

<p><b>IN THIS ISSUE:</b></p> <ul style="list-style-type: none"> <li>▪ <b>Sodium nitrite being sold to individuals at risk of self-harm</b></li> </ul>	<p><b>FROM:</b> Nicholas Brandon, MD, MA, MSc, CCFP, FRCPC Acting Medical Officer of Health</p>
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<p><b>Key Messages:</b></p> <ul style="list-style-type: none"> <li>▪ There have been media reports of sodium nitrite being consumed to cause self-harm</li> <li>▪ Ingesting sodium nitrite may cause methemoglobinemia</li> <li>▪ Methemoglobinemia may be treated with methylene blue. <b>Consult with the on-call Toxicologist at the Ontario Poison Centre 1-800-268-9017 (Toll-Free) or 416-813-5900 (Toronto) immediately</b></li> <li>▪ Mental health hotlines and resources are available for people in crisis and may be considering self-harm</li> </ul>
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**Sodium nitrite being sold to individuals at risk of self-harm**

There have been media reports of cases of sudden death in which it is suspected that sodium nitrite that was purchased online was consumed. Two victims have been identified in Peel region.

Sodium nitrite is increasingly recognized as a method of committing self-harm. In 2019 and 2020, Ontario saw at least 23 sodium nitrite poisoning deaths, according to a 2021 study: <https://www.sciencedirect.com/science/article/abs/pii/S0379073821002279#> from the Ontario Forensic Pathology Service. Most of those deaths were ruled to be intentional. However, it is unknown how prevalent this is in Canada since national data is not collected from medical examiners, coroners, or poison centres about sodium nitrite poisoning. People who eat food or drink fluids that contain unusually high levels of sodium nitrite may experience methemoglobinemia.

**What is sodium nitrite?**

Sodium nitrite is a white, crystalline substance used as a food additive and commonly found in processed meats. It is also used in industrial uses, pharmaceuticals, and pesticides. Consumption of excess amounts of sodium nitrite can reduce oxygen-levels, impair breathing and can result in death.

**Symptoms**

Methemoglobinemia presents with cyanosis, cardiac dysrhythmias, and circulatory failure, and/or progressive central nervous system (CNS) effects.

Symptoms of nitrite ingestion may include abdominal pain, blue lips, fingernails and skin, convulsions, diarrhea, dizziness, headache, laboured breathing, confusion, nausea, unconsciousness, and death.

Symptoms of nitrite inhalation and dermal exposure include eyes, skin, and respiratory tract irritation.

**Treatment**

Methemoglobinemia can be treated with supplemental oxygen and methylene blue.

**Consultation with the on-call Toxicologist at the Ontario Poison Centre at 1-800-268-9017 (Toll-Free) or 416-813-5900 (Toronto) is recommended for all cases of methemoglobinemia.**

For more information, refer to the Ontario Poison Centre’s Emergency Treatment of Methemoglobinemia: <https://www.ontariopoisoncentre.ca/siteassets/pdfs/english/new---since-2021/methb-final-for-formatting-logo.pdf>

## Mental Health Resources

Mental health hotlines and resources are available for people in crisis who may be considering self-harm, including:

- Canadian Mental Health Association:  
<https://cmha.ca/> or 905-278-9036 or 1-888-811-2222
- CMHA List of Provincial Mental Health Supports:  
<https://ontario.cmha.ca/provincial-mental-health-supports>
- Kids Help Phone:  
<https://kidshelpphone.ca/urgent-help> or 1-800-668-6868
- Centre for Addiction and Mental Health  
<https://www.camh.ca/en/health-info/crisis-resources> or 416-535-8501 or 1-800-463-2338
- EveryMind (formerly Peel Children's Centre):  
[www.everymind.ca](http://www.everymind.ca) or 24/7 Crisis Line 905-278-9036