Protective effect of conventional cooking versus use of microwave ovens in an outbreak of salmonellosis.

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Abstract
The authors conducted an investigation to determine the extent and source of an outbreak of Salmonella typhimurium gastroenteritis that occurred following a community picnic in Juneau, Alaska, in 1992, and to evaluate risk factors for illness. A case-control study among 54 picnic attendees and a retrospective cohort study among 60 members of 17 households who had taken home leftover food from the picnic were conducted. A case was defined as diarrhea with onset 12-72 hours after eating food that had been prepared for the picnic. The case-control study associated illness with eating roast pork from one of two pigs that had been flown in from a Seattle, Washington, restaurant. The roast pork was taken home by persons from at least the 17 households included in the cohort study. The cohort study identified 43 persons who ate roast pork, of whom 21 (49%) became ill. This compared with only one case of illness among 17 cohort members who had not eaten roast pork (relative risk = 8.3, 95% confidence interval 1.2-57.0). Of 30 persons who ate reheated meat, all 10 who used a microwave oven became ill, compared with none of 20 who used a conventional oven or skillet. The Seattle restaurant had prepared the roast pork by first thawing two frozen pigs for several hours at room temperature and then cooking them in a gas-fired flame broiler. One of the pigs was left unrefrigerated for 17-20 hours after cooking. Compared with conventional methods of reheating, microwave ovens had no protective effect in preventing illness. To prevent outbreaks such as this one, care must be taken to assure that food is both properly cooked and handled and properly reheated.

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