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NATIONWIDE FOOD CONSUMPTION SURVEY— IMPLICATIONS

(By D. Mark Hegsted, Administrator, Human Nutrition Center,
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What conclusions can we or should we draw from the data available so far?

I prefer to begin by noting some of the limitations, or possible limitations, in the data so that we don't overinterpret the findings. The average household or the average person doesn't really exist. So, while average values are important and flag changes in consumption, they never tell us quite what we would like to know. If consumption of something stays the same, increases or decreases as a whole, various groups within the population can be expected to show different trends. The more the data are broken down into specifics, the more useful the information is nutritionally. On the other hand, individuals within any group will also vary substantially. We cannot monitor the intake or nutritional status of every individual, so we have to deal with groups. Whatever we conclude, the limitations of statistical data need to be kept in mind.

Although it is not very useful in helping to interpret data, it is at least worth noting that questions can be raised about the reliability of data collected in such surveys. The food supply is now exceedingly complex and becomes more so all the time. Our knowledge of food composition always lags behind our needs and always will. Some of the apparent changes in consumption may reflect inadequacies in the data base and, thus, our interpretation may change with time as the data base improves. Nevertheless, most of us believe that consumption data are a reasonable reflection of what groups of people do although we know that they do not reflect what individuals do. The average values reported here agree reasonably well with average values reported by HANES; for example, which gives us some confidence. Nevertheless, there is still relatively little hard evidence to compare what people eat with what they say they eat. Additional efforts are required to improve our methodology, although I do not expect major improvements other than, perhaps, improvements in methods to handle the information collected.

As Dr. Pao has indicated, the total food consumption of Americans—practically across the board—appears to be at a very low level. This in spite of the fact that we are as big and fat as we ever were and obesity may be gaining on us. About the only interpretation possible at this time would be that Americans are becoming increasingly sedentary. It raises many questions. Can optimal health be achieved by simply reducing food intake to control obesity? Although many people

have a firm faith in the benefits of exercise, there is little hard evidence on what is achieved by various amounts of exercise. Indeed, as will be emphasized by the report of the Panel on Obesity of the American Society of Clinical Nutrition, which should be published in December, there remains many questions about what is actually achieved by weight reducing programs even when they are successful. Obviously, for Americans as a whole, the emphasis upon weight and obesity over the past many years may have reduced food consumption but has not achieved what is thought to be desirable.

These low levels of food consumption make it increasingly difficult for many Americans to achieve the rather generous levels of nutrients specified in the recommended dietary allowances. The Food and Nutrition Board has repeatedly warned that consumption of less than the RDA does not mean an individual is deficient in that nutrient, yet we must also assume that the Food and Nutrition Board does believe that consumption at these levels is desirable. What are we to make of the proposition that the average American woman consuming a mixed and well-balanced diet cannot obtain the FDA for several nutrients? It is one thing to conclude that a proportion of any group is at risk of deficiency because of poor food choice or inadequate supplies. It is something else to define the average American at risk of deficiency.

These low levels of consumption are of interest in that recent estimates place the national food supply at about 3,500 calories per person per day. The data you have heard this morning indicate that about 2,900 of these calories actually enter the household but only 1,800 to 1,900 calories are actually consumed. Where does all of that food go? Do we really waste almost half of the total food available or feed it to cats and dogs? How much redundancy in our total food supply is required to adequately nourish our population? We can all list many factors which encourage waste—the decreasing size of families, the way foods are packaged, the way food is served in restaurants, and so forth. Yet, it should be of considerable interest to find out what actually happens. Are there 3,500 calories of edible food? If we envisage a limitation in food supplies some 10 or 20 years down the pike, there would appear to be great opportunities for conservation of food in the same way that there are opportunities for conservation of energy—the two are not unrelated.

The data are encouraging in that they indicate the spread in dollars spent for food and the kinds of food consumed at various income levels is diminishing. The programs of the past 10 years have assisted the lower income groups so that they more nearly participate in our abundant food supply. At the same time, 3 percent of all households report that they do not have enough food, and this rises to 9 percent in the low-income groups. As Ms. Hama has emphasized, this is still a lot of people and much remains to be done, especially in a country that may waste nearly half of the total food available.

