

Listeriosis

Summary

Listeriosis is caused by the bacterium *Listeria monocytogenes*. Infection results from ingestion of contaminated foods or from maternal transmission to the neonate. In high-risk individuals, listeriosis causes meningoenzephalitis and/or septicemia. Signs and symptoms can include fever, headache, nausea, vomiting, and signs of meningeal irritation. Neonatal infection can manifest as pneumonia, septicemia, and meningitis. Laboratory diagnosis can be made by culture of blood, cerebrospinal fluid (CSF), amniotic fluid or other tissues. Antimicrobial therapy is indicated for patients with listeriosis. Persons at high risk of complications from listeriosis should avoid soft cheeses (such as brie, feta, Camembert, Mexican-style cheeses); unpasteurized milk or milk products; deli meats; refrigerated smoked fish; cold salads from salad bars; and reheat until steaming leftover or ready-to-eat foods.

Agent

- Listeriosis is caused by *Listeria monocytogenes*, an aerobic, gram-positive bacillus.

Transmission

- Reservoir: The primary reservoir for *L. monocytogenes* is soil, forage, mud, and silage. Additional reservoirs include infected domestic and wild animals, fowl, and humans. Soft cheeses may support the growth of *L. monocytogenes* and have caused outbreaks. *Listeria* can multiply in refrigerated foods that are contaminated.
- Mode of Transmission: Foodborne transmission causes epidemics and sporadic infections. Implicated foods include contaminated unpasteurized milk, soft cheeses, prepared meats (such as hot dogs and deli meat), undercooked poultry, and unwashed raw vegetables. In pregnant women, asymptomatic fecal or vaginal carriage can result in neonatal infection.
- Period of Communicability: Infected individuals can shed the organism in their stool for several months. Mothers of infected newborn infants can shed the organism in vaginal discharge and urine for 7-10 days after delivery, rarely longer.

Clinical Disease

- Incubation period: Variable, may range from 1 day to more than 3 weeks; median incubation period for foodborne transmission is estimated to be 3 weeks.
- Illness: In normal hosts, the illness may be characterized by an acute, mild febrile illness. Those at highest risk are neonates, the elderly, immunocompromised individuals, and pregnant women. Maternal infection can be associated with fever, malaise, headache, gastrointestinal symptoms, and back pain; abortion or preterm delivery can be complications. In other adults and children, disease usually manifests as meningoenzephalitis and/or septicemia. Signs and symptoms can

include fever, headache, nausea, vomiting, and signs of meningeal irritation. Delirium, coma, and shock can occur. Neonatal infection can manifest as pneumonia, septicemia, or meningitis.

Laboratory Diagnosis

- The organism can be cultured from a variety of body fluids, including blood, cerebrospinal fluid (CSF), meconium, gastric washings, placenta, and amniotic fluid.
- Serologic tests might be indicated in an epidemiologic investigation, but may not be reliable.

Treatment

- Antimicrobial therapy is indicated for patients with listeriosis. Appropriate antimicrobial therapy includes ampicillin, penicillin, alone or in conjunction with gentamicin, depending on severity of illness. Treatment decisions should be made in conjunction with the patient's health care provider.

Surveillance

- **Case Definition:**
Confirmed – A clinically compatible case associated with isolation of *L. monocytogenes* by culture from a normally sterile site.
- **Reporting:** **Report all suspected or confirmed cases of listeriosis to the Epidemiology and Response Division (ERD) at 505-827-0006.** Information needed includes: patient's name, age, sex, race, ethnicity, home address, home phone number, occupation and health care provider.
- **Case Investigation:** Complete the CDC Listeria Case Form and mail to the Epidemiology and Response Division, P.O. Box 26110, Santa Fe, New Mexico 87501-6110, or fax to 505-827-0013. Investigation information should also be entered in NM-EDSS per established procedures.

Control Measures

1. **Case management**
 - 1.1. Isolation: None required.
 - 1.2. Prophylaxis: Not applicable.
2. **Contact management**
 - 2.1. Isolation: None required.
 - 2.2. Prophylaxis: Not applicable.
3. **Prevention**
 - 3.1. Persons at high risk of complications from listeriosis should avoid soft cheeses (such as brie, feta, Camembert, Mexican-style cheeses); unpasteurized milk or milk products; deli meats; refrigerated smoked fish; cold salads from salad bars; and reheat until steaming leftover or ready-to-eat foods.

