CURRENT NUTRITIONAL PROBLEMS IN AMERICA

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I want to thank the American Meat Science Institute for the opportunity to address this group today. The topic that has been chosen for me, "Current Nutritional Problems in America," is controversial, to say the least. If you were to ask any ten professional nutritionists to speak on this topic, I suspect that you would find at least six different answers and evaluations. The Food and Drug Administration and several other groups are currently holding hearings in Washington on certain aspects of this question. Much of what I will say today, therefore, I must label as opinion.

The comments will, however, be centered on the data of recent substantial reports. There are a number of these, but there are three major reports that have been issued within the last few months. One of these is the Nationwide Food Consumption Survey of the U. S. Department of Agriculture. The second is entitled, "Hunger, U. S. A.", and is issued by the Citizens' Board of Inquiry into Hunger and Malnutrition in the U. S. A. The third is the report of the "World Food Problem" issued by the President's Science Advisory Committee. These three reports contain an abundance of provocative data.

The U. S. Department of Agriculture report says in effect that 50% of the American families have diets which are "not good" (do not meet the NRC recommended allowances over the period of one week as measured in the Spring of 1965). The situation now is reportedly worse than it was 10 years ago, at which time only 40% of the American dietaries were judged to be "not good". The clear implication is that the American diet has been getting progressively worse for the last 10 years.

If one reads further into the report, he will find a description of the changes in diet which have occurred in the past 10 years and which presumably have led to this deterioration in nutritional acceptability of the national diet. Among the major things that one will note is that we are now eating more beef and poultry. We are eating proportionately more cake and perhaps a little less bread. We are consuming slightly less milk, and we are consuming much more frozen fruit juices and vegetables. Taken all together, this is presumably bad. I must concede that if I were given a choice between the 1965 diet and the one reported 10 years earlier, I would probably be stupid enough to choose, for myself, the 1965 diet.

The report goes on to detail the nature of the nutritional deficiencies which occur most commonly in this country today, and to indicate the reasons why half of the family dietaries were classed as being "not good". Most frequently, there was deficiency in Vitamin C, Vitamin A and calcium. These are the conclusions of this survey, and on this basis we are asked to believe that the American dietary has become worse in the last 10 years, and that half of the American families are consuming diets which are "not good".

Now I ask you to stop and think a moment. How many cases of frank scurvy, xerophthalmia, night blindness, or other critical evidences of Vitamin A or Vitamin C deficiency have you seen in the past week? Certainly if a high per cent of the American dietaries are grossly inadequate with regard to these nutrients, statistics would grant that there must also be a very large number of critically deficient individuals in this country. I have not seen them, and I dare say you have not seen them. In fact, they are clinically rare in any developed area of this earth.

Parenthetically, I suspect that one problem with the USDA conclusions stems from a rather simple statistical error -- related to the fact that dietary intake data for Vitamin C and Vitamin A have unusually large day-to-day variations. I discussed this matter several years ago, and I would hope that, before publishing further parts of this survey, these workers might take the opportunity to confer with a statistician concerning this point.

Now, the other critical deficiency in the American dietary was reported to be that of calcium. I do not claim to be an expert on the minerals. I do note that the President's Science Advisory Committee goes into some detail concerning the nutritional deficiencies that occur in certain of the underdeveloped nations of this earth, and concludes by stating that "there is no good evidence that calcium deficiency constitutes a serious health problem" in any portion of this earth -- and it further points out that there are many areas of the earth in which the calcium consumption is considerably less than the average in the U. S. A.

In summary then, the most generous thing that I can say about the overall conclusions of the USDA survey is that they are inaccurate, misleading and detract attention from the true problem.

They should not have received the widespread publicity that they have been given. The intelligent layman looking at these conclusions, and then looking at the people in his immediate environment, can only conclude that nutritional allowances and probably all official statements on nutrition are grossly unimportant or misleading. The scientific community looking carefully at these conclusions can only view the field of nutrition with either contempt or pity.

