

Listeriosis Investigation: Situational Update and Lab Testing Information

Attention: All Physicians, Walk-In Clinics, Emergency Departments, Infection Control Practitioners, Long Term Care Homes, Rest and Retirement Homes

Date: February 2, 2016

Further to our [HealthFax](#) of January 25, 2016, this is a situational update and lab testing information pertaining to the current Listeriosis investigation.

There are currently seven confirmed Listeriosis cases in Ontario under investigation. The majority of these cases are older adults who became sick with Listeria between May 2015 and January 2016. Within Simcoe County and the District of Muskoka there has been one case of Listeriosis in 2016, which is currently under investigation to determine if there is a link to the provincial outbreak. Simcoe Muskoka on average experiences two cases per calendar year.

The source of the federally-led Listeriosis cluster was confirmed to be certain **Dole and PC Organics brands of pre-packaged leafy green products that were recalled on January 22, 2016**. To date, the source of illness for cases in the provincially-led investigation has not been confirmed. However, leafy greens, salad blends and salad kits are food items being investigated. It is uncertain whether there is a link between the federal and provincial investigations at this time. The investigations are ongoing.

Listeriosis is a rare but potentially serious food-borne illness that can severely affect the elderly, pregnant women and individuals with weakened immune systems. Symptoms may include vomiting, nausea, diarrhea, cramps, severe headache, constipation and persistent fever. In severe cases, these symptoms may be followed by meningitis encephalitis and/or septicemia, either of which can result in death.

- The incubation period for Listeriosis is from 3 to 70 days with an average incubation period of 3 weeks.
- **Testing is not recommended for those who have eaten the recalled products but do not have symptoms.**
- **Laboratory confirmation is generally obtained through routine cultures of blood, CSF and other potentially involved anatomic sites (e.g. joint, pleural, pericardial fluid) for the isolation of *Listeria monocytogenes*. Please submit specimens through your routine outpatient or hospital laboratory testing site for culture requesting testing for Listeria.**
- **Stool cultures for Listeria are only available through the public health lab and are only recommended for those ill and pregnant, immunocompromised or 65 years of age and can take up to two weeks.**

The attached [Lababstract](#) provides detailed information on clinical and food testing with regard to outbreaks of Listeria.

For further information please contact the Communicable Disease team at (705) 721-7520 ext. 8809.

Labstract – January 2016

***Listeria monocytogenes* – Clinical and Food Testing Guidelines for Foodborne Illness Outbreaks**

To Health Care Providers,

Listeriosis is a foodborne illness that usually presents as a self-limited syndrome with malaise, fever, and diarrhea with no further untoward outcome. In a minority of cases, particularly in the immunocompromised, neonates, elderly and pregnant women, illness such as bacteremia, meningitis, and fetal loss can ensue. Ingestion of suspect food by healthy or immunocompetent persons does not necessarily result in infection with *Listeria*.

These guidelines are applicable during an outbreak investigation or when there is a known contaminated or recalled food product. The guidelines address both clinical testing and food testing for *Listeria*.

Individuals with symptoms of meningitis and/or invasive disease require clinical laboratory testing, regardless of consumption of a known contaminated or recalled food product. The optimal clinical specimens for suspected, symptomatic cases of listeriosis are blood cultures.

Listeria stool testing should ONLY be submitted to the Public Health Ontario Laboratory (PHOL) for symptomatic, high risk persons (i.e., immunocompromised, 65 years of age and over, pregnant women) with known consumption of a contaminated or recalled food product. Stool specimens submitted will be forwarded to Health Canada for testing however they may not be very helpful in clinical management as it takes up to 2 weeks from sample collection to final results and may have a lower sensitivity.

Testing for *Listeria* in asymptomatic people who consumed a contaminated or recalled food product is not required.