- 3.2. Emphasize good hand hygiene practices (i.e., proper handwashing after using the toilet, changing diapers, and before and after handling food).
- 3.3. General guidelines for preventing foodborne illness include:
- Thoroughly cook raw food from animal sources;
 - Wash raw fruits and vegetables;
 - Avoid unpasteurized dairy products;
 - Wash hands, knives, and cutting boards after handling uncooked foods;
 - Use precooked and ready-to-eat foods as soon as possible;
 - Keep refrigerator set at 40 degrees Fahrenheit or colder.
- 3.4. Immunization: Not applicable.

Management of Listeriosis in Child Care Centers – Contact the Epidemiology and Response Division at 505-827-0006 for recommendations.

References

American Academy of Pediatrics. Pickering LK, ed. 2006 Red Book: Report of the Committee on Infectious Diseases. 27th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006.

Heymann, DL, ed. Control of Communicable Diseases Manual. 18th edition. Washington, DC: American Public Health Association; 2004.

U.S. Food and Drug Administration, (2005) *Listeria Fact Sheet* [Online] Rockville, MD, U.S. Food and Drug Administration. Available at: <http://www.fda.gov/womens/getthefacts/listeria.htm> [Accessed 27 December 2006]

Levy, Daniel, (2005) *Listeriosis* [Online] Baltimore, MD, MedlinePlus Medical Encyclopedia, National Institute of Health. Available at: <http://www.nlm.nih.gov/medlineplus/ency/article/001380.htm> [Accessed 27 December 2006]

LISTERIOSIS

What is listeriosis?

Listeriosis is a disease caused by eating food “dirtied” or contaminated with the *Listeria monocytogenes* bacteria.

What are the symptoms of listeriosis?

Symptoms usually occur about 3 weeks after exposure but may appear as soon as 1 day or more than 3 weeks after exposure. The disease may be mild or severe.

- Mild symptoms include fever and muscle aches and sometimes nausea or diarrhea. Healthy children and adults may not have any symptoms.
- Severe symptoms include sudden fever, intense headache, and stiff neck and confusion, loss of balance and convulsions. These may occur when the infection spreads to the nervous system or bloodstream. This is more likely to happen in newborns and adults with weak immune systems (e.g., persons with cancer, diabetes, or an organ transplant).
- If a woman is infected while pregnant, she may not feel very ill, but may have a premature delivery or even lose the baby as a result of infection. A baby can also become infected during the last trimester of pregnancy or during birth, and then become sick in the first 3 weeks of life.

How is listeriosis spread?

Eating or consuming raw or contaminated milk, soft cheeses, unwashed raw vegetables, undercooked poultry and ready-to-eat meats (like cold cuts) can cause infection. Listeriosis may also be spread from a pregnant woman to her baby in the womb or during birth.

How long are people contagious?

Infected humans can shed the bacteria in stool for several months. Mothers of infected newborn infants may shed the bacteria in vaginal discharges and urine for 7 to 10 days after delivery. This disease is not very contagious since the bacteria are not easily passed from one person to another.

Who gets listeriosis?

Anyone can get listeriosis, but there are certain groups of people more likely to get sick.

- Unborn babies and newborns
- Pregnant women
- Persons who have weak immune systems
- Elderly persons

What treatment is available for people with listeriosis?

Penicillin or ampicillin used alone or with other antibiotics are used to treat listeriosis. Antibiotics may be given to infected pregnant women to prevent illness in the baby.

Do infected people need to be kept home from school, work or daycare?

Since the bacteria are passed in stool, people with diarrhea should be excluded from day care, patient care, and foodhandling. Most infected people may return to work or school when their diarrhea stops, provided that they carefully wash their hands after using the toilet and before preparing and/or eating food.

How can I protect myself and my family from getting listeriosis?

