

WELCOME! PLEASE CONSIDER FILLING OUT OUR PRE-LECTURES SURVEY!

https://ubc.ca1.qualtrics.com/jf e/form/SV_0BaujGaK34koAkK



Mini Med School Lecture Series 2023/24

Nov 18th, 2023 - New Canadian Alcohol Use Guidelines

Nov 25th, 2023 - Accessing a Family Doctor in BC

Jan 13th, 2024 - Skin: Conditions and Concerns

Jan 20th, 2024 - Depression in the Elderly

Feb 3rd, 2024 - Ozempic and other GLP-1 Agonist

Feb 10th, 2024 - Artificial Intelligence (AI) in Health Care



New Canadian Alcohol Use Guidelines

Background Information Current Guidelines Risks, Evidence, & Mechanisms Takeaways Michael Smith

BSc, UBC MD Class of 2026 Island Medical Program

Nov 18, 2023 9:00 AM – 10:30 AM



THE UNIVERSITY OF BRITISH COLUMBIA Faculty of Medicine



About Us

Introduction



UBC

Hello! I'm Michael Smith, a 2nd year medical student from UBC's Island Medical Program.

My colleague is Derek Anderson, also a 2nd year medical student at UBC's Vancouver Fraser Medical Program.

Our Research Question

UBC Medicine Flexible and Enhanced Learning (FLEX)

"To learn about the effectiveness of our virtual Mini Med School (MMS) series of online learning lectures in addressing questions from its participants" CONSENT FORM FOR PARTICIPANTS: Virtual Mini Med School (MMS) 2023/2024 Lecture Series: Effectiveness in Addressing Questions from Participants

I. STUDY TEAM Who is conducting the study? Principal Investigator: Dr. Jane Gair Teaching Professor, Division of Medical Sciences Island Medical Program Faculty of Medicine, UBC jgair@uvic.ca 250-472-5543

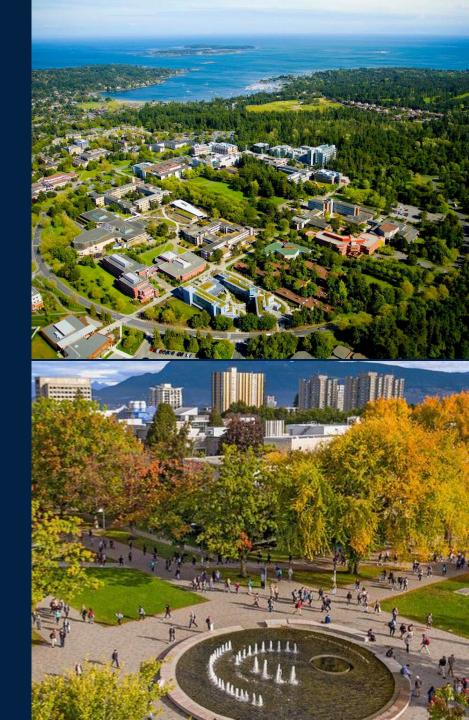
Co-Investigator(s): Mr. Michael Smith Student, Island Medical Program Undergraduate Medical Education Faculty of Medicine, UBC <u>msmith87@student.ubc.ca</u>

Mr. Derek Anderson Student, Vancouver Fraser Medical Program Undergraduate Medical Education Faculty of Medicine, UBC bpl20@student.ubc.ca



Territorial Acknowledgement

I would like to begin by acknowledging that I am joining you from the the unceded territory of the ləkwəŋən (Lekwungen) speaking peoples, including the Songhees, Esquimalt, and WSÁNEĆ (hwha - say - netch) peoples whose historical relationships with the land continue to this day.





Disclosure

I am a second-year medical student. These talks do not constitute or substitute for medical advice. Please consult with a healthcare provider if you or others you know have any personal health-related concerns.

We are not experts in this topic, and many study statistics and biological mechanisms presented here are complex. To present the information in a simple manner, some details will be glossed over. We will make every attempt to present this information in the clearest way.





Final Notes:

- 1. Ask questions anytime in the chat box! (will be reviewed by our MMS team, most saved till end).
- 2. Lecture will be recorded please turn off camera if you would like to.
- 3. Copy of these PowerPoint Slides will be sent to you all after the lecture! Recording will be available on Dr. Gair's website (see Resources).
- 4. There will be a 10-minute break in the middle of the lecture.
- 5. The lecture content is about 1 hour, leaving approx. 15 minutes of time at the end for questions.