CLINICAL TESTING FOR *LISTERIA*

Clinical symptoms/ exposure	Host affected	Testing recommended	Where to submit testing
Asymptomatic with consumption of a known contaminated or recalled food product	All hosts, including immunocompromised, pregnant and those 65 years of age or older	<p>None</p> <ul style="list-style-type: none"> Counsel regarding potential symptoms of gastroenteritis and invasive listeriosis and to consult a health care provider should these develop 	Not applicable
<p>Gastroenteritis with or without fever and no other symptoms</p> <p>AND</p> <p>consumption of a known contaminated or recalled food product</p>	Immunocompetent hosts who are not pregnant and not 65 years of age or older	<ul style="list-style-type: none"> Stool for routine culture and susceptibility as per usual practice Stool testing for <i>Listeria</i> is not indicated Counsel regarding potential symptoms of invasive listeriosis and to return to the health care provider should these develop If evidence of fever within 24 hours of clinical assessment, may consider 2 sets of routine blood cultures (which detect <i>Listeria spp.</i>) 	<ul style="list-style-type: none"> Routine stool and blood cultures can be submitted to a hospital laboratory with a hospital requisition or a commercial laboratory with an OHIP requisition* Routine blood or stool cultures are not available at PHO
	Pregnant, immunocompromised, or 65 years of age or older	<ul style="list-style-type: none"> Stool for routine culture and susceptibility as per usual practice If evidence of fever within 24 hours of clinical assessment, may consider 2 sets of routine blood cultures (which detect <i>Listeria spp.</i>) Stool cultures for <i>Listeria</i> can be considered (these can be submitted to PHOL in a sterile urine container for testing at Health Canada). Of note, stool culture for <i>Listeria</i> may not be very helpful in clinical management, as it may have a lower sensitivity and takes up to 2 weeks from sample collection to final results. Counsel regarding potential symptoms of invasive listeriosis and to return to the health care provider should these develop 	<ul style="list-style-type: none"> Routine stool and blood cultures can be submitted to a hospital laboratory with a hospital requisition or a commercial laboratory with an OHIP requisition* Routine blood or stool cultures are not available at PHO Stool cultures for <i>Listeria</i> can be submitted to PHOL in a sterile urine container for testing at Health Canada. These specimens must be accompanied by a PHO laboratory requisition
Evidence of systemic involvement suggested by headache, stiff neck, confusion, loss of balance, or convulsions in addition to fever and muscle aches, REGARDLESS of exposure to a known contaminated or recalled food product	All hosts	<ul style="list-style-type: none"> Routine blood cultures (which will detect <i>Listeria spp.</i>). Two sets of blood cultures should be taken from different sites. A third set of blood cultures should be drawn only if endocarditis is suspected. Collect another set of blood cultures after 48 hours if the previous cultures are negative and there is ongoing concern of invasive infection with <i>Listeria monocytogenes</i>. If clinical assessment is suggestive of possible neurological involvement (meningitis or meningoenzephalitis), consider lumbar puncture and bacterial culture of cerebrospinal fluid Culture of other potentially involved anatomic sites as needed (e.g., joint, pleural, pericardial fluid, sputum) 	<ul style="list-style-type: none"> Routine blood and other sterile site cultures can be submitted to a hospital laboratory with a hospital requisition or a commercial laboratory with an OHIP requisition* Blood or cerebrospinal fluid cultures are not available at PHO

NB. Serology for *Listeria* is not available.

*If clinical specimens are positive for *Listeria monocytogenes*, the hospital or commercial laboratory should forward isolates to PHOL for molecular subtyping.

FOOD TESTING FOR LISTERIA

Food testing at PHOL is performed to support local public health units to identify contaminated food products linked to human illness and mitigate ongoing exposure and risk.

Suspect foods can be submitted for testing to PHOL for laboratory-confirmed cases of listeriosis, to support a foodborne illness investigation after assessment by the local public health unit.

Food products that are already recalled are generally not tested. A recalled product may be considered for testing only for laboratory-confirmed clinical cases of listeriosis following an assessment by the local public health unit and Public Health Ontario.

For further information:

- Contact the PHOL Customer Service Centre at 416-235-6556 or 1-877-604-4567 (toll-free), or by email at CustomerServiceCentre@oahpp.ca
- For PHOL specimen collection information and previous Lababstracts, refer to <http://www.publichealthontario.ca/Labs>
- The current version of the PHOL General Test Requisition and other forms are available at <http://www.publichealthontario.ca/Requisitions>
- To subscribe to future Lababstracts, email lababstracts@oahpp.ca
- To register for Autofax and receive laboratory reports by fax directly from our laboratory information system as soon as they are released, contact the PHOL Customer Service Centre.