
Summary of Toxicology News in BC and Health Regions in March 2018

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Public Health and Environmental Toxicology; What is BCTOX and why?

Health professionals (HP) including policymakers, health educators and researchers need to be regularly updated on environmental toxicology issues to keep up with rapidly evolving toxicology information, emerging health risks from environmental chemicals and to manage issues that are locally highlighted in the popular press and news media.

Environmental toxicology training is limited during education, and when HPs enter the field, they lack information on the responsibilities for regulation and risk communication among local, provincial and federal agencies, as well as their relations to international organizations, scholarly articles, and private sectors, including industry¹. All of these factors lead to avoidable confusion.

BCTOX acts as a local up to date resource to answer current toxicology issues. The business model of BCTOX is flexible in order to maximise its applicability. BCTOX is also still developing, and will be determining its future directions along the way.

BCTOX acts like a pendulum. It mobilises your interventions to other places where they can also be used, and also back-translates the health activities that have had a “life outside of the health system” and have made societal impacts. While BCTOX is not official and not liable for the reported news from media, it is BC-related, and full of concise information that is handpicked and fun to read. BCTOX keeps you engaged with toxicology news in BC.

BCTOX is full of inspiring ideas dedicated to B.C.

Major toxicological statistics March 2018

Mortalities In total, around 700 premature deaths could be attributed to toxic exposures in BC in October including:

- **ACUTE exposures;**
 - 130 due to Illicit drug overdose
 - 10 due to suicides (CO, drugs and alcohol)
- **CHRONIC current and past exposures;**
 - 500 due to smoking and tobacco use,
 - 81 (air pollution),
 - 11 (radon)
 - 6 (asbestos)

These are equal to overall 15×10^{-5} population toxic exposure-induced deaths in March alone, including 2.4×10^{-5} acute and 13×10^{-5} chronic toxicities (estimations are subject to assumptions and limitations, and overlaps are possible (see BCTOX 2(8): 103)).

Morbidities Around 2200 calls were made to BC-DPIC (estimated from August 2017)

Sola dosis facit venenum

Only the dose makes the poison!

Paracelsus (1493 – 1541 CE)

Summary of Toxicology News for First Nations Populations, March 2018, BC

(A) BC

Q1. Why do First Nations people in BC have worse outcomes & face a shorter life expectancy than the nonindigenous population?

- Higher rates of chronic diseases
- Lower life expectancy
- Higher rates of infant mortality
- An alarming 92% higher incidence rate of cervical cancer (women)
- 39% higher incidence of colorectal cancer (men)
- Much lower cancer survival rate

Potential reasons?

- Geography
- Shortages of trained healthcare staff
- Limited access to large medical centres
- Legacy of colonial system and generational trauma
- Lack of culturally-safe screening options

--- History needs to be considered when looking at the modern-day healthcare system.

[\(Read more\)](#) and [\(Read more\)](#)²

--- BCTOX; Is it possible that chronic exposure to toxins play a role in this?

Q2. How much is the extent of First Nations populations on environmental projects?

“Indigenous people will have an increased role in decision-making, he does not intend it to mean a veto over resource development projects” according to BC Environment Minister George Heyman.

BC’s Environmental Assessment Office is working with First Nations.

--- Indigenous role to be enhanced, but not with veto.

[\(Read more\)](#)

Kootenay art exhibit shares the silent voices of B.C.’s opioid crisis.



Cranbrook Daily Townsman 2018-03-13 [\(Rea and see more\)](#)

B) National

Q3. What is the rate of reporting household mould or mildew based on the First Nations Information Governance Centre

A new report by FNIGC provides an unprecedented look at trends over time in the health and well-being of First Nations communities. According to which:

“The percentage of First Nations adults reporting **household mould or mildew** was 39.7%, which marks a significant decrease compared to 50.9%

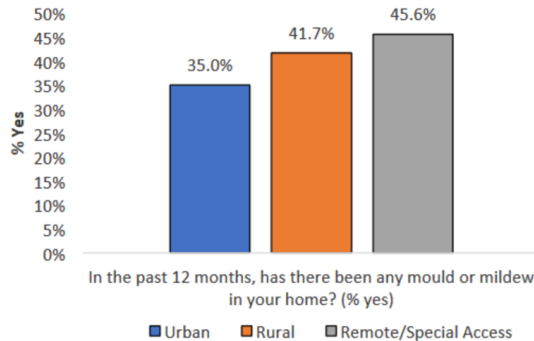
Summary of Toxicology News for First Nations Populations, March 2018, BC, Continue

in RHS Phase 2 and 44% in RHS Phase 1 (2002-2003). Despite this, the current First Nations rate is still three times higher than the rate in the general population (13%).”

