



Sudbury & District

Health Unit

Service de
santé publique

Fall/Winter 2017 • Issue 91

THE Advisory

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Message from the Medical Officer of Health

Dear Colleagues,

This fall/winter edition of *The Advisory* covers a wide array of public health topics that are of importance to your practice.

Many parents and caregivers have challenges monitoring and limiting screen time by young children. We have included a guide to counselling and questions to consider asking families with young children about their screen time. In addition, in 2018 the Health Unit will start offering a new topic as part of the Academic Detailing Program (ADP)—Lyme disease.

This edition also includes information about learning and teaching others about environmental hazards, sodium in drinking water, as well as an emerging parasitic infection—*Echinococcus multilocularis*.

Please accept my very best wishes for you and your close ones in 2018.

Sincerely,

Dr. Penny Sutcliffe, Medical Officer of Health

Academic detailing: Personalized continuing professional development in your office

Jodi Maki, MPH, Health Promotion

What is the Academic Detailing Program (ADP)?

Launched in 2016, the ADP acknowledges the key role that primary care practitioners play in promoting and protecting the health of our communities. The ADP was developed to help primary care providers bridge knowledge and skill gaps on a variety of public health issues encountered in practice.

Once a relevant topic is identified, the Health Unit identifies and develops evidence-based clinical tools to be adapted to local practices. This includes local public health and other community resources so that you know what kind of services are available for your patients.

When you sign up for a session, an Academic Detailer will meet with you in your practice setting at a time that is convenient for you, and the session will be tailored to what you want to learn. Over 15–20 minutes, the Detailer will demonstrate how to use evidence-based and pragmatic clinical tools developed for the session, answer your questions, and provide relevant local public health and community resources for your patients.

Topic: Low Milk Supply (2017, ending in March 2018)

Why low milk supply? On average, 79% of mothers in the Sudbury and Manitoulin districts have the intention to breastfeed. However, by the time the baby is 6 months old, only 16% of mothers are breastfeeding exclusively¹. Insufficient milk supply is reported as the number one reason why mothers stop breastfeeding².

What will you learn during this session? The learning outcomes include:

1. Know and discuss breastfeeding norms.
2. Assess breastfeeding using evidence-based tools.
3. Protect the milk supply.
4. Ensure the mother is followed up by a lactation educated health care provider.

This Group Learning program has been certified by the College of Family Physicians of Canada and the Ontario Chapter for up to 0.5 Mainpro+ credits.

Don't miss out! Sessions on the Low Milk Supply topic will only be available until March 9, 2018.

To sign up for a session or for more information, please call Jodi Maki at 705.522.9200, ext. 285 or email adp@sdhu.com.

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- 1 BORN Ontario. BORN Information System [Internet]. (2015) Ottawa, ON: Available from: <https://www.bornontario.ca/en/born-information-system/>
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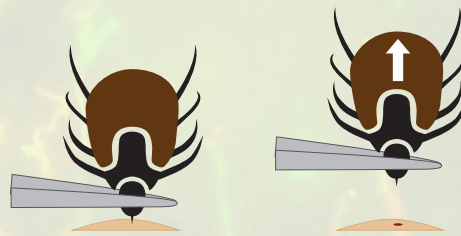


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2018 topic: Lyme disease

Based on input from ADP participants, we are pleased to announce that Lyme disease has been selected as the topic for 2018, which will begin in the spring. Stay tuned for more information.



Transitioning from quadrivalent to nine-valent human papillomavirus vaccine (HPV9)

Stephanie Vendetti-Hastie, Clinical Services

HPV9 (Gardasil®9) was authorized for use in Canada in February 2015 and was included in the Ontario Publicly Funded Immunization Schedule as of September 5, 2017. It is publicly funded for and administered to Grade 7 students as part of the Sudbury & District Health Unit school-based vaccination program. It is also funded for individuals meeting select high-risk criteria as outlined in the publicly funded schedule.

HPV9 can be used as a 2-dose series for individuals 9 to 14 years of age and a 3-dose series for students who start their series on or after their 15th birthday. Eligible students can receive HPV vaccine up until the end of Grade 12.

