



Public Health Update

Wednesday, July 6, 2005

Seven Steps for Safe Food In The Summertime

Note: The following material is from the Partnership for Food Safety Education

During the summer months, it is especially important to take extra precautions and practice safe food handling when preparing perishable foods such as meat, poultry, seafood and egg products. The warmer weather conditions may be ideal for outdoor picnics and barbecues but they also provide a perfect environment for bacteria and other pathogens in food to multiply rapidly and cause foodborne illness. Follow the suggestions below to reduce the risk of foodborne illness this summer.



- Always, wash your hands with hot, soapy water before and after handling food.
- When marinating for long periods of time, it is important to keep foods refrigerated. Don't use sauce that was used to marinate raw meat or poultry on cooked food. Boil used marinade before applying to cooked food.
- When grilling foods, preheat the coals on your grill for 20 to 30 minutes, or until the coals are lightly coated with ash.

- Use a meat thermometer to insure that food reaches a safe internal temperature.
- Hamburgers should be cooked to 160° F, while large cuts of beef such as roasts and steaks may be cooked to 145° F for medium rare or to 160° F for medium. Cook ground poultry to 165° F and poultry parts to 170° F. Fish should be opaque and flake easily.
- When taking foods off the grill, do not put cooked food items back on the same plate that previously held raw food.
- A full cooler will maintain its cold temperatures longer than one that is partially filled so it is important to pack plenty of extra ice or freezer packs to insure a constant cold temperature.

The National Wildlife Health Center

Many public health issues within the NPS system are caused by organisms that are transmitted from animals to humans. Some of these zoonotic diseases are transmitted directly from an animal to a human (Rabies, for example) and others require a vector or biologic intermediary (West Nile Virus, for example, which is transmitted from birds to man by mosquitoes).

Because of these wildlife connections, the NPS Public Health Program (PHP) is exploring ways in which the National Wildlife Health Center (NWHC), operated by USGS, and the PHP can collaborate on zoonotic disease surveillance within the park system.

The following material is a description of the NWHC and the types of work carried out there.



Each year, wildlife managers across the United States are confronted with sick and dead animals, frequently on a large scale. Minimizing such wildlife losses depends on effective technical support, knowledgeable guidance, and timely intervention. The National Wildlife Health Center (NWHC) mission is to provide information, technical assistance, and research on national and international wildlife health issues. To fulfill the NWHC mission, the Center monitors disease and assesses the impact of disease on wildlife populations; defines ecological relationships leading to the occurrence of disease; transfers technology for disease prevention and control; and provides guidance, training and on-site assistance for reducing wildlife losses when outbreaks occur.

The NWHC is located in Madison, Wisconsin. The modern buildings and laboratories are designed exclusively for combatting wildlife diseases. Due to the mobility of wildlife and the potential for spread of disease, timely and accurate determination of causes of wildlife illness and death is a prerequisite to achieving effective disease control and prevention. National wildlife refuge personnel, law enforcement agents, state conservation agency biologists, university-affiliated scientists and others send wildlife carcasses and tissue samples to the NWHC for diagnostic examination. The Center has a staff of over seventy scientists and support personnel who offer services and conduct activities to prevent and control wildlife diseases. The Center had a major role in

conducting field studies and providing expert testimony that resulted in the conversion to nontoxic shot for hunting waterfowl in the United States.

Center field investigations provide immediate technical assistance to field personnel who find sick and dead wildlife. NWHC personnel provide instructions on collection, preservation, and shipment of specimens for laboratory examination and will travel to problem areas to conduct field investigations and assist local personnel with disease control operations. They respond to catastrophic events, such as major die-offs, that threaten the health of wildlife populations. Assistance is provided for disease problems that involve migratory birds, endangered species and other warm-blooded wildlife that live on Department of Interior (DOI) lands throughout the United States.

