

July 30, 2024

Re: Clinical Guidance for Plant-Based Beverages and Outbreak of *Listeria* Infections

## Issue

An outbreak of *Listeria* that is linked to various Silk® and Great Value plant-based refrigerated beverages has been declared at a national level by the Public Health Agency of Canada. On July 26, Alberta was confirmed to have a case matching the cluster. In total, there are 18 cases across Canada: AB (1), ON (12), QC (4) and NS (1). There have been 13 hospitalizations and 2 deaths.

Public Health Agency of Canada updates may be found [here](#).

### What is *Listeria*?

*Listeria* are common bacteria found in soil and decaying vegetation as well as in numerous animal species, water and sewage. It can also be a low-level contaminant in processed and unprocessed foods of plant and animal origin that can survive and multiply at refrigerator temperatures. Infections with *Listeria* (usually *Listeria monocytogenes*), or listeriosis, are uncommon, with one to 15 infections reported per year in Alberta since 2000.

### Risk factors for serious infections from *Listeria*

Serious infection from *Listeria* is uncommon. Individuals at most risk for serious infection are neonates, anyone over age 60 years of age, and/or those who are immunosuppressed, whether due to disease or medications (especially steroids). Pregnant people are at risk of infection that may result in miscarriage, stillbirth, premature delivery, or serious infection in the newborn.

### What are the symptoms of infection with *Listeria*?

1. **Acute Self-Limited Febrile Gastroenteritis** – Ingestion of a large amount of *Listeria* in contaminated food can cause fever, watery diarrhea, nausea, vomiting, headache and joint/muscle pain. Onset is usually within a few hours to 10 days of consuming contaminated product, lasts one to two days and resolves without treatment. There is no role for routine stool cultures, as *Listeria* can be found in stool of healthy people.
  2. **Invasive Listeriosis** – *Listeria* has potential to cause serious, invasive disease including bloodstream infection and meningococcal meningitis, and infections in pregnant people. Onset is usually within seven to 10 days of consuming
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contaminated product with the vast majority occurring within four weeks (and rarely up to 12 weeks).

- a. **Bloodstream Infection (Septicemia)** – Fever and chills (with or without prior gastrointestinal symptoms)
- b. **Central Nervous System Infections (Meningoencephalitis)** – Fever and change in mental status, with or without meningitis (headache, neck stiffness)
- c. **Infections in Pregnancy** – Febrile gastroenteritis and bloodstream infections are most commonly diagnosed in the third trimester. Consider listeriosis in pregnant people who have consumed contaminated product and develop fever, myalgia, abdominal or back pain, nausea, vomiting or diarrhea.

**Approach to those exposed to contaminated or recalled product<sup>1</sup>:**

- Testing for *Listeria* in asymptomatic individuals is not recommended.
- Laboratory testing may be warranted for symptomatic individuals at risk for severe disease (see Table). Routine cultures of blood, CSF and sterile sites will detect *Listeria*. Food product testing requires direction from a Medical Officer of Health/Environmental Public Health.
- Systemic infections with *Listeria* are serious and may be complex. Clinical consultation for expert input is recommended in management of these infections.

<b>Presentation</b>	<b><i>Listeria</i> Testing Recommendations</b>
Asymptomatic or resolved symptoms (with or without Risk Factors – see above)	<ul style="list-style-type: none"> <li>• No testing recommended; counsel regarding symptoms of listeriosis and to consult a health care provider should these develop within three months of the last exposure event.</li> </ul>
Acute afebrile gastroenteritis and <u>no</u> risk factor for severe illness (see Risk Factors above)	<ul style="list-style-type: none"> <li>• No testing for <i>Listeria</i> recommended; counselling as above.</li> <li>• Stool testing for bacterial, <i>C. difficile</i> (where appropriate), viral and/or protozoal pathogens for alternate diagnoses of severe or persistent symptoms, as clinically indicated.</li> </ul>

<sup>1</sup> Modified from Public Health Ontario: <https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Listeria-monocytogenes-Confirmation-Serotyping/Listeriosis-Clinical-Testing-Information>

<p>Acute afebrile gastroenteritis <u>with Risk Factors</u> for severe illness (see above)</p>	<ul style="list-style-type: none"> <li>• Counselling; Stool testing for alternate diagnoses, as above</li> <li>• Consider collecting two sets of routine bacterial <b>blood cultures</b> if symptoms are not improving within 24 - 48h</li> </ul>
<p>Acute <b>febrile</b> (<math>\geq 38.1^{\circ}\text{C}</math>) gastroenteritis</p>	<ul style="list-style-type: none"> <li>• Collect two sets of routine bacterial <b>blood cultures</b></li> <li>• Stool testing for alternate diagnoses, as above</li> <li>• Assess need for empiric treatment pending culture results (especially if risk factors for severe illness)</li> </ul>
<p><b>Signs and symptoms of invasive</b> listeriosis. (bloodstream infection and/or CNS Infection)</p>	<ul style="list-style-type: none"> <li>• Collect two sets of routine bacterial blood cultures</li> <li>• With neurological involvement, consider collecting CSF for cell count, protein, glucose and bacterial culture</li> <li>• Additional bacterial cultures as indicated (e.g. joint, pleural, pericardial, respiratory)</li> <li>• Assess need for empiric treatment pending culture results</li> </ul>
<p><b>Pregnant with gastroenteritis or symptoms of invasive infection</b></p>	<ul style="list-style-type: none"> <li>• Consider listeriosis if exposed to contaminated or recalled product and having relevant symptoms (see above)</li> <li>• Collect two sets of blood cultures (and stool studies, as clinically indicated – see above)</li> <li>• Consider presumptive antibiotic therapy</li> </ul>

Thank you for your attention in this matter.

Sincerely,



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