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Message from the Medical Officer of Health

Dear colleagues,

With summer in full swing and many more warm days potentially on the horizon, we are certainly reminded of the importance to encourage our patients and clients of the need to beat the heat to stay healthy and safe.

In this issue of *The Advisory*, we provide pertinent information about public health topics that are of relevance to diverse audiences. For example, we discuss the nutritional importance of fish as well as the need to monitor consumption levels due to possible contaminants. We also introduce you to an updated guide released by *Best Start* and *Mother Risk*, titled *Drinking Alcohol while Breastfeeding: Desk Reference for Health Care Providers*.

With many individuals having questions about chronic illnesses, such as cancer, the new online *My CancerIQ* tool can help them assess their risks. Lastly, as health care providers, you understand the importance of helping patients manage their intake of sodium, and our data on sodium in municipal drinking water sources is an important source of information.

I hope you find time to enjoy the many outdoor activities and attractions our beautiful communities have to offer.

Sincerely,

Dr. Penny Sutcliffe, Medical Officer of Health

Sodium in drinking water supplies

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. A maximum acceptable concentration for sodium in drinking water has, therefore, not been specified.

The average intake of sodium from water is only a small fraction of that consumed in a normal diet. 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 shared with 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).

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 S	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 (most recent test results available)

Details regarding specific water supplies can be obtained by contacting the local municipal office.

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	2011	102.4
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	2012	75

Note: Many of the distribution systems within a community may reflect a blended supply of water.

Eating sport fish

Cynthia Peacock-Rocca, Environmental Health

Canada's Food Guide¹ recommends that your patients eat at least two servings of fish (75 grams per serving) every week.

According to Health Canada², recent evidence has suggested that eating fish and the associated intake of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) can help maintain healthy heart function. Regular consumption of fish by pregnant women and women who might become pregnant plays a role in normal fetal brain and eye development.

Fish is also an excellent source of protein, a significant source of vitamin D, and contributes valuable minerals to the diet such as selenium, iodine, magnesium, iron, and copper.

However, some fish can carry contaminants such as mercury. Levels of contaminants will vary widely from one fish species and size to another, and are location-specific. Contaminants found in fish can come from local sources as well as from sources thousands of kilometers away. For example, airborne contaminants can travel long distances and return to the earth in the form of rain or snowfall. Mercury is one such contaminant. Mercury is the cause for most consumption advisories for inland water bodies. As mercury is evenly distributed in fish flesh, there is nothing that can be done to remove or reduce the contamination. Keeping this in mind, it is especially important to counsel your patients on the safe amount of fish to consume.

According to the Guide to Eating Ontario Fish³, most Ontario sport fish do not cause immediate health effects. The majority of your patients could see benefit in the increased consumption of fish; however, eating contaminated fish regularly can result in an accumulation of contaminants in the body to levels that become a health concern. Examples of fish that have higher levels of fatty acids and that are also low in mercury include salmon, rainbow trout, herring, and smelt.²

The Guide identifies sensitive populations as:

1. women of child-bearing age (women who intended to become pregnant or are pregnant)
2. children under 15 years of age

These two groups of patients are affected by contaminants at lower levels than the general population. Women of child-bearing age, including pregnant women and nursing mothers, can affect the health of their baby through a diet elevated in contaminants such as mercury.

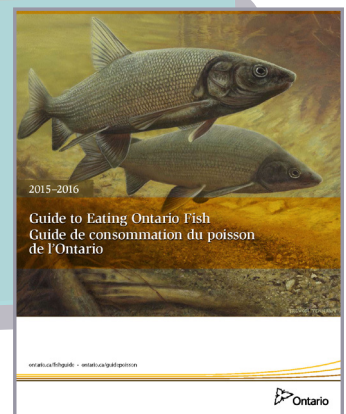
For these patients, it is important to advise them to eat well balanced meals and to consume only the least contaminated sport fish. These fish are described in the Guide as those in the 4 to 32 meal per month categories.

