

FOOD POISONING OUTBREAK

Salmonella enteritidis in Ice Cream

What Happened?

On September 6, 1993, fourteen individuals, seven children and seven adults attended a dinner at a hospital in Florida, USA. Within twenty-one hours, twelve individuals became ill with diarrhea, nausea or vomiting, abdominal pain or fever. All individuals were examined by a physician and Salmonella enteritidis was isolated from the stools of three individuals. Salmonella enteritidis was also found in the ice cream. No other foods were implicated.

Who Made the Ice Cream?

The ice cream was prepared at the hospital three hours prior to the meal using a recipe that called for six raw eggs. The ice cream had been made with pasteurized milk, had been properly cooled and no food handling errors were identified. The individual who made the ice cream was not ill prior to its preparation but became ill thirteen hours after eating the ice cream.

What Went Wrong?

Investigators concluded the ice cream was contaminated by the addition of the raw eggs. Salmonella enteritidis is present in about one in every ten thousand eggs. Contamination occurs as the yolk is formed in the hen's body. Subsequent temperature abuse above 7°C allows this organism to grow rapidly. As few as one Salmonella cell in a sixty gram sample has resulted in major foodborne illness outbreaks.

How Do You Prevent This From Happening?

Control of ingredients in dairy products is a critical control point. In this example, raw eggs should not have been used in the production of ice cream. Pasteurized egg products are available and can be added either prior to or after pasteurization of an ice cream mix.

Can This Happen in a Dairy Plant?

Yes! Two dairy processing operations are currently under investigation for Salmonella contamination that has caused foodborne illness outbreaks. One plant is in Canada, the other is in the USA. One produces ice cream, the other cheese. A similar series of dairy related illness outbreaks occurred in North America between 1982 and 1985. Yersinia, Salmonella and Listeria were the most frequent infectious agents. This illustrates that dairy products are not immune to contamination with foodborne pathogens and that industry must always be vigilant to ensure the safety of their dairy products.

For further information contact the Dairy
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