Noxe



Todays Agenda

New Canadian Alcohol Use Guidelines

Background Information

Current Guidelines

10 min BREAK

Risks, Evidence, & Mechanisms

Takeaways



Todays Agenda

New Canadian Alcohol Use Guidelines

Let's Get Started!

Background Information

Current Guidelines

10 min BREAK

Risks, Evidence, & Mechanisms

Takeaways

Alcohol: Background

- Ethanol clear colorless liquid with psychoactive properties
- Most used substance in Canada (75% of Canadians aged 15+)
- Spectrum of Usage 7.9% aged 65+ heavy drinking





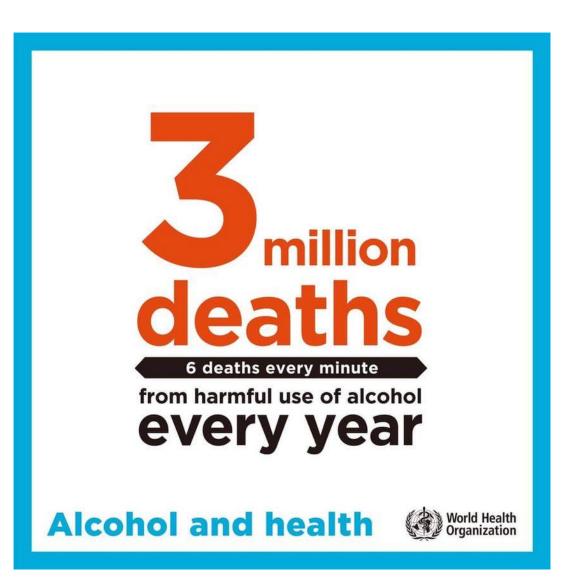
The Wider Perspective

Canada (2017 – CCSA)

- 18,000 deaths in Canada (2017)
- \$16.6 billion in alcohol related costs, \$5.4 billion health care

Globally

• 3 million annual deaths





Canadian Centre on Substance Use and Addiction - CCSA

- CCSA created on August 31st, 1988, by Canadian Government
- Non-governmental organization for national leadership
- Created 2011 "Canada's Low Risk Drinking Guidelines" (LRDGs)



Canadian Centre on Substance Use and Addiction



Canada's Low-Risk Alcohol Drinking Guidelines (LRADG)



BACKGROUND INFORMATION

Disclaimer

- This is NOT an antialcohol lecture!
- Purpose reflect the intention of the guidelines
- CCSA "people living in Canada have the right to know"

NEWS



Canada

Just how risky is it to drink more alcohol than Canada's new guide advises?

Experts say it's difficult to compare, but some Canadians want clearer answers



<u>Yvette Brend</u> · CBC News · Posted: Jan 25, 2023 1:00 AM PST | Last Updated: January 25

OPINION

Canada's drastic new alcohol guidelines demand a closer look

DAN MALLECK

CONTRIBUTED TO THE GLOBE AND MAIL PUBLISHED JANUARY 20, 2023





A standard drink means:



Beer 341 ml (12 oz) of beer 5% alcohol Cooler, cider, ready-to-drink 341 ml (12 oz) of drinks 5% alcohol

or



or Wine 142 ml (5 oz) of wine 12% alcohol



or Spirits (whisky, vodka, gin, etc.) 43 ml (1.5 oz) of spirits 40% alcohol



How many standard drinks are in a bottle of wine (750mL, 12% alcohol)?

Approx. 3 standard drinks

Approx. 5 standard drinks

Approx. 7 standard drinks

Approx. 9 standard drinks



Hint: 142mL of wine = 1 standard drink



How many standard drinks are in a bottle of wine (750mL, 12% alcohol)?

Approx. 3 standard drinks

Approx. 5 standard drinks

Approx. 7 standard drinks

Approx. 9 standard drinks



Hint: 142mL of wine = 1 standard drink



Which contains more alcohol? 9 oz wine, 20 oz beer, or 3 oz of spirits?

9 oz wine

20 oz beer (Canadian pint)

3 oz spirits ("double")

They're the same





Which contains more alcohol? 9 oz wine, 20 oz beer, or 3 oz of spirits?