Now I'd like to turn to the second report, "Hunger, U. S. A." It deals with poverty. It deals with the invisible poor. It is important to couple the word "invisible" with the word "poverty". Data concerning the poor are extremely difficult to obtain, and I must concede that this report, though very eloquent in its presentation, is lacking in some of the hard fact that I would like to see. The difficulty, of course, is that of locating and studying the poor. Their names are not listed in the telephone book. Many of them live on streets that are not paved and have no water or sewage.

I suspect that, by and large they are not adequately covered in the USDA food consumption survey. True, that survey included individuals with low family incomes, but a large portion of these were older people or pensioners with little or no taxable income. This is a very different sociological group. I'm speaking now of long term, hard core poverty -- the invisible poor. They are not "consumers" (in the mercantile sense) and

hence, one who is interested in selling food or any other commodity has no real interest in sampling this group. Their dollars are too few to be important in the market place.

They do exist and they are hungry. They are in all parts of this country, including Georgia. They are black and white. There are an increasing number of Negroes. One evidence of this increase in numbers can be seen in the progressive increase in the rate of premature birth weight among the Negro population of this state. Prematurity is a leading cause of infant mortality in this area. If you will trace these data back to the 1940's, just after the war-time (when jobs were relatively easy to obtain), you will find that the prematurity rate in both the white and Negro populations was substantially identical at that period. Since then, however, there has been a progressive increase in prematurity among the Negro, but no change in the white population. Prematurity is known to be correlated with poor maternal nutrition, and I am told by sociologists that these data reflect in a true way the difference in relative economic status of these two racial groups in our state over the course of the last 15 years.

There is one large group of hungry people that is easily visible. We have 100,000 school children in the state of Georgia that go to the lunchroom every noon and watch the other children eat, while they sit there with no food. There are about 200,000 of them in this one state alone that cannot pay for their school lunch. Some 70,000 of these are covered by funds from local and civic groups and another 30,000 are covered by Federal funds, but each day there are an additional 100,000 that do not eat. They sit there and watch the others eat, while they themselves go hungry. You can be equally certain that many of these same children have little or nothing for breakfast and return home to a supper which is meager at best.

There is another group that is a little more difficult to find, but we are coming to believe may be the most critical of all. I refer to the malnourished infant and his mother. There are studies in various parts of the world today that confirm that the lack of proper food during pregnancy and during the early months of infant life lead to a permanent physical and mental stunting of the child. Most studies suggest that the result is a population whose average I.Q. is 85 rather than 100 -- a population which is almost totally lacking in individuals with high levels of intelligence. Many of these children are inevitably failures in school and many more will inevitably end up as wards or partial dependents of the state.

Among the working adult population a lack of food does not have as dramatic or as permanent an effect. Careful physiological studies in wartime Germany indicate very clearly that one of the major effects of hunger is to make the individual lethargic. If you do not have an adequate caloric intake, it is mathematically impossible to sustain a high level of caloric output for any prolonged period. At first glance the person may appear to be languid or even lazy. Among the poor, however, it may be much more appropriate to ask the question first, "has this person had an adequate amount of food to eat?"

Is there a nutritional problem in the United States? Many different answers can and have been given. As I said, this is a matter of opinion. If you are the typical affluent American, and judge by the people coming through your home and through your air-conditioned office and are careful

to look neither to the right nor left as you go through life, you will probably reply to this question by pointing to the problems of obesity and say that we are eating too much. You may even point to the large meat intake, and talk about saturated fat, cholesterol and high blood pressure. You may even point to the USDA survey as evidence that we are eating the wrong things (cake instead of bread) and conclude that we should be taking vitamin pills, or probably both vitamin pills and mineral pills to balance our diet.

I am afraid that I do not see any of these as an adequate or responsible answer today. If one will but look, he must conclude that there are hundreds of thousands of hungry and malnourished people in this country. The hungry school children are easy to find. There are many thousands of children and adults that are permanently physically and mentally stunted from inadequate early nutrition. The most critical nutritional problem in America today is a lack of food, a lack of calories, a lack of protein and probably a lack of certain other specific nutrients -- just what nutrients, I do not know. The invisible poor are there. They have not been adequately studied, and their specific nutritional problems are not precisely known.

Finally, let me say a few words about the third of these official reports -- "The World Food Problem", prepared by the President's Science Advisory Committee. Much of this applies more specifically to the nutritional problems of Central and South America.