This Guide summarizes how much fish any of your patients can safely consume regardless of their health status. Because contaminant levels will vary due to a number of factors, you should obtain a copy for your office as reference when counselling your patients.

Copies of the Guide are available:

- Online at: <https://www.ontario.ca/document/guide-eating-ontario-fish>
- By phone at 1.800.565.4923
- By email at picemail.moe@ontario.ca

Guide to Eating Ontario Fish



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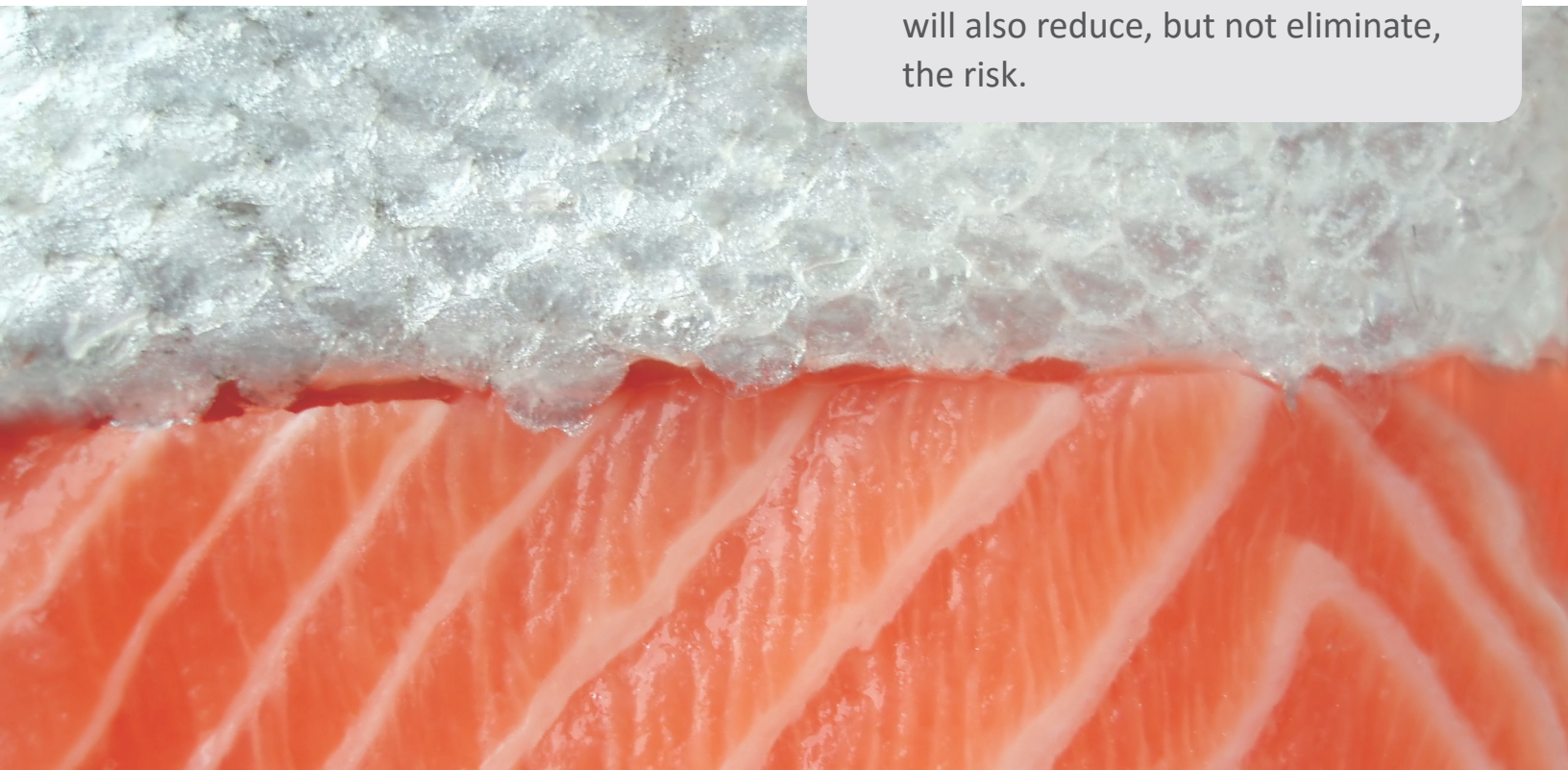
Follow the advice below to reduce the amount of contaminants consumed in fish.

