Irradiation Enhances Food Safety and Quality

By ACSH Staff — May 14, 2003

Over 50 years of scientific research have established that the irradiation of foods to minimize food-borne illness and decrease waste is both safe and effective. Physicians and scientists associated with the American Council on Science and Health (ACSH) endorse the use of irradiation to enhance safety and supplement other food protection methods.

These and other facts about food irradiation are spelled out in the latest (fifth) edition of Irradiated Foods [1], a revised booklet published by ACSH and updated by Paisan Loaharanu, M.S. (former Head of the Food and Environmental Protection Section of the Joint Division of Nuclear Techniques in Food and Agriculture of the FAO and IAEA, Vienna, Austria). The booklet explains the process of food irradiation, and provides answers to common consumer questions about it.

"It is important that consumers understand that food irradiation is a safe process," states Dr. Ruth Kava, director of nutrition at ACSH. "Irradiation does not make food radioactive any more than a dental X-ray makes teeth radioactive."

The Centers for Disease Control (CDC) estimate that if half of the ground beef, pork, poultry, and processed luncheon meats in the United States were irradiated, there would be over 880,000 fewer cases of food-borne illness, 8,500 fewer hospitalizations, 6,660 fewer catastrophic illnesses, and 352 lives saved every year.

Irradiation can be used on foods in a number of ways. Typically, a low dose of radiation can be used to pasteurize foods such as meat, poultry, seafood, and spices in the same manner that heat is used to pasteurize milk, eliminating disease-causing organisms. Irradiation is meant to supplement not replace other methods of ensuring food safety.

The safety of food irradiation has been studied more extensively than that of any other food preservation process, including canning, freezing, dehydration, and the use of chemical additives. Just as processing foods by other means (such as broiling) can create minute amounts of new chemicals, so can irradiation but there is no evidence that trace amounts of these chemicals are hazardous for human consumption. Nor does irradiation of food pose a risk to workers in irradiation plants or to communities in which irradiation plants are located.

Irradiation has been approved for various applications by over 50 countries worldwide, as well as by the World Health Organization, the Food and Agriculture Organization of the United Nations, the American Medical Association, the American Dietetic Association, and the Institute of Food Technologists. As of March 2003, over 7,000 supermarkets and retail outlets in the U.S. were selling irradiated ground beef.

According to ACSH President Dr. Elizabeth Whelan, "Food irradiation is a most valuable addition to our arsenal in the war against food-borne illnesses. The American consumer has much to gain
and nothing to lose from the wider application of food irradiation to our food supply." Consumers can learn more about irradiation in the new edition of ACSH's Irradiated Foods.

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