[\(Read more\)](#)

Mould or mildew

Percentage of First Nations adults reporting on household mould or mildew in their home in the past 12 months, by remoteness adopted from FNIGC’s report [\(Click\)](#) [see next page]



Q4. How much is the rate of drug use in First Nations adults?

Illicit drug use among First Nations adults in the 12 months prior to the survey (adopted from FNIGC’s report [\(Read more\)](#))

Illicit drug used in the past year	RHS Phase 2		RHS Phase 3	
	%	95% CI	%	95% CI
Cannabis				
No use in past year	67.7	[66.9, 69.2]	69.7	[68.2, 71.2]
Once or twice	11.1	[10.3, 11.9]	11.2	[10.3, 12.1]
Monthly	3.2	[2.8, 3.7]	2.4	[2.0, 2.8]
Weekly	5.6	[4.9, 6.6]	4.6	[3.8, 5.4]
Daily or almost daily	12.4	[11.3, 13.5]	12.1	[11.2, 13.1]
Cocaine or crack				
No use in past year	92.2	[91.4, 93.0]	91.9	[90.9, 92.8]
Once or twice	5.3	[4.7, 5.9]	5.6	[4.8, 6.5]
Monthly	1.3	[1.0, 1.6]	1.5	[1.2, 1.9]
Weekly	1.2	[0.9, 1.5]	0.6	[0.5, 0.9]
Daily or almost daily	N/A	N/A	0.3E	[0.2, 0.5]E

Note: E High sampling variability, interpret with caution.

Q5. What is the percent abstinence from prescription & illegal drug use?

Abstinence from prescription and illegal drug use by First Nations adults in the past 12 months (adopted from FNIGC’s report [\(Read more\)](#))

Drug	% Never used	95% CI
Amphetamines	98.2	[97.9, 98.5]
Methamphetamine/Crystal Meth	98.8	[98.4, 99.1]
Ecstasy	98.4	[98.1, 98.7]
Hallucinogens	97.7	[97.3, 98.1]
Inhalants	99.4	[98.8, 99.7]
Heroin	99.7	[99.5, 99.8]
Prescription opioids	75.1	[72.8, 77.2]
Prescription stimulants	98.9	[98.6, 99.1]
Prescription sedatives	93.9	[93.0, 94.7]

Q6. Presence of smoke detectors, etc.?

Prevalence of home amenities & safety features for First Nations adults (Modified for toxicology related items from FNIGC)

Household amenity	% Yes	95% CI
Garbage collection service	87.0%	[84.0, 89.5]
A working smoke detector	83.5%	[81.7, 85.1]
A fire extinguisher	50.0%	[47.4, 52.6]
A carbon monoxide detector	40.3%	[38.3, 42.3]

[\(Read more\)](#)

Q7. What is the rate of allergies?

Among First Nations children, allergies (10.1%), asthma (8.3%), dermatitis /eczema (5.9%) were among the most prevalent chronic health conditions.

[\(Read more\)](#)

Summary of Toxicology News for Coastal Health , March 2018, BC

Q1. Why are overdose induced deaths more common among men?

Reports from B.C. show that among overdose induced deaths:

- 82% were men
- 88% were alone in a residence at the time of death
- Over half were 30 to 49 years of age
- Fentanyl was detected in 81%

Why are overdose induced deaths more common among men?

- Men work jobs that can result in workplace injuries
- Men are more likely to engage in risky intravenous drug use
- Men are more likely to feel intense guilt and shame for their addictions, likely leading them to use opioids alone
- An expectation that men will be able to take large amounts of drugs because they feel physiologically tough
- Men might also refrain from reaching out and receiving help for their addictions and physical and emotional pain
- Men may think showing any emotional vulnerability or physical vulnerability is equated with weakness

The biology behind an overdose

- Feedback loop to reduce pain, anxiety, [and] produces feelings of euphoria and well-being
- Creation of, over time, a tighter feedback loop in which the individual has to continue to take opioids or go into withdrawal.”

[\(Read more\)](#)

Summary of Toxicology News for Fraser Health , March 2018, BC

Q1. Should Fraser Valley Regional Library staff be allowed to administer naloxone?