Eat less contaminated fish

- Eat smaller and leaner fish, which are typically less contaminated.
- Eat panfish (edible game fish that usually do not outgrow the size of the pan) from inland locations.
- Do not eat organs of any fish regardless of the location from which it was caught. Organs can be high in both heavy metals and pesticides

Clean and cook fish with fatty flesh properly

- Before cooking, clean the fish by removing the skin, trimming off the fatty areas, and discarding the flesh around the belly area.
- When cooking, reduce contaminant exposure by allowing fat to drip away during the cooking process by either grilling, broiling, or baking the fish.
- Do not reuse oil if deep frying fish.
- To avoid a food-borne illness, verify that the fish has been cooked to a safe internal temperature of 70°C (158°F) by inserting a probe thermometer into the thickest part of the fish⁴. Wearing protective gear will also reduce, but not eliminate, the risk.




Bringing *My CancerIQ* closer to home

Joel Maziarski, Student Nurse, Health Promotion

Earlier this year, the Health Unit released the *2016 Population Health Profile*.⁵ This report presented statistics regarding cancer in the Health Unit's service area. Both overall cancer incidence and mortality rates in the area have consistently exceeded Ontario provincial rates⁵. This is true for lung cancer incidence and mortality, colorectal cancer incidence, and kidney cancer incidence rates—all sites which have associations with modifiable risk factors.^{6, 7, 8, 9}

Risk perception has been shown to influence cancer screening behaviours.¹⁰ Educational interventions that enhance knowledge of individual cancer risk could be instrumental in empowering patients to make informed decisions and take appropriate actions to better protect themselves.¹¹ Research indicates that educating patients about the use of evidence-based online resources can facilitate the public dissemination of quality health information that has the potential to influence health behaviour.¹²

Initially launched by Cancer Care Ontario in February of 2015, *My CancerIQ* (www.mycanceriq.ca) is a website that provides online tools for assessing individual risk relative to a number of different cancer types.¹³ Upon completing an assessment, *My CancerIQ* provides personalized tips and resources for reducing cancer risk, and links users to community screening resources as appropriate.¹⁴ The website also has a section dedicated to educating users about risk and protective lifestyle factors specific to each included cancer type.¹⁵ As of 2016, the site includes assessment tools for six cancers, including breast, lung, cervical, colorectal, melanoma, and kidney cancers. The high kidney cancer incidence rate in the Health Unit's service area means that *My CancerIQ* could be very relevant to area physicians and patients alike. Encouraging your patients to complete a risk assessment through *My CancerIQ* could help elicit productive dialogue on cancer prevention and screening, and motivate patients to engage in healthy behaviour change.¹⁵ The cancer risk assessment report produced from each assessment can also provide physicians with important patient data such as family history and lifestyle risk factors.¹⁵



Help your patients understand how to reduce their cancer risk. Refer your patients to *My CancerIQ*, review their risk profile, and help them develop a personalized action plan.



Alcohol use while breastfeeding

Brenda Stankiewicz, Health Promotion, and Nicole Stewart, Clinic and Family Services

The World Health Organization recommends breastfeeding exclusively for the first six months and continued breastfeeding, with appropriate complementary foods, for up to two years or beyond. In Canada between 2003–2010, about 10% of pregnant and 20% of breastfeeding women consumed alcohol.

Recent research indicates that alcohol exposure via breast milk can:

- Inhibit lactation.
- Have a negative effect on infant motor development.
- Disrupt the infant’s sleep-wake pattern.
- Reduce the amount of breast milk an infant will consume.
- Increase risk of hypoglycemia.