You can find out more by going to the NWHC website at:
<http://www.nwhc.usgs.gov/>

Recent Plague Issues in Colorado

In late May, two parks in Colorado experienced animal die-offs and tests indicated the presence of the causative bacteria of plague. The wetter year, after several years of drought may be contributing to this apparent uptick in this issue.

The causative bacterium *Yersinia pestis* is transmitted to people through flea bite and direct contact with infected animals. Each rodent species is host to one or more species of fleas which, when infected, are carriers. These fleas generally do not infest other animals unless their natural hosts are unavailable. Rock squirrels (*Spermophilus variegatus*) are closely related to California ground squirrels and are the most significant plague host in Colorado. Their principal flea *Diamanus montanus* is an aggressive parasite and will readily bite other animals and people. Domestic cats and dogs can also contract plague by infective fleas. They may carry infected fleas home to their owners or, especially with cats, serve as a direct source of infection.

In man, the incubation period (interval between exposure and appearance of symptoms) is usually 2-6 days. Typical symptoms include sudden onset of fever and chills, severe headache, muscle aches, nausea, vomiting and a general feeling of systemic illness. Extreme pain and swelling in a lymph node draining the infection site is a suggestive symptom of bubonic plague. (The swollen, painful node is called a "bubo"). Other forms of the disease include septicemic illness with no bubo developing, and pneumonic plague in which the lungs are involved. The septicemic and pneumonic forms are the most serious. In addition, pneumonic plague can be spread by inhalation of infective droplets expelled by another human or animal with plague pneumonia.

Treatment with antibiotics is effective during the early stages of disease. If diagnosis and appropriate treatment are delayed, life-threatening complications may follow. A doctor or hospital emergency room should be consulted as soon as symptoms appear and a history of exposure to potentially infected animals is very important in evaluating the risk from plague.

Plague is rarely transmitted to humans with an average of less than two human cases a year reported in Colorado.

Excerpts from the Exploits of an NPS Public Health Consultant

The following stories are from LTJG Adam Kramer, who is stationed at Flagstaff, Arizona and covers public health issues in the parks in that area. While we find the concession operations in the NPS to be extremely cooperative in our efforts to protect the public, there is always plenty of room for improvement. The short stories that follow serve to illustrate just some of the issues that our Public Health Consultants discover and help people to correct.

So what is that? What do you use it for? This is a common refrain from many Environmental Health Professionals during evaluations of food establishments. The answers to these simple questions may be

the anticipated response or may be something very unexpected. Here are two different situations in which these simple questions brought to light some major concerns with the operations.

Scenario 1 – Can I have some pesticide with my eggs

During an inspection, a can of Raid insect killer was observed with the other chemicals for the establishment. When the operator was asked what she did with it, she explained she had a fly problem in the dining room and would use the spray to kill the flies. The follow up question of when she would spray was the surprising answer. She explained she would often go throughout the dining room and spray. The major issues here were the tables were preset and now contaminated, plus the shocking revelation was that she would spray even as patrons were eating. Needless to say, the problems of her pest control techniques were pointed out and better alternatives such as keeping her door closed were discussed.

Scenario 2 – Pasta that will clean you out



During another inspection, walking down the cook line there was a spray bottle with a yellow liquid in it hanging over the pasta station. The manager was asked what was in the spray bottle and he responded that it was olive oil that he sprayed on his pasta after cooking. This response made sense and it was the right color for olive oil. The inspection continued on to the utility sink and there was another spray bottle with a yellow liquid in it hanging there. The manager was again asked what was in it and he stated it was degreaser used for cleaning. The question was then posed "Isn't that

degreaser the same color as your olive oil?" This was one of those few times you actually saw someone's jaw drop. Upon further investigation it was found that he was actually applying degreaser to his pasta. During the follow up, the manager had taken to labeling everything (including clearly identifiable items such as pinto beans) to insure that it would not happen again.