Students who have started their HPV4 vaccination series and have received some but not all of the required HPV4 doses are to complete their vaccine series with HPV4. There are currently no indications to provide HPV9 to students who have previously received HPV4 vaccine.

Requests for release of HPV vaccine to health care provider offices can be arranged where special circumstances require. Please contact our office to make arrangements.

References

- Ministry of Health and Long-Term care. Ontario Publicly Funded Immunization Schedule. December 2016.

Echinococcus multilocularis: An emerging parasitic infection in Ontario

Holly Browne, Environmental Health

Key message for health care practitioners

Echinococcus multilocularis (*E. multilocularis*) is a rare parasitic tapeworm that may now be endemic to Ontario. It can be transmitted from canids (dogs, coyotes, foxes) to humans. It causes a slowly-progressive infection that almost certainly fatal if left untreated. Animal and human health practitioners should be aware of this parasite.

Public Health Ontario (PHO) has developed a fact sheet and guidance document for health care providers to learn more about this parasite.^{3,4}

The key messages are provided for you in this article.

What is *Echinococcus multilocularis*?

E. multilocularis is one of the four *Echinococcus* species of parasitic tapeworms known to cause disease in humans. Infection results in alveolar echinococcosis. Multiple cases of the infection have been identified in domestic canids in Southern Ontario. As they can transmit the parasite to humans, this raises the possibility that it will become an emerging infection among Ontario's population.

How might my patients be exposed?

Canids are the definitive host, harbouring the adult form of the parasite in their intestinal tract. Eggs are passed in feces and infect the intermediate hosts (rodents), forming alveolar hydatid cysts that spread throughout the body. The infected rodents are ingested by the definitive host, completing the life cycle. However, humans may be exposed to infected canid feces and develop alveolar echinococcosis.

What are the signs and symptoms?

Alveolar hydatid cysts have a 5–15 year incubation period prior to developing clinical signs and symptoms. Presenting complaints are consistent

with hepatic disease including malaise, weight loss, and right upper quadrant pain. Symptoms consistent with hepatic duct involvement include jaundice, cholangitis, portal hypertension and Budd-Chiari syndrome may all occur. The disease can be confused with hepatocellular carcinoma at initial presentation. Extra-hepatic involvement is very rare, affecting less than 1% of cases.

If left untreated, the disease has a case fatality as high as 90% within 10 years of onset of clinical symptoms, and virtually 100% by 15 years.

How do I test for *E. multilocularis*?

Alveolar hydatid in humans is diagnosed through serological confirmatory testing and supported by compatible radiographic imaging (i.e. abdomen CT scan or MRI) and histopathology of biopsied tissue. Serologic testing for alveolar hydatid cysts is not performed in Canada. Rather, serum specimens with a requisition for "alveolar hydatid" or "*E. multilocularis*" are sent for reference laboratory testing in Switzerland, after approval of the request by the PHO Laboratory parasitologist. Testing information is found here: <http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Specimen-Collection.aspx>.

How do I treat *E. multilocularis*?

Early diagnosis and treatment with albendazole improves life expectancy significantly. Preventive measures are important and are outlined in "Key messages for your patients".

References:

- Ontario Agency for Health Protection and Promotion (Public Health Ontario). *Echinococcus multilocularis*: Five things for clinicians to know. Toronto, ON: Queen's Printer for Ontario; 2017.
- Ontario Agency for Health Protection and Promotion (Public Health Ontario). *Echinococcus multilocularis*: Information for health care providers. Toronto, ON: Queen's Printer for Ontario; 2017.

Key messages for your patients:

- Practise good hygiene when handling canine feces.
- Avoid exposure to wildlife feces.
- Practise basic hygiene, particularly handwashing after exposure to areas where canids may have defecated.
- Ensure routine (monthly) treatment of dogs that may be exposed to infected rodents. These would include, for example, dogs that are allowed to roam or that have access to rodent habitats in parks and gardens. Consider deworming treatments with anti-parasitic medications indicated for *E. multilocularis* infection.