For women who want to use alcohol while breastfeeding, Best Start and Mother Risk have released this updated guide: *Drinking Alcohol while Breastfeeding: Desk Reference for Health Care Providers (HCP)*.

What you can advise to those who are breastfeeding:

- Occasional drinking does not warrant discontinuing breastfeeding, as the importance of breastfeeding is extensive and well recognized.
- Limit alcohol intake, particularly when breastfeeding newborns (first 3 months) because of their rapidly developing central nervous system and underdeveloped ability to metabolize alcohol.
- Follow Canada’s *Low-Risk Alcohol Drinking Guidelines* as occasional drinking while breastfeeding has not been convincingly shown to adversely affect nursing infants.
- Avoid heavy alcohol consumption or binge drinking while breastfeeding.
- After drinking alcohol, wait a certain amount of time before breastfeeding. Refer to the insert for details.
- Express breast milk to relieve any discomfort of engorgement and to help maintain milk supply.

Download a copy of *Drinking Alcohol while Breastfeeding: Desk Reference for Health Care Providers (HCP)* at http://www.beststart.org/resources/alc_reduction/pdf/Alcohol_desk_ref_EN_2016_fnl.pdf. The Guide is also available in French at http://www.beststart.org/resources/alc_reduction/pdf/Alcohol_desk_ref_FR_2016.pdf.

To learn more about drinking alcohol while breastfeeding, visit: www.sdhu.com.

Drinking Alcohol while Breastfeeding

Drinking Alcohol while Breastfeeding
Desk Reference for Health Care Providers (HCP)

This desk reference provides information for HCP about reducing any possible negative effects of alcohol consumption by breastfeeding women. While the harmful effects of alcohol during pregnancy are well established, the consequences of alcohol during breastfeeding are less well understood. Breastfeeding is the optimal method of infant nutrition. The world health Organization (WHO) recommends exclusive breastfeeding from birth to six months of age and continued breastfeeding, with appropriate complementary foods, for up to two years or beyond.

FACTS:

- In Canada in 2003-2010, about 10% of pregnant and 20% of breastfeeding women consumed alcohol.
- Alcohol enters breast milk by passive diffusion and levels closely resemble those in maternal blood within 30 to 60 minutes of ingestion.
- The amount of alcohol transferred to nursing infants through breast milk is approximately 5-6% of the weight-adjusted maternal dose.
- The blood alcohol concentration of an infant exposed to alcohol via breast milk varies based on a number of factors (e.g. the amount of alcohol consumed by the mother and the weight of the infant).
- Infants are metabolically similar to approximately half the rate of adults.
- Recent research indicates that alcohol exposure via breast milk can:
 - Have a negative effect on infant motor development.
 - Disrupt the infant’s sleep-wake pattern.
 - Reduce the amount of breast milk an infant will consume.
 - Increase risk of hypoglycemia.
- Mothers who consume alcohol while breastfeeding may breastfeed for a shorter duration. In addition, frequent or heavy drinking can impair the mother’s judgment and functioning.

CLINICAL PRACTICE GUIDELINE
According to the SOGC CLINICAL PRACTICE GUIDELINE:
• HCP should create a safe environment for women to report and discuss alcohol consumption. Use of interventions are effective and should be provided by HCP for women with at-risk drinking.

What to Tell Women:

- Occasional drinking does not warrant discontinuing breastfeeding, as the importance of breastfeeding is extensive and well recognized.
- Limit alcohol intake, particularly when breastfeeding newborns (first 3 months) because of their rapidly developing central nervous system and underdeveloped ability to metabolize alcohol.
- Follow Canada’s Low-Risk Alcohol Drinking Guidelines on occasional drinking while breastfeeding has not been convincingly shown to adversely affect nursing infants.
- Avoid heavy alcohol consumption or binge drinking while breastfeeding.
- After drinking alcohol, wait a certain amount of time before breastfeeding. Refer to attached table for details. Express breast milk to relieve any discomfort of engorgement and to help maintain milk supply.

best start
mother risk
www.beststart.org

MOTHER RISK
www.motherisk.ca

For more information on alcohol and breastfeeding, call Mother Risk Helpline 1-877-327-4656

Table 1 - Time from beginning of drinking until clearance of alcohol from breast milk for women of various body weights. Assuming alcohol metabolism is constant at 15mg/dL, and women is of average weight (62.5 kg or 137.5 lb).