Bed Bugs



Bed bugs are an increasing problem nation-wide, particularly in lodging. Some NPS operations have had complaints from visitors of bites, even occasionally extensive bites from just one nites stay. The following information has been edited from materail provided by the Harvard School of Public Health.

Bed bugs are small wingless insects that feed on the blood of warm-blooded animals. Hatchling bed bugs are about the size of a poppy seed, and adults are about 1/4 of an inch in length. From above they are oval in shape, but are flattened from top to bottom. Their color ranges from nearly white (just after molting) or a light tan to a deep brown or burnt orange. The host's blood may appear as a dark red or black mass within the bug's body. Because they never develop wings, bed bugs cannot fly. When disturbed, bed bugs actively seek shelter in dark cracks and crevices.

Bed bugs seek out people and animals, generally at night while these hosts are asleep, and painlessly sip a few drops of blood. While feeding, they inject a tiny

amount of their saliva into the skin. Repeated exposures to bed bug bites during a period of several weeks or more causes people to become sensitized to the saliva of these bugs; additional bites may then result in mild to intense allergic responses. Bed bugs are not known to transmit any infectious agents.

Bed bugs and their relatives occur nearly worldwide. Bed bugs became relatively scarce during the latter part of the 20th century, but their populations have resurged in recent years, particularly throughout parts of North America, Europe, and Australia. They are most abundant in rooms where people sleep, and they generally hide nearest the bed or other furniture used for sleeping. Bed bugs are most active in the middle of the night, but when hungry, they will venture out during the day to seek a host. Their flattened bodies allow them to conceal themselves in cracks and crevices around the room and within furniture. Favored hiding sites include the bed frame, mattress and box spring. Clutter around the room offers additional sites for these bugs to hide, and increases the difficulty in eliminating bed bugs once they have become established.

Because bed bugs readily hide in small crevices, they may accompany (as stowaways) luggage, furniture, clothing, pillows, boxes, and other such objects when these are moved between apartments, homes and hotels. Used furniture, particularly bed frames and mattresses, are of greatest risk of harboring bed bugs and their eggs.

Folds and creases in the bed linens, and seams and tufts of mattresses and box springs, in particular, may harbor bed bugs or their eggs. They may also be found within pleats of curtains, beneath loose areas of wallpaper near the bed, in corners of desks and dressers, within spaces of wicker furniture, behind cove molding, and in laundry or other items on the floor or around the room. Sometimes, characteristic dark brown or reddish fecal spots of bed bugs are apparent on the bed linens, mattress or walls near the bed. A peculiar coriander-like odor may be detected in some heavy infestations.

Regional Public Health Consultants Northeast

CAPT Barry Hartfield (978) 970- 5033

National Capital

CAPT Richard Durrett (202)619- 7070

Southeast

CDR Brian Cagle (404) 562- 3124 ext 549

Midwest

CDR Robert Reiss (402) 221- 3786

Intermountain

CAPT John Collins (303) 969- 2922

CAPT Joe Winkelmaier (505) 988- 6040

LT George Larsen (307) 344- 2273

LTJG Adam Kramer (929) 226- 0168

Pacific West

CDR Paul Robinson (510) 817- 1375

CDR John Leffel (206) 220- 4270

Alaska

CDR John Leffel (206) 220- 4270

WASO Staff

Director, Office of Public Health

CAPT Chuck Higgins (202) 513- 7217

Deputy Director, Office of Public Health

LCDR Jason Thomas (202) 513- 7226

Program Analyst

Sonya Coakley (202) 513- 7215

Individual Park Public Health Staff

GATE LT Craig Ungerecht (718) 354- 4693

SEKI Paul Schwarz (559) 565- 3144

LAME J. Shannon Swann (702) 293- 8985

YOSE Bernice Dommer (209) 379- 1033



In Partnership for nearly 100 years, the National Park Service and the United States Public Health Service have worked together to protect the health of visitors in Americas Parks!