with the money they have. People must be educated in the choosing of proper foods. Poor and nonpoor alike must realize that a proper diet is a basic determinant of good health. To enable the poor to receive an adequate and nutritious diet, classes for training in dietary vocations and skills should be set up in our present secondary schools to enable high school students to take such training if desired, rather than college preparatory courses exclusively. School lunches could include nutritious foods not obtainable at home. Night courses should be made available to adults. Government support might be necessary in those instances where local school districts were unable to support such vocational training centers.

Publicized studies show a surprising degree of undernutrition among even relatively high-income families. This indicates the necessity for a concentrated educational and promotional program for more nutritious food, good eating, and intelligent shopping for food among people on all levels of income. This, of course, is where the nation's food-retailing industry can play a vital role through its distribution system, which reaches most homemakers at least once a week. This system enables distributors of food to serve as the most direct and rapid channels of communication with consumers. After all, dietary habits rely to a great extent on motivation. The food industry should be able to make changes in dietary habits easy for the individual. In addition, a commission should be appointed of representative food scientists, nutritionists, leaders in the food industry, regulatory officials, and private citizens to review those statutes which prevent the development of nutritious foods.

In preventive medicine, unfortunately, if we have to rely on the individual to take care of himself, we are likely to fail, especially in regard to food. We have such an illusion of immortality that we do very little to prevent death—especially if it means a little extra effort, i.e., wearing seat belts, watching what we eat, exercising, giving up smoking. We are well aware of the fact that it is human nature to wait for symptoms before seeing the doctor. But the very first heart attacks are fatal to almost 40% of victims, either immediately or within

six weeks. Almost 20% die in the first hour. It is too late then to wait for symptoms. We must practice prevention in our daily living. Of course, what we are looking for is a diet as tasty as ice cream and cake but that will not make us fat as they do. What cigarette smokers want, rather than to give up smoking, is a "safe" cigarette. We need new breakthroughs and a wider application of what we know. We have all been conditioned by the habits of centuries in which man searched for enough food, and we must now adjust to the new situation which, in this country, is that man may sometimes have too much and the wrong kind of food. Drs. McGandy and Stare[6] speak of "nutrition . . . built into manufactured foods" as the possible answer. This should extend to meat and dairy products. Through further research we must show the American public that what we are really striving for is to improve the nutritional needs of Americans: a "renaissance in nutrition" that will bring better health and will lower the risk factors in coronary heart disease.

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