Food Safety and Protecting Wyoming's Health

by Dr. Tracy Murphy
State Epidemiologist, Wyoming Department of Health

More than 140 years ago Louis Pasteur showed the world that the growth of microorganisms was responsible for the spoilage of beverages such as milk, and that heating could markedly reduce such spoilage and resulting illness.

Since then, we've taken major steps forward to make our food safer, including wide use of pasteurization and safety standards. Over the years, these measures have helped protect the public from countless cases of sickness and have likely saved many lives. While not all foodborne disease has been eliminated, there is no doubt that many, many illnesses are prevented by our current protections.

As the state epidemiologist for the Wyoming Department of Health (WDH), I strive to protect public health in our state. We receive reports of various diseases, including foodborne illnesses, from around Wyoming related to public health. We follow up and investigate these disease reports, and take action as necessary to address ongoing public health concerns. To accomplish our goals, we work together with local health departments and public health nursing offices, private medical professionals and the Wyoming Department of Agriculture.

When it comes to food safety, some misconceptions I regularly encounter include: "foodborne illness is not a concern in Wyoming," "foodborne illness only comes from food prepared by large commercial operations," "only hazardous foods spread disease," and "pasteurization of milk isn't needed." Let me assure Wyoming residents these are false and dangerous beliefs.

Foodborne illnesses do indeed occur in Wyoming. They are always quite unpleasant to endure, and can be life-threatening in some cases. From 2003-08 WDH received reports of 1,012 cases of Campylobacter, E. coli, Salmonella and Shigella. Each of these involves bacteria that can cause gastrointestinal illness. It's important to note not every case gets reported to us, and there were numerous additional cases of illness caused by other organisms commonly spread by contaminated food or water. In 2008 alone, WDH followed up on illnesses associated with 12 outbreaks having food as the likely source.

Large multi-state outbreaks, such as the one involving Salmonella-contaminated peanut butter with over 700 illnesses and multiple deaths, understandably grab the headlines. But it is far from true that foodborne illness is only caused by food prepared by large commercial operations. In fact, most gastrointestinal illnesses caused by contaminated food occur sporadically and are not part of larger outbreaks. Of Wyoming's 1,012 cases of Campylobacter, E. coli, Salmonella and Shigella reported in 2003-08, approximately 70 percent were sporadic.

Experience and the health literature bear out that most cases of foodborne illness occur as a result of the food handling and preparation practices of persons in their own kitchens. This has significant meaning when opponents of food safety regulations attest that home-produced food for sale is automatically safe and should not be held to common food safety standards.

It is also false that only “hazardous” food can spread disease. A recently published report provides evidence that from 1990-2006 there were at least 179 outbreaks resulting in 4,904 illnesses linked to breads and other bakery items such as cakes and pies in the United States (*Center for Science in the Public Interest, Dec 2008*).

Unfortunately, in Wyoming and other states, there is an ongoing push from some to reverse the concrete conclusion of science that pasteurization of dairy products prevents illness. Pasteurization involves heating milk to a high enough temperature for a long enough time to kill any disease-causing bacteria in the milk. Pasteurization of milk has been a recommended federal policy since 1924; in 1987 federal law prohibited interstate commerce of unpasteurized dairy products. These policies have gone far to reduce milk-related illnesses. However, milkborne outbreaks still occur, almost exclusively in situations where raw milk was consumed.

Drinking raw milk is the leading cause of Campylobacter outbreaks in Wyoming. From 2003-08, three outbreaks of Campylobacter likely associated with raw milk were identified, resulting in 18 illnesses. During the same time period, nine additional Wyoming cases of Campylobacter were identified likely due to consumption of raw dairy products. Outbreaks happen in other states too. In 2005, 18 cases of infection with E. coli O157:H7, mostly among children under 14, occurred in Washington and Oregon. The cases were scientifically linked to raw milk. In 2007, 29 cases of Salmonella in Pennsylvania were associated with consumption of raw dairy products. In April 2009 the Colorado Department of Health investigated a cluster of illnesses due to Campylobacter associated with a cow-sharing program.

Proponents of raw milk sales claim raw milk offers health benefits. However, the scientific evidence behind these claims is lacking. The official publication of the American Academy of Pediatrics has stated there are no documented health benefits associated with ingestion of unpasteurized milk or milk products.

Yes, food safety problems do still occur. We should all keep working to improve our personal practices at home, and our shared community, state and federal standards. Instead, we have seen recent efforts here in Wyoming to weaken the food safety protections we now enjoy, such as allowing the sale of any home-produced foods without any safety regulations or increased interest in legalizing the sale of raw milk. When it comes to food safety and protecting our health, taking any step backward would be the exact wrong thing to do.