Changes regarding non-medical exemptions for mandatory school vaccines

Stephanie Vendetti-Hastie, Clinical Services

As of September 1, 2017, amendments to the *Immunization of School Pupils Act* (ISPA) have strengthened the requirements for parents and legal guardians who seek to obtain conscientious or religious exemptions for mandatory school vaccines.⁶

In accordance with the legislation, parents and guardians who are considering not vaccinating their children for non-medical reasons must now participate in an education session provided by their local public health unit. This new requirement is in addition to completing and submitting a “Statement of Conscious or Religious Belief” form that has been witnessed by a Commissioner for Taking Affidavits.

For parents/guardians seeking non-medical exemptions, the Sudbury & District Health Unit now offers, by appointment, individual education sessions in the form of a standardized video module. Please refer any of your patients who are seeking non-medical exemptions for vaccination to the Health Unit so that we can provide them with further information or can book them an appointment for an educational session.

References

- ⁶ Ontario Ministry of Health and Long-Term Care (May 2016). Ontario Strengthening Requirements for School Vaccine Exemptions [Press release]. Retrieved from <https://news.ontario.ca/mohlhc/en/2016/05/ontario-strengthening-requirements-for-school-vaccine-exemptions.html>

Sodium in drinking water supplies in the Sudbury and Manitoulin districts

Burgess Hawkins, Manager, Environmental Health

Sodium levels are routinely monitored in all government regulated water supplies in the province of Ontario.

The aesthetic objective for sodium in drinking water is 200 mg/L, at which point it can be detected by a salty taste. Sodium is not considered a toxic element. Therefore, a maximum acceptable concentration for sodium in drinking water has not been specified.

The average intake of sodium from water is only a small fraction of that consumed in a normal diet (see inset). However, persons suffering from hypertension or congestive heart failure may require a sodium-restricted diet, in which case the intake of sodium from drinking water could become significant. The local Medical Officer of Health is required to be notified when the sodium concentration exceeds 20 mg/L, so that this information can be passed on to local physicians.

Sodium in common foods

Below are some examples of sodium content from *Health Canada's Nutrient Value of Some Common Foods, 2008* (http://www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/nutrient_value-valeurs_nutritives-tc-tm-eng.php).

For information on reducing dietary sources of sodium to maintain a healthy lifestyle, visit www.sdhu.com.

Table 1. Sodium content from Health Canada's Nutrient Value of Some Common Foods, 2008

Common Food	Measure	Sodium (mg)
Bread, whole wheat, commercial	1 slice	184
Milk, skim	250 mL	109
Chicken, broiler, breast, meat, roasted	75g	56
Soup, chicken vegetable, chunky	250 mL	1 128
Potato chips, plain	1 small bag	229
Pickles, cucumber, dill	1 medium pickle	833
Olives, pickled, canned or bottled	4	249

Note: This publication lists the nutrients most relevant in terms of public health and contribution to the food supply of 1 100 of the most commonly consumed foods in Canada.



Water systems reported to have sodium concentrations higher than 20 mg/L are listed below.

Table 2. Water systems reported to have sodium concentrations higher than 20 mg/L			
Facility	Location	Date	Sodium concentration (mg/L)
C. A. MacMillan Place Well Supply	Webbwood	2015	20.9 – Resample 20.4
Chapleau Drinking Water System	Chapleau	2013	23.7; Resample 22.8
Dowling Drinking Water System	Dowling	2015	29.2 to 35.0 – Resample 30.3 to 35.6
Falconbridge Drinking Water System	Falconbridge	2015	21.7 to 25.3 – Resample 21.1 to 28.2
Gervais Trailer Park	Chapleau	2015	155
Gogama Well Supply	Gogama	2013-2014	22.9 – Resample 21.8
Humarcin Residents' Organization	Sudbury	2017	106
Maytown Mobile Home Village	Massey	2013	45.6 – Resample 46
Onaping/Levack Drinking Water System	Onaping/Levack	2015	65.7 – Resample 52.9
Peace Valley Trailer Park	Wahnapitae	2011	107.1
Résidence des pionniers de Noëlville	Noëlville	2015	90.2 – Resample 91.2
Sudbury Drinking Water System – David Street	Sudbury South End	2015	52.8 – Resample 52.3
Sudbury Drinking Water System – Garson	Garson	July/November 2015	24.5/58.5 – Resample 23.0/56.4
Valley Drinking Water System	Valley East	May/November 2015	24.2 to 34.4/26.6 to 72.6 – Resample 30.9/26.2 to 70.1
Warren Well Supply	Warren	2017	105 – Resample 104