Secretary Bergland has warned us that we should be very clear about the problems of the poor when we talk about food costs. It is important to note that although we continually complain about food costs and other faults of the food system, for most Americans, food costs are low compared to most of the world. Most Americans would not willingly

trade what American agriculture and our food system have achieved with that available in other parts of the world.

Incidentally, it is of substantial interest in terms of the total world food problem to note that the average calorie consumption of Americans at 1,800 to 1,900 calories per day is not greatly different from that reported in many of the developing countries where undernutrition and malnutrition are common. Yet, how many Americans are hungry? There are problems of definition as well as distribution and, again, how much redundancy in food supplies is actually needed to minimize or prevent undernutrition.

I avoided the term "malnutrition" in the last sentence because there is abundant evidence that Americans are not optimally nourished and that a major problem is excessive consumption—excessive consumption of fat, cholesterol, sugar, salt, and alcohol, as well as total calories. The latter, as I have indicated, is somewhat hard to square with the apparent level of energy consumption, obesity, and estimated energy requirements. This does not mean we are not concerned with essential nutrients but, as the papers today demonstrate, we are still caught to considerable degree in traditional methods or areas of concern. Although we are concerned and must keep watch on consumption of thiamin, riboflavin, niacin, vitamin C, and so forth, these do not represent the major nutritional concerns of the U.S. population or the major problem areas. With regard to essential nutrients, the problem areas would appear to be iron, zinc, magnesium, vitamin B6, and so forth—nutrients where there is a substantial difference between levels specified by the RDA and consumption levels. Because these are emerging interests, our data base is less adequate.

Many of the problems are obvious to all of you. These include better definition of requirements, analytical methods, problems related to bioavailability, the evaluation of nutritional status, and so forth. We now know, for example, that total iron content of the diet is probably less important than the form of iron in the diet and the nature of the diet with which it is consumed. The research effort that will be required to provide a better evaluation here is quite clear.

Similarly, comparative data from 1965 to 1977 on fat, cholesterol, salt, and sugar are less than adequate because of our shifting interests. These were not major considerations in prior surveys. Although Americans are apparently consuming somewhat less fat than previously (which is desirable), it hasn't changed much. I expect that many are actually doing better than these values indicate since it seems reasonable that a substantial amount of fat might be trimmed from meat at the table and may not be adequately accounted for in the calculations.

As you are aware, we cannot calculate sugar and salt consumption from these data. Other data on total available sweeteners indicate an increase which, when combined with a fall in total calories consumed, indicates a higher proportion of the total calories in sugar and sweeteners. This is an undesirable trend. It is worth noting that the role of sugar in dental caries is more related to the kind of product consumed and when it is consumed than the total amount consumed. The data indicate that consumption of sugar, syrup, jelly, and candy has decreased, which may be a favorable trend. It probably is due to greater

use of sugar in processed foods rather than use of sugar as such in the household. Together with an increase in soft drink consumption, I conclude we are not gaining in this area.

Increased consumption of alcoholic beverages, again combined with a falling total food consumption, is probably undesirable, although I am a believer in moderation in all things.

As I have indicated, future reports will provide a greater breakdown of the data both in terms of who eats what and the products actually eaten, which will be instructive. For example, the data available group eggs, legumes, and nuts together. This makes sense in traditional terms as good sources of protein other than meat and dairy products but is less helpful at this time. Protein consumption is now at a very high level and, in general at least, it would seem that we need not place much emphasis on protein. In contrast, there are valid reasons to encourage legume consumption—fiber, vegetable fat and the current low levels of consumption—and so more specific data will be useful. Although there are valid reasons to encourage increased consumption of dietary fiber (and we know something about sources of dietary fiber), the analytical methods available are inadequate to deal properly with this topic.

Let me end by urging everyone to recognize both the value and the limitations of these kinds of data. Statistical data can be exploited for a variety of purposes both legitimate and illegitimate and I urge everyone, including ourselves in the Human Nutrition Center, to try to use them honestly and constructively.

Finally, let me note that it is now November 1979 and the last data in the survey were collected in April 1978. Given the fact that the data were derived from 15,000 households in 48 States and also included data on 34,000 individuals who consumed upward of 20,000 different products, it is a formidable task to produce any kind of report. I want to publicly congratulate all those in the Consumer and Food Economics Institute for what they have achieved in the face of a limited staff and also tell them we confidently expect even shorter turnaround times in the future.