9 oz wine – 1.87 SDs

20 oz beer (Canadian pint) – 1.73 SDs

3 oz spirits ("double") – 2.08 SDs

They're the same



Takeaway

- Can be hard to calculate standard drinks!
- "Drinks" can be different than standard drinks
- Helpful Tools Exist ->



Canadian Institute Institut canadien for Substance de recherche sur Use Research l'usage de substances

Convert your drinks into standard drink sizes

For an amount of alcohol, find out how many Canadian standard drinks it represents.







Todays Agenda

New Canadian Alcohol Use Guidelines

Background Information

Current Guidelines

10 min BREAK

Risks, Evidence, & Mechanisms

Takeaways



CURRENT GUIDELINES

So, What Are The Current Guideline from CCSA? https://www.ccsa.ca/

Canada's Guidance on Alcohol and Health Per week



~~~~



Canadian Centre on Substance Use

Evidence. Engagement. Impact.

high risk

CCSA Public Summary



Drinking less is better

We now know that even a small amount of alcohol can be damaging to health.

Science is evolving, and the recommendations about alcohol use need to change.

Research shows that no amount or kind of alcohol is good for your health. It doesn't matter what kind of alcohol it is — wine, beer, cider or spirits.

Drinking alcohol, even a small amount, is damaging to everyone, regardless of age, sex, gender, ethnicity, tolerance for alcohol or lifestyle.

That's why if you drink, it's better to drink less.

Canada's Guidance on Alcohol and Health

Aim to drink less

Drinking less benefits you and others. It reduces your risk of injury and violence, and many health problems that can shorten life.

Here is a good way to do it

Count how many drinks you have in a week.



Set a weekly drinking target. If you're going to drink, make sure you don't exceed 2 drinks on any day.

Good to know

You can reduce your drinking in steps! Every drink counts: any reduction in alcohol use has benefits.



Canadian Centre on Substance Use

Evidence, Engagement, Impact.



Explanations

- **1. Risk Thresholds:** what does it actually mean?
- 2. Evidence: where did they get the information?
- 3. Mechanisms of Harms: why do we think alcohol causes these concerns?





Risk Thresholds

- = Level of risk that is "acceptable"
- Based on environmental regulations / BMJ guides
- Alcohol: Premature Death
 - 1 in 1,000
 - 1 in 100
- What amount of use gets you to that risk?





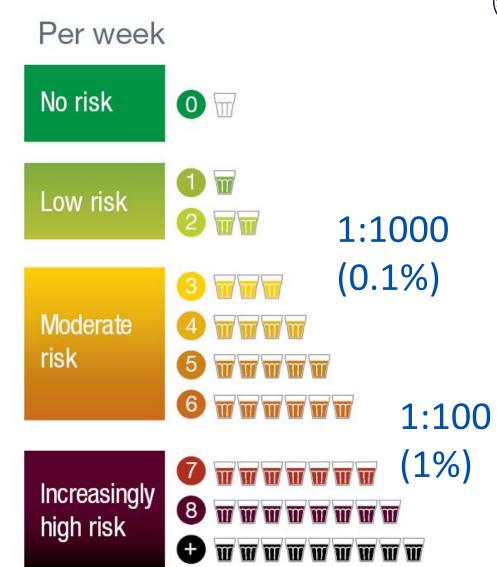
RISKS, EVIDENCE, & MECHANISMS

Canadian Risk Threshold