Resamples are taken if the original sample is over 20 mg/L to confirm results.

Many of the distribution systems within a community may reflect a blended supply of water. Details regarding specific water supplies can be obtained by contacting the local municipal office.

Educational opportunity: Learn and teach others about environmental hazards

Chelsey Bertrand, 4th year medical student, University of Ottawa

Environmental hazards impact the health of our population, in particular, children, the elderly, and people with chronic respiratory or cardiovascular conditions⁵.

To increase awareness of these hazards, Health Canada has developed a “train-the-trainer” program for health professionals. Participants learn and provide outreach to primary health care providers regarding the health risks of radon, air quality, and climate change⁶.

Knowledge around these topics is limited in the community and further outreach is needed to increase public awareness.

These topics are briefly outlined on the next page.

Consider becoming an environmental health champion by engaging with and educating other health professionals about environmental health hazards. This is an effort to prepare primary care clinicians for counselling patients to limit exposure to these health hazards to improve their overall health and well-being. The process of the program is simple:

1. **Become trained** – through Health Canada webinars, and courses through the University of British Columbia and McMaster University
2. **Provide outreach regionally** – by conducting self-generated outreach activities to primary care clinicians in your local region with the newly-acquired knowledge of environmental risks
3. **Receive compensation** – for efforts in educating other health professionals and improving their skills in preventing, detecting, and managing patient risks and exposures⁶

For further information on the Educational Outreach to Health Professionals on the Air Quality Health Index, Climate Change, and Radon program, please visit the College of Family Physicians of Canada at http://www.cfpc.ca/uploadedFiles/Health_Policy/PDFs/AQHI%20CC%20Radon%20Recruitment%20Flyer_FINAL_13Jun2017.pdf.

For more information about these environmental health hazards, please visit www.sdhu.com or contact our Environmental Health Division at 705.522.9200, ext. 464.

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- 11 *Radon - Sudbury & District Health Unit*. (2015). Sudbury & District Health Unit. Retrieved 12 October 2017, from <https://www.sdhu.com/health-topics-programs/environment/air-quality/radon>

Environmental hazards

Air Quality Health Index (AQHI) ⁹	Climate Change / Extreme Heat ¹⁰	Radon ¹¹
<p>The AQHI is a Ministry of Environment and Climate Change (MOECC) indicator of air pollutants (ozone, fine particulate matter, nitrogen dioxide, carbon monoxide, sulfur dioxide, and total reduced sulfur compounds) with the potential to have negative effects on human health and environment.</p> <p>Air quality is rated as good or very good, moderate, poor or very poor, and accompanied by health messages on adjusting outdoor activity levels for the general and at-risk populations.</p>	<p>Climate change can increase the frequency, duration, and intensity of high temperature and high humidity events.</p> <p>Risks to health from extreme heat events include dehydration and illnesses including heat exhaustion, heat stroke, heat rash and even death.</p> <p>Anyone can suffer from heat-related illnesses. Those at higher risk include persons living in places without adequate cooling systems, persons experiencing homelessness, and those who exercise or work outdoors.</p>	<p>Radon breaks down in the lungs, emitting alpha particles that can damage surrounding tissue and develop into lung cancer. Radon is the second leading cause of lung cancer, after smoking. It affects both smokers and non-smokers, with smokers at a higher risk of developing lung cancer.</p> <p>It is a natural gas found in soil that can move up through the ground into household basements and into the air that we breathe.</p> <p>Because it is not visible, and is tasteless and odourless, it is important to test for radon through certified professionals or through home testing kits. A "long term test device" is recommended by Health Canada.</p>
<p>The SDHU issues smog advisories when indicated, promotes the use of the AQHI, and works with the MOECC on local air quality issues.</p>	<p>The SDHU communicates health precautions to the community when heat warnings are issued by Environment and Climate Change Canada.</p> <p>The City of Greater Sudbury and the SDHU have developed a Heat Response Plan to respond to potential adverse heat events. The Health Unit is also contacting smaller municipalities to discuss developing their own plans.</p>	<p>Additional information on radon can be found on the SDHU website at www.sdhu.com.</p>