Currently, Fraser Valley Regional Library staff are not allowed to administer naloxone in the past six months, even if;

- * They are trained to do so
- * They are in possession of it

They have to call 911 and stand back.

Why not?

* Partly because of the concern of staff safety e.g. accidental contact with fentanyl

Summary of Toxicology News for Fraser Health, March 2018, BC, Continue

- * Concern of administering naloxone to someone who didn't require it.
- * Many libraries are located close to first responders.

[\(Read more\)](#)

--- **What do you think is a better policy?**

Q2. *Previous visits of overdose cases*

"80% of people who died from an illicit substance overdose in the Fraser Health area had received care in the emergency department at least once in the 12 months before their death", not just for overdose but also for injury, trauma, back pain, alcohol overdose or mental health.

[A report from January] [\(Read more\)](#)

--- **Are previous visits of overdose cases an opportunity to intervene? What do you think? How?**

Q3. B.C. is still in the forefront on coal projects

A Fraser Surrey Docks received approval from the Port of Vancouver to build a direct-transfer coal facility on the Fraser River that would be used to transfer up to eight million tonnes of coal annually from trains onto barges. --- This process would move the coal to a deep-water station on Texada Island.

A Canadian federal court struck down a legal challenge in B.C., and Burnaby, New Westminster and Surrey refused to support the project.

--- Coal dust harms marine animals both fish and filter-feeding bivalves and also bio accumulates.

--- Unlike coal mines in eastern B.C., almost no B.C. carbon tax is levied on U.S. coal shipped those few kilometres from the U.S. border by White Rock to Lower Mainland ports.

[\(Read more\)](#)

--- **What do you think about proposing a carbon taxing for U.S. coal shipped across the border?**

Q4. Microplastic pollution based on new sampling

258 tiny particles of plastic in a cubic meter of seawater were found in samples from ocean water near the Vancouver Convention Centre according to Peter Ross, vice-president of research at Ocean Wise.

"The threat of plastic waste in our ocean is a real challenge to both aquatic life and marine ecosystems."

Studies show that:

- One million water bottles are sold every minute around the world
- 500 billion plastic bags are used globally every year
- One dump truck full of plastic waste finds its way to the ocean every minute
- It is predicted plastic consumption will double in the next 20 years

--- Ocean Wise will provide tips, ocean stories and videos for living a more ocean-friendly life. #BePlasticWise pledge participants will receive monthly lifestyle challenges to help them reduce single use plastic over the course of a year.

[\(Read more\)](#)

--- **What can you do? Why not avoid takeout plastic, lined cups and lids, spoons and forks. Start now! What else can you do? Any suggestions for others?**

Q5. Other news?

--- Dying days for 25-bed mental health facility on Chilliwack/Abbotsford border

[\(Read more\)](#)

--- Criticisms close the Ocean Park Laboratory

[\(Read more\)](#)

--- B.C. is a strong supporter of [pharmacare]. We'll be at the table with our resources to talk to the federal government according to B.C. Minister of Health.

[\(Read more\)](#)

Summary of Toxicology News for Interior Health, March 2018, BC

Q1. Why is there no report of overdose induced deaths from Kamloops in January?

Among 125 illicit drug-overdose deaths in January 2018 in BC, only 19 were in the Interior Health Authority --- None of them from Kamloops according to the B.C. Coroners Service.

Why not?

There are requirements that must be met under the Coroners Act and privacy legislation, according to coroner's office spokesman Andy Watson.

Apparently, the report does not include data for communities recording five or fewer deaths, which is the reason that no report exists in January from:

Kamloops, Kelowna, and well as Nanaimo, Abbotsford, Burnaby, Langley, Maple Ridge, Coquitlam, Richmond, Chilliwack, New Westminster and Prince George.

--- **What do you think about the policy?**

---- "February's overdose death statistics will be released next month; There were at least six such deaths in Kamloops in February, based on an overdose alert issued by IH."

[\(Read more\)](#)

The busiest hospitals in the region for opioid overdoses

The highest was Kelowna General with about 355, followed by Vernon Jubilee (310) and Royal Inland in Kamloops with 180 and Penticton.

[a report from January] [\(Read more\)](#)

Summary of Toxicology News for Northern Health, March 2018, BC

Q1. Why the frequency of drug overdoses deaths is constantly lower in Northern Health than the rest of the Province?

"There were 125 suspected drug overdose deaths in January 2018 – five in northern British Columbia."