Premature Death (<75 years)

- 1 in 1000 risk = 2 standard drinks weekly (low)
- 1 in 100 risk = 6 standard drinks weekly (high)

Math: lifetime absolute risk approach, 17.5 YLL (years life lost) per threshold (lifetimes)



Risk: Summary

How should I interpret the alcohol-attributable years of life lost

17.5 years of life lost per 1000 people

- Does this mean everyone who drinks this amount loses 6.4 days of life?

- No.

A good way to interpret it is

(1) That you have <u>1 in 1000 chance</u> of dying early from alcohol at this consumption level

(2) That death will occur on average **17.5 years earlier (i.e., 17.5 years of life lost)** than the age you would have died if that alcohol-attributable death did not occur.







How are you feeling now learning about Canada's Guidance on Alcohol and Health guidelines?

Guidelines are all clear to me!

Information is new, but making sense

Still a bit confused about the guidelines

Feeling skeptical about the recommendations





BREAK TIME FOR 10 MIN

PLEASE CONSIDER FILLING OUT OUR PRE-LECTURES SURVEY!

https://ubc.ca1.qualtrics.com/jf e/form/SV_0BaujGaK34koAkK





Remember what the high-risk (1:100 risk of premature death) alcohol intake threshold is?

2 standard drinks per week

4 standard drinks per week

6 standard drinks per week

8 standard drinks per week





Remember what the high-risk (1:100 risk of premature death) alcohol intake threshold is?

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Todays Agenda

New Canadian Alcohol Use Guidelines

- Risk Thresholds: what does it actually mean?
- 2. Evidence: where did they get the information?
- **3.** Mechanisms of Harms: why do we think alcohol causes these concerns?

Background Information

Current Guidelines

10 min BREAK

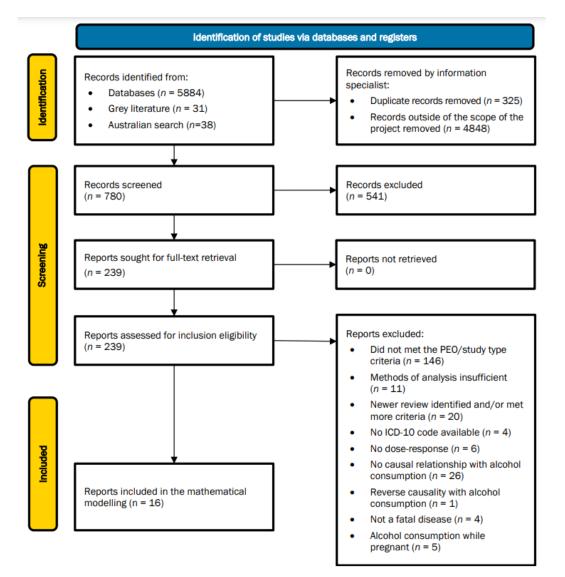
Risks, Evidence, & Mechanisms

Takeaways



Evidence: Methods

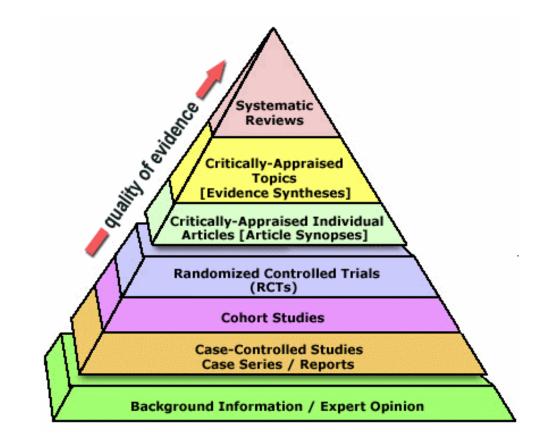
- Specific inclusion criteria for mathematical models
- Identified 5,915
 systematic reviews
- Only 14* met criteria for long term risk
- *Made up of over ~364 studies total



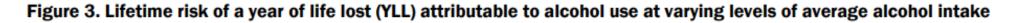


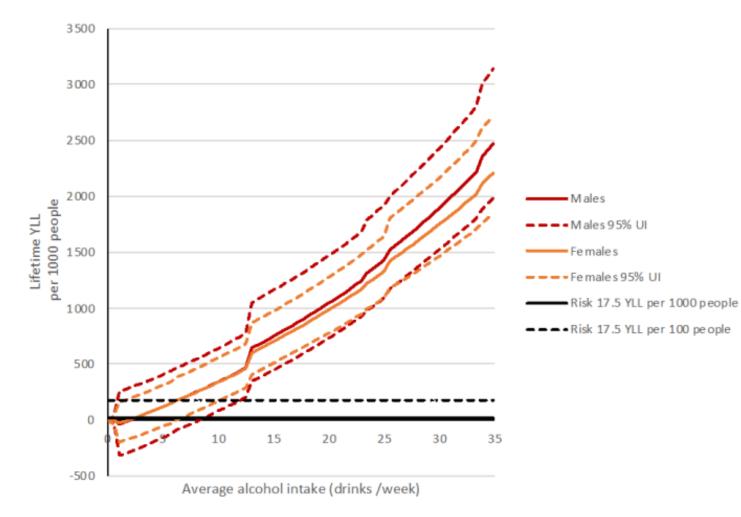
Evidence: Limitations

- Randomized Controlled Trials are gold standard for effects of interventions
- BUT
- Unethical and impractical in the field of alcohology
- <u>Use observational studies</u>, <u>control for risk factors</u>, etc.



Evidence: Results