Screen Time: A guide to counselling parents/caregivers of young children

Laryssa Bilinsky, RN, Public Health Nurse, Health Promotion

Exposure to screens in young children under 5 years is increasing, as are concerns about the implications of increased screen time. Screen time refers to time spent on any screen including television, computers, cellphones, gaming consoles, smartphones and tablets. The Canadian Pediatric Society (CPS) and the Canadian Sedentary Behaviour Guidelines recommend no more than 1 hour of recreational screen time* per day for children 2 to 5 years of age. Screen time is not recommended for children under 2 years. Only 15% of Canadian children aged 3 to 4 years meet these guidelines.¹⁰

*Recreational screen time is screen time use outside of school or homework activities.

Research has highlighted the potential impacts of increased screen time:

- language delays^{11, 12}
- lower cognitive abilities^{13,14,15}
- overweight and obesity^{16, 17, 18}
- sleep deprivation¹⁹
- less school-readiness²⁰
- inattentive, aggressive, and inability to self-soothe^{21, 22}

Recommendations

To promote child health and development, physicians and other health care providers should consider following the 4 M's when counselling parents/caregivers on the appropriate use of screen time.²³

1. Minimize screen time

- Screen time for children under 2 years is not recommended.
- For children 2 to 5 years, limit routine or regular screen time to under 1 hour per day.
- Ensure that sedentary screen time is not a

routine part of child care for children younger than 5 years.

- Maintain daily “screen-free” times, especially for family meals and book-sharing.
- Avoid screens for at least one hour before bedtime, given the potential for melatonin-suppressing effects.

2. Mitigate the risks associated with screen time

- Be present and engaged when screens are used and, whenever possible, co-view with children.
- Be aware of content and prioritize educational, age-appropriate and interactive programming. Sites such as www.common sense media.org, www.mpa-canada.org, and www.edululu.org can help you to find age-appropriate movies, apps, shows, video games, websites, and more.
- Use parenting strategies that teach self-regulation, calming, and limit-setting.

3. As a family, be mindful about the use of screens

- Conduct a self-assessment of current screen habits and develop a family media plan for when, how, and where screens may (and may not) be used.
- Help children recognize and question advertising messages, stereotyping, and other problematic content.
- Remember: Too much screen time means lost opportunities for teaching and learning.
- Be reassured that there is no evidence to support introducing technology at an early age.

4. Adults should model healthy screen use

- Choose healthy alternatives, such as reading a book, outdoor play and creative, hands-on activities.
- Turn off their devices at home during family time.
- Turn off screens when not in use and avoid background TV.



10 questions to consider asking families with young children²³:

1. What kind of screens are in your home (e.g. TV, tablet, computer, smartphone)? Which does your child use?
2. Is watching TV or programs/movies on other devices a shared family activity and a common way to relax? How often is a screen on in the background even though no one is watching?
3. Does anyone in the family use screens during mealtimes?
4. What content do you watch with your child? What does your child watch alone?
5. Do you encourage or discourage conversation with your child while you are using screens?
6. Do you ever watch adult or commercial programming with your child?
7. Does your child use screens while you do chores around the home? Often? Sometimes?
8. Are there any screen-based activities in your child's day care program? Do you know how often they are used?
9. Does your child use any kind of screen before bedtime? How long before bedtime? Is there a TV or computer in your child's bedroom? Does your child take mobile devices into their bedroom?
10. Does your family have rules or guidelines for screen use that everyone understands and shares?

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