[\(Read more\)](#)

--- **This is excellent news. The potential reasons worth seeking. --- What do you think are the reasons?**

Let's hope that Northern Health continue efforts to provide care and breakdown stigma associated with the crisis will help to reduce mortality rates from drugs according to Dr. Andrew Gray (MHO)

[\(Read more\)](#)

Summary of Toxicology News for Northern Health, March 2018, BC, Continued

Q2. Installing salt water scrubbers at Rio Tinto's aluminium smelter in Kitimat

Installation of salt water scrubbers at Rio Tinto's aluminium smelter in Kitimat to reduce the amount of toxic emissions has been a hot topic.

-- It is being rekindled at the Kitimat council this evening.

"They can get away with just a little bit of air monitoring and not spending the extra 250 or so million dollars they should have spent on the scrubbers, similar to most modern aluminium plants.

This is "just the wrong decision from the public's point of view and we can push back", according to Northern Health's former Chief Medical Officer David Bowering who appeared before Kitimat council.

[\(Read more\)](#)

Summary of Toxicology News for Vancouver Coastal, March 2018, BC

Q1. Positive Outlook - under the Vancouver Native Health Society (VNHS) is in danger of losing funding to another non-profit!

A Downtown Eastside clinic (441 East Hastings Street) built almost 20 years ago designed for Indigenous people living with HIV/AIDS is in danger of losing funding to another non-profit.

They received medical care, social services, and often just a warm meal in this clinic.

[\(Read more\)](#)

BCTOX; This centre has certainly contributed in controlling overdoses as it is relatively more common among HIV/AIDS population.

--- What can be done about it? What do you suggest?

Summary of Toxicology News for Vancouver Island, March 2018, BC

Q1. Why bylaw requires rezoning approval for supervised consumption sites

Local zoning bylaw is an "obstacle to substance use treatment" in Nanaimo - a city with an overdose death rate that is 50 per cent higher than the rest of the province according to Dr Paul Hasselback.

Hasselback called for change to the bylaw that requires rezoning approval for supervised consumption sites, as well as liquor stores, drug rehab facilities and methadone clinics.

Nanaimo needs more than one supervised consumption site in the city.

[\(Read more\)](#)

--- Why is the Nanaimo council inactive on the opioid and homeless crises? What do you think?

Modular supported housing rejected?

Bill McKay, Nanaimo Mayor, is in favour of the bylaw overturned and for multiple fixed sites to be approved, but according to him, some councillors prefer a mobile safe consumption site over a fixed location.

[\(Read more\)](#)

What do you think? What are the benefits of the fixed sites over mobile safe consumption sites?

Frequency of opioid overdose deaths in January 2016

In January 2018, Victoria recorded 14 illicit drug overdose deaths, and Island Health had 29 overdose deaths last month.

[\(Read more\)](#)

Why are relative rates of overdose induced deaths higher in Nanaimo? What do you think?

Victoria Inner Harbour is the most polluted on the B.C. coast

Mussels and near-shore ocean sediments from 55 locations were collected and analyzed recently. Among them, four sites in the harbour all ranked among the top five most polluted areas coast-wide.

Why?

- * Victoria's industrial past
- * More recently, pharmaceuticals
- * Shallow body of water
- * Low circulation and sedimentation

What did they find?

* Alkylphenols, dioxins, PCBs, Now-banned polychlorinated biphenyl, PBDEs,

Coolant, flame retardant, hydrocarbons and pharmaceuticals.

--- "PCB levels in habitat, including sediments, are high enough to contaminate the food chain and deliver PCB's to our killer whales"

[\(Read more\)](#) and [\(Read more\)](#)

--- What can be done about it? What do you suggest to help?

Other news

"A handful of cities could soon face a legal showdown with the Trump administration over their efforts to open "supervised injection facilities" Supervised injection sites aimed at cutting opioid overdoses risk the wrath of the DEA and prosecutors.

[\(Read more\)](#)

Energy has a role to play in achieving universal access to clean water and sanitation.³

[\(Read more\)](#)

How Pruitt's EPA Is Delaying, Weakening and Repealing Clean Air Rules?⁴

[\(Read more\)](#)

References

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Energy

Energy has a role to play in achieving universal access to clean water and sanitation <https://moderndiplomacy.eu/2018/03/22/energy-has-a-role-to-play-in-achieving-universal-access-to-clean-water-and-sanitation/> (accessed March 25, 2018).

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