Idaho Department of Health and Welfare

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Listeria: An Emerging Pathogen

Listeria monocytogenes, the causative agent of listeriosis, is a foodborne pathogen. Each year, the bacteria cause approximately 2,500 cases of listeriosis nationwide. Of these, around 2,300 persons are hospitalized and 500 persons die. The case fatality rate is high, with 20 deaths per 100 cases of illness.

Listeriosis can lead to spontaneous, late-term abortion or stillbirths in pregnant women and can cause a serious and sometimes fatal infection in those persons with weak immune systems – the frail or elderly, persons with chronic disease, persons with HIV infection or taking chemotherapy. The infectious dose is unknown but is presumably less in high risk groups.

High Risk Groups
Listeria infection is most problematic for pregnant women, newborns, and adults with weakened immune systems.

Listeriosis may appear flu-like and include a fever, muscle aches, and occasional gastrointestinal symptoms, such as nausea or diarrhea. Neck stiffness, confusion, loss of balance, or convulsions may also occur.

Clinical samples useful for *Listeria* testing include cerebrospinal fluid, whole blood, or stool (stool may take up to 6 months to grow an organism). Suspicious food items can also be tested.

The Food and Drug Administration (FDA) regularly institutes nationwide recalls of foods. During 1999, *L. monocytogenes* contamination was responsible for 45% of nationwide recalls (see graph for 1999 data). During the months of October and November 2000, there were seven recalls, five of which referred to products contaminated with *Listeria monocytogenes*.

Listeria monocytogenes is ubiquitous in soil and water, but is readily killed by pasteurization. Animals may be silent carriers. The consumption of contaminated milk and meat, particularly unpasteurized or raw products, is often the source of infection. Animals contaminate vegetables indirectly by the use of manure-based fertilizers. Post-processing contamination may also occur with improper food handling, particularly with soft cheeses and cold cuts at the deli counter.

Unlike other foodborne pathogens, *Listeria* will continue to grow at refrigerated temperatures (4°C, 39°F) and so the degree of contamination increases with storage.

FDA data from 1993-99 indicates that hot dogs and luncheon meats are two products of particular concern as vehicles for foodborne *Listeria monocytogenes*. The agency

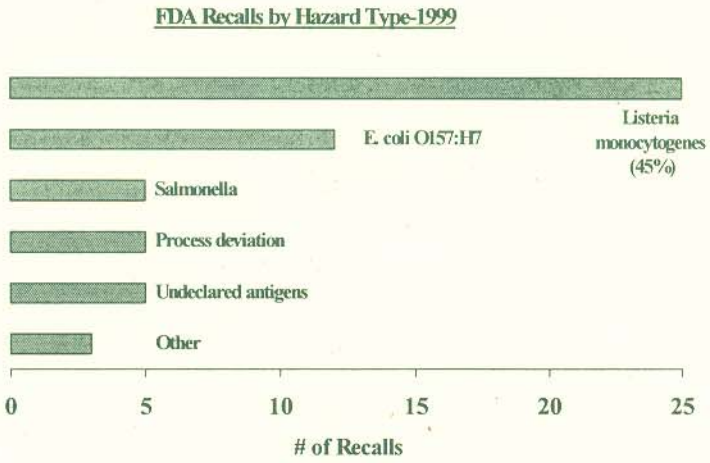
Listeriosis continued 2
Child Death Prevention 2
Cancer trends 3
Polio surveillance 4

is proposing various rule-making changes to increase safety standards for processed

Cook foods thoroughly
Avoid cross-contamination
Avoid unpasteurized/raw dairy

foods, and to increase microbiological testing before the products reach consumers. People at high risk for listeriosis and their family members, or individuals preparing food for them, should take the following precautions:

- Reheat until steaming-hot the following types of ready-to-eat foods: hot dogs, luncheon meats, cold cuts, fermented and dry sausage, and other deli-style meat and poultry products.
- Wash hands with hot, soapy water after handling these types of ready-to-eat foods. (Wash for at least 20 seconds.) Also wash cutting boards, dishes, and utensils.
- Avoid unpasteurized milk and soft cheeses, such as feta, Brie, Camembert, blue-veined or Mexican-style cheese.



Further information on *Listeria* infections is available on the U.S. Department of Agriculture website – www.fsis.usda.gov; or contact Epidemiology Services, Idaho Department of Health and Welfare, at 208-334-5939 or the Idaho Food Protection Program at 334-5938.

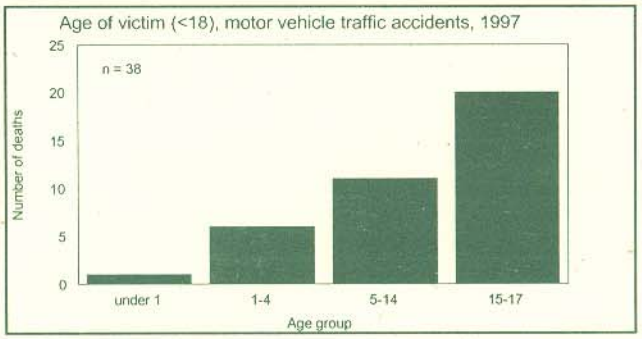
Listeria infections are reportable in the State of Idaho. Any confirmed or suspected case should be reported to the local health district or state health department within 7 days of suspicion. Public health investigators seek to determine the source of infection for every suspected or confirmed case of listeriosis.

New Report Emphasizes Prevention of Child Deaths in Idaho

Motor vehicle accidents were the most common cause of preventable child death in Idaho in 1997. That's one conclusion of a new report by the Idaho Child Mortality Review Team, which was established in 1998 by then-Governor Phil Batt. The report outlines the major causes of death among Idaho's children in 1997, and makes recommendations on ways in which future deaths might be prevented.