Weight (kg)	1	2	3	4	5	6	7	8	9	10	12
45.0 (100)	2:30	5:00	7:30	10:00	12:30	15:00	17:30	20:00	22:30	25:00	27:30
50.0 (110)	2:45	5:15	7:45	10:15	12:45	15:15	17:45	20:15	22:45	25:15	27:45
55.0 (121)	3:00	5:30	8:00	10:30	13:00	15:30	18:00	20:30	23:00	25:30	28:00
60.0 (132)	3:15	5:45	8:15	10:45	13:15	15:45	18:15	20:45	23:15	25:45	28:15
65.0 (143)	3:30	6:00	8:30	11:00	13:30	16:00	18:30	21:00	23:30	26:00	28:30
70.0 (154)	3:45	6:15	8:45	11:15	13:45	16:15	18:45	21:15	23:45	26:15	28:45
75.0 (165)	4:00	6:30	9:00	11:30	14:00	16:30	19:00	21:30	24:00	26:30	29:00
80.0 (176)	4:15	6:45	9:15	11:45	14:15	16:45	19:15	21:45	24:15	26:45	29:15
85.0 (187)	4:30	7:00	9:30	12:00	14:30	17:00	19:30	22:00	24:30	27:00	29:30
90.0 (198)	4:45	7:15	9:45	12:15	14:45	17:15	19:45	22:15	24:45	27:15	29:45
95.0 (209)	5:00	7:30	10:00	12:30	15:00	17:30	20:00	22:30	25:00	27:30	30:00
100.0 (220)	5:15	7:45	10:15	12:45	15:15	17:45	20:15	22:45	25:15	27:45	30:15
105.0 (231)	5:30	8:00	10:30	13:00	15:30	18:00	20:30	23:00	25:30	28:00	30:30
110.0 (242)	5:45	8:15	10:45	13:15	15:45	18:15	20:45	23:15	25:45	28:15	30:45
115.0 (253)	6:00	8:30	11:00	13:30	16:00	18:30	21:00	23:30	26:00	28:30	31:00
120.0 (264)	6:15	8:45	11:15	13:45	16:15	18:45	21:15	23:45	26:15	28:45	31:15
125.0 (275)	6:30	9:00	11:30	14:00	16:30	19:00	21:30	24:00	26:30	29:00	31:30
130.0 (286)	6:45	9:15	11:45	14:15	16:45	19:15	21:45	24:15	26:45	29:15	31:45
135.0 (297)	7:00	9:30	12:00	14:30	17:00	19:30	22:00	24:30	27:00	29:30	32:00
140.0 (308)	7:15	9:45	12:15	14:45	17:15	19:45	22:15	24:45	27:15	29:45	32:15
145.0 (319)	7:30	10:00	12:30	15:00	17:30	20:00	22:30	25:00	27:30	30:00	32:30
150.0 (330)	7:45	10:15	12:45	15:15	17:45	20:15	22:45	25:15	27:45	30:15	32:45

RESOURCES FOR HCP:
Canadian Society of Obstetrics & Gynaecology, Best Start, Mother Risk, Health Canada, and the Department of Health, Science and Technology.
Canadian Society of Obstetrics & Gynaecology, Best Start, Mother Risk, Health Canada, and the Department of Health, Science and Technology.
Canadian Society of Obstetrics & Gynaecology, Best Start, Mother Risk, Health Canada, and the Department of Health, Science and Technology.
Canadian Society of Obstetrics & Gynaecology, Best Start, Mother Risk, Health Canada, and the Department of Health, Science and Technology.

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Sudbury & District Health Unit

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Please send your comments, questions, or suggestions to sdhu@sdhu.com or call 705.522.9200.



Sudbury & District

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