The world food problem is critical. It is intimately related to the rapid rise in world population. This will require a 50% increase in food production by 1985, and a doubling by the turn of the century -- if we are to feed the world of the future as well as it is being fed today. It is only fair to add that we are not doing too well today. There are over 10,000 persons each day who die of starvation. (Over 400 persons have died of starvation within the past hour -- and many of them were in Central and South America.)

This is too big a problem to discuss or solve in the next few minutes, but what it does mean is that there must be a major revolution in agriculture and the food industries within the next 10 - 15 years. Some of the present predictions undoubtedly are inaccurate, but one can well imagine that, within the next decade or so:

1) every acre of tillable farm land in the world will be pressed into maximum production

2) grazing may be largely confined to the savannah lands of Africa and South America, and similar areas unsuited to more intensive cultivation, and

3) farm animals will no longer be fed grain or other products suitable for human food consumption.

In final summary, hunger and calorie-protein undernutrition constitute the greatest nutritional problem both in this country and in the less developed countries of the world. Some people are actually starving. Large numbers are hungry, and more mouths are arriving to be fed every day. This, in a word, is the current nutritional problem of America, and of the World. There is a need for food -- not vitamin pills, but FOOD.

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DR. SHERMAN: Thank you for an extremely fine paper and very well presented. I think it will stimulate some thought in all of us. Now I would like to turn the discussion cver to Dr. Olaf Kolari, of the American Meat Institute Foundation. He was, incidentally, the Chairman of this Nutrition Committee, and did a very excellent job and a lot of work on it.

DR KOLARI: Thank you, Bill. Members of the American Meat Science Association, I might say that I am very happy to be on your program. I would like to commend our speakers for setting the record straight on the recommended dietary allowances and then to Dr. Caster for setting us straight on the nutritional problems that we have in this country. I agree with Bill--I think that what he has said will certainly stimulate a lot of discussion.

I was also very happy to notice that Dr. Voris said that there were no recommended allowances for alcohol, but I would just like to point out from the nutritional point of view that one gram of alcohol yields 7 calories, and if you like this in a liquid measure--one milliliter yields 5.6 calories.

I think that our time is running a little short, so at this time I think I will just ask for questions, and these young gentlemen here will provide the right answers if you have the right questions. Are there any questions on the two papers that were presented?

QUESTION: You hear a great deal about vitamin E, and I wonder if you would care to tell us if there is a requirement and what relation this may have to muscular dystrophy.

O. KOLARI: Dr. Voris, I wonder if you would like to handle that question. Please come to the microphone in case we have some recording problems.

DR. VORIS: There is a recommendation in the 1968 revision of the recommended allowances for vitamin E for the first time. This is at the level of I think 30 micrograms or 30 International Units per day for adults, but there has been no symptomatology for vitamin E deficiency among people in the United States that has been really identified, so that there has been no relationship observed as far as I know to muscular dystrophy. I think that the various attempts to treat the cases of muscular dystrophy with vitamin E have been largely disappointing. At least for the first time, there will be tabulated a recommended allowance of vitamin E and this largely came about because of the persistent increase in the consumption of vegetable oils with polyunsaturated fat. This is where vitamin E apparently serves the main purpose in human nutrition, in the protection of that type of calories.

FROM THE FLOOR: Occasionally we hear laymen speak of the relationship of vitamin E to heart disease. Would you care to speak on this?

DR. VORIS: I don't think there has been any real factor related to heart disease, and certainly as far as I know not with vitamin E.

KOLARI: Thank you, Dr. Voris. Are there any other questions?

FROM THE FLOOR: Why are the recommended caloric requirements decreasing for adults?

DR. VORIS: Because their gasoline consumption is increasing. It may be based on the apparent decrease in physical activity among the elderly in the United States.

O. E. KOLARI: Any other questions? If there are no other questions, I will turn the program back over to Dr. Sleeth. Thank you very much.

DR. SLEETH: Thanks to you, Bill, Oley, and the two guest speakers we have had this morning. Because of the things that they had to tell us--about calories and dietary allowances and so forth--we have taken the prerogative of canceling lunch and have the track opened up over at the field house.

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