- Pregnant women and persons with weak immune systems should *not* eat soft cheeses such as feta, Brie or “queso fresco”.
- Avoid raw milk and other unpasteurized dairy products.
- Wash hands frequently with water and soap. (Sanitizing gel may be substituted when hands are not visibly soiled.)
- Immediately wash cutting boards and counters used for preparation to prevent cross contamination with other foods.
- Ensure that the correct internal cooking temperature is reached particularly when cooking using a microwave.



LISTERIOSIS

¿Qué es la listeriosis?

Es una enfermedad causada por comer alimentos contaminados con la bacteria *Listeria monocytogenes*.

¿Cuáles son los síntomas de la listeriosis?

Los síntomas normalmente aparecen como 3 semanas después de haber estado expuesto, pero pueden aparecer en tan sólo un día o más que 3 semanas después el expuesto. La enfermedad puede ser leve o grave.

- Los síntomas leves incluyen fiebre y dolores musculares y, a veces, diarrea o náuseas. Los niños y adultos que están sanos pueden no tener ningún síntoma.
- Los síntomas graves incluyen aparición repentina de fiebre, dolor de cabeza intenso, rigidez en el cuello y confusión, pérdida del equilibrio y convulsiones. Estos pueden ocurrir cuando la infección ha pasado al sistema nervioso o a la sangre. Es más posible que ocurra en recién nacidos y adultos cuyo sistema inmunológico está debilitado (por ejemplo, porque tienen cáncer, diabetes o han recibido un trasplante).
- Si una mujer embarazada contrae la infección, puede que no se sienta muy enferma, pero es posible que tenga el bebé antes de tiempo o incluso pierda al bebé a consecuencia de la infección. Un bebé también puede contraer la infección durante el último trimestre del embarazo o en el momento del parto, y entonces enfermarse durante sus tres primeras semanas de vida.

¿Cómo se transmite la listeriosis?

Se puede contraer la infección, si se consume leche cruda (sin pasteurizar) o contaminada, quesos blandos, verduras crudas sin lavar, carne de ave que no está bien cocinada y embutidos. La listeriosis también se puede transmitir de madre a hijo durante el embarazo o en el parto.

¿Por cuánto tiempo pueden las personas con listeriosis contagiar a otros?

Las personas infectadas pueden expulsar la bacteria en sus heces por meses. Las madres de recién nacidos que se han infectado pueden tener la bacteria en las secreciones vaginales y orina por casi dos años (7-10 días) tras el parto. Esta enfermedad no es muy contagiosa, ya que la bacteria no se pasa fácilmente de persona a persona.

¿Quién puede contraer la listeriosis?

Cualquiera puede contraer listeriosis, los grupos de mayor riesgo son:

- Bebés que todavía no han nacido y recién nacidos
- Mujeres embarazadas
- Personas cuyo sistema inmunológico está debilitado
- Personas mayores

¿Cómo se trata la listeriosis?

Se usa la penicilina o ampicilina junto con otros antibióticos. Se puede dar antibióticos a las mujeres embarazadas que tengan la infección para prevenir que se pase al bebé.

¿Es necesario quedarse en casa y no ir a la escuela, a la guardería o al trabajo?

Como la bacteria se encuentra en las heces, las personas que tengan diarrea no deben ir a la guardería, tampoco deben trabajar las personas que tratan a pacientes o que manipulan alimentos. La mayoría de los infectados pueden regresar al trabajo o la escuela cuando dejen de tener diarrea, pero tienen que llevar especial cuidado y lavarse bien las manos después de usar el baño o antes de preparar comida.

¿Cómo puedo protegerme yo y proteger a mi familia contra la listeriosis?

- Las mujeres embarazadas y los que tienen su sistema inmunológico debilitado **no deben comer** quesos blandos como feta o brie.
- Evite la leche cruda y otros productos lácteos sin pasteurizar
- Lávese las manos con frecuencia con agua y jabón. (En lugar de lavárselas puede usar un gel desinfectante para manos cuando no se vean sucias).
- Lave los tableros para cortar de inmediato y también los mostradores que se hayan usado para preparar comida, de esta forma evita que otras cosas se puedan contaminar.
- Cuando cocine, asegúrese de que los alimentos alcancen la temperatura de cocción interna correcta, sobre todo si usa un microondas.



Epidemiology and Response Division
505-827-0006

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