



Perspective

On the Use of Chemicals in Foods

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A DISTINCTION MAY BE MADE between two aspects of the problems under discussion—one is the permitted tolerance levels of toxic substances that may find their way, as contaminants, into foods and the other is the purposeful addition of apparently nontoxic substances to foods for technological purposes. This paper deals essentially with this second problem of food additives. The pharmacological problem is whether it is necessary and possible to safeguard the health of the public against the use of chemicals in foods.

The "health of the public" can only be assessed statistically. Opinion on its maintenance or decline must be based on the consideration of the fertility, mortality, and morbidity rates in a community and the changing pattern of behavior and disease. It is a measure of the adaptation of man to his environment. This environment consists of two main groups of factors—one group is more or less peculiar to each individual and includes housing, clothing, feeding, drinking, and smoking habits and occupational factors, while the other tends to affect the community as a whole and includes the agents of disease, the preventive and curative measures available for their control, the climate, and the relationships between individuals within the community and between different communities in the world at large. The environmental pattern varies considerably from time to time, from place to place, and from one community to another. Some of the factors in this environment may cut down fertility, increase the incidence of certain diseases, and shorten life—while others may increase the birth rate, prevent or cure disease, and lengthen the average life span. The over-all statistical picture gives some idea of a balance established between opposing factors. A community living under reasonably constant conditions settles down to a steady fertility, morbidity, and mortality rate. The

introduction of some deleterious factor into the environment may be expected to show itself as some alteration in fertility, some shortening of the life span, some measurable change in the incidence of some particular disease process, or a combination of these changes. To appreciate the problem of food additives in its proper perspective it is necessary to realize not only the complexity of the environment of man, but also mankind's great powers of adaptation to change. . . .

It is perhaps helpful, therefore, to ask how the problem of food additives has arisen at just this time. Not long ago, it was usual for most food to be prepared and cooked in the home. During the last 50 years there has been a decrease in the home preparation and cooking of food and an increase in the use of foods prepared, processed, and even cooked before purchase. This trend is even more obvious in certain other countries than in Great Britain. There seems to be no reason to suppose that there will be any change in this practice, and indeed every indication that the large-scale preparation, processing, and cooking of food will become more and more important. In the large scale manufacture of prepared, processed, and cooked foods, chemical additives are used to ensure both more uniform results and the maintenance of the best possible quality of food for the consumer. . . . The use of chemicals in food would seem to be dictated by the circumstances in which we have to live. It is most unlikely that the small environmental change involved will have repercussions on public health to compare in any way with those resulting from the introduction of tobacco, the abolition of tight-lacing, the invention of the motorcar, or the rise in the price of spirits. Nevertheless such repercussions as do arise must be examined, studied, and controlled.

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