A few of the findings and conclusions include:

The majority of the 38 children killed in motor vehicle traffic accidents were teenagers (see figure). Inattention while driving, especially with other teenagers in the car, over-correction of vehicles that had gone off the road, and lack



of restraint use played major roles in the fatal accidents. During health visits, counseling of teenage patients by their physicians to emphasize seatbelt use and avoidance of drugs and alcohol could help reduce future deaths due to motor vehicle accidents.

Twenty babies died of Sudden Infant Death Syndrome (SIDS) in Idaho in 1997. Infants were sometimes put to sleep on their stomachs, placed

in very soft bedding, or co-sleeping with their care givers. Although the Idaho SIDS rate has declined, in part due to the national "Back to Sleep" campaign, Idaho continues to have a higher rate of SIDS than the nation as a whole. The following recommendations for care giver counseling to reduce SIDS are taken from an article that appeared in American Family Physician in 1998: "The major risk-reduction measures supported by available scientific research are (1) having health babies sleep in the supine position; (2) not exposing babies to cigarette smoke, either during pregnancy or after birth; (3) making the sleeping environment as safe as possible; and, possibly, (4) breast feeding rather than bottle feeding." The full mortality report is being distributed to coroners and child safety advocates around the state. To request a copy, call Diane Prince at 334-5930; the full report is also available on the Internet at: **www2.state.id.us/dhw/cmrt97.pdf.**

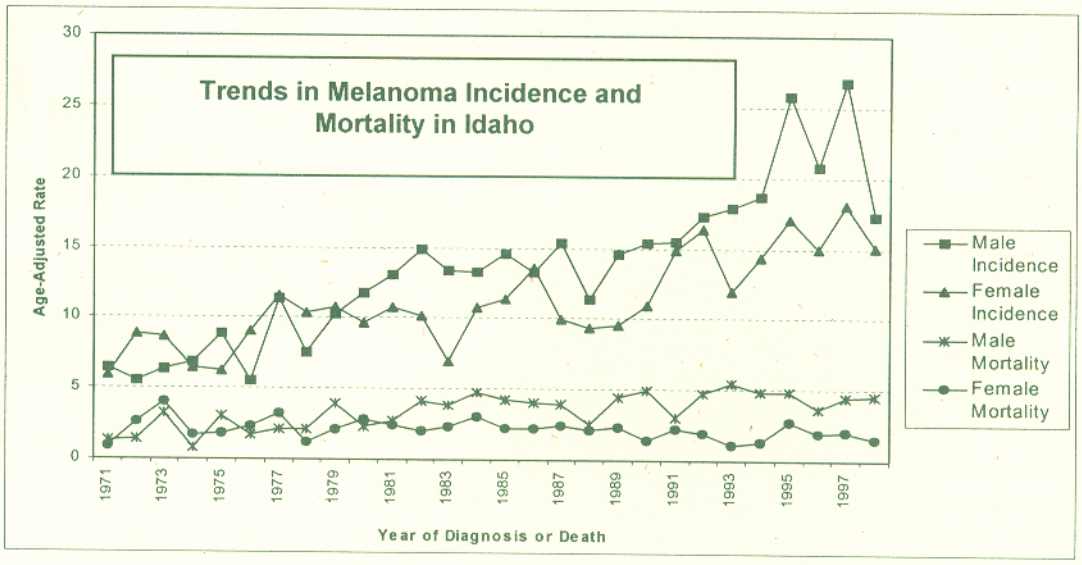
NEW REPORT ON CANCER TRENDS IN IDAHO

The first report to detail Idaho's cancer trends was published in October by the Cancer Data Registry of Idaho (CDRI). Overall, Idaho's rates are lower than national rates for many cancer sites (breast, colon, larynx, liver, lung), but rates are on the rise in Idaho and the nation for some preventable cancers (lung cancer among females, melanoma). The report shows trend information for 24 cancer sites and all sites combined. For each site, information is provided on the numbers of cases and deaths, age-adjusted incidence and mortality rates by sex and year of diagnosis, comparisons of Idaho to combined rates from other states, stage-specific rates, and maps depicting trends in five-year average cancer incidence by county.

Results showed, for example, that melanoma incidence and mortality increased significantly from 1971 to 1998. Most of the increase in melanoma incidence was for early-stage cases. Ada County had significantly higher rates of melanoma during three of the four five-year time periods studied.

The full report, "Cancer Trends in Idaho, 1971-1998," is available on the Internet at *http://www.idcancer.org*.

For more information or a copy of the full report, please contact Chris Johnson, CDRI's epidemiologist, at (208) 338-5100 x214.



CDC Recommends Enhanced Surveillance for Polio

Since July, 2000, nineteen cases of acute flaccid paralysis (AFP) have been identified in the Dominican Republic (DR) and one in Haiti. The outbreak virus strain associated with this syndrome is 97% genetically related to the oral polio vaccine (OPV) strain, which appears to have reverted in the local population, expressing the more virulent characteristics of the wild type polio virus. Due to frequent travel between the U.S. and Haiti or the DR, heightened awareness is required for the emergence of polio cases in the U.S. Contact the District or State Health Departments immediately if you see any AFP individuals, particularly with a travel history to the DR or Haiti. With any suspected case of poliomyelitis, clinicians should collect stool, throat swabs, paired serum, and CSF, when possible. Arrangements for testing should be made through the State Public Health Laboratory at 208-334-2235 x 228. In communities with low vaccine coverage, and the likelihood of introduction from this part of the world, special attempts should be made to improve immunization rates.

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