Disease or injury 1 2 3 4 5 6 7 14 21 35 Tuberculosis 3.7% 7.5% 11.4% 15.5% 19.7% 24.1% 26.3% 62.4% 105.2% 233.3% 2.9% 6.4% Lower respiratory infections 1.0% 1.9% 3.9% 4.9% 5.9% 13.7% 21.0% 37.6% 5.1% 15.8% 21.6% 37.0% 89.4% 152.3% 338.4% Oral cavity and pharynx cancer 10.3% 27.6% 33.8% Oesophagus cancer 2.7% 5.4% 8.2% 11.1% 14.1% 17.2% 18.7% 42.7% 69.1% 139.3% 7.0% 9.2% Colorectal cancer 1.4% 2.7% 4.1% 5.6% 8.5% 20.0% 31.1% 57.4% Liver cancer 0.8% 1.6% 2.4% 3.2% 4.0% 4.8% 5.2% 11.2% 17.0% 30.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Breast cancer 3.0% 6.0% 9.1% 12.3% 15.5% 18.8% 20.5% 46.3% 73.8% 143.5% Larynx cancer 3.5% 7.2% 11.0% 14.9% 18.9% 23.1% 25.3% 59.7% 100.1% 219.7% Pancreatitis 0.0% 0.1% 0.1% 0.2% 0.2% 0.3% 1.1% 2.4% 5.9% **Diabetes Mellitus** 0.0% 6.2% 18.8% 32.9% 44.5% 113.6% 207.1% 553.0% Liver cirrhosis 12.4% 25.6% 40.5% 2.6% 3.9% 6.6% 8.0% 8.7% 18.9% 29.2% 53.7% Atrial fibrillation and flutter 1.3% 5.3% 2.8% 8.7% 29.3% 5.7% 11.8% 15.0% 16.6% 17.4% 35.9% 47.2% Hypertension -5.0% -5.0% -5.0% -5.0% -5.0% 4.0% Ischemic heart disease -5.0% -5.0% 4.0% 15.0% 8.0% 14.0% Ischemic stroke -8.0% -8.0% -8.0% -8.0% -8.0% -8.0% -8.0% 8.0% Intracerebral hemorrhage -8.0% -8.0% -8.0% -8.0% -8.0% -1.0% -1.0% 25.0% 25.0% 67.0% 21.0% 21.0% 21.0% 11.0% 11.0% 39.0% 39.0% 82.0% Subarachnoid haemorrhage 21.0% 21.0% 3.1% 5.7% 8.3% 11.0% 13.8% 16.6% 18.0% 40.2% 64.5% 129.2% Epilepsy 9.2% 48.8% Road injuries 3.0% 6.1% 12.5% 15.9% 19.3% 21.1% 80.2% 168.0% Other unintentional injuries 1.6% 3.2% 4.8% 6.4% 8.1% 9.8% 10.6% 23.3% 36.5% 68.3% Intentional injuries 5.1% 10.5% 16.1% 22.1% 28.3% 34.9% 38.3% 96.1% 171.2% 431.9%

Table 2. Increased risk of diseases and injuries for males based on average weekly alcohol use (standard drinks per week)

Dark red > 50%; light red 20% to 50%; yellow 10% to < 20%; green < -10%



Table 1. Increased risk of diseases and injuries for females based on average weekly alcohol use (standard drinks per week)

Disease or injury	1	2	3	4	5	6	7	14	21	35
Tuberculosis	3.7%	7.5%	11.4%	15.5%	19.7%	24.1%	26.3%	62.4%	105.2%	233.3%
Lower respiratory infections	1.0%	1.9%	2.9%	3.9%	4.9%	5.9%	6.4%	13.7%	21.0%	37.6%
Oral cavity and pharynx cancer	5.1%	10.3%	15.8%	21.6%	27.6%	33.8%	37.0%	89.4%	152.3%	338.4%
Oesophagus cancer	2.7%	5.4%	8.2%	11.1%	14.1%	17.2%	18.7%	42.7%	69.1%	139.3%
Colorectal cancer	1.4%	2.7%	4.1%	5.6%	7.0%	8.5%	9.2%	20.0%	31.1%	57.4%
Liver cancer	0.8%	1.6%	2.4%	3.2%	4.0%	4.8%	5.2%	11.2%	17.0%	30.1%
Breast cancer	1.8%	3.7%	5.6%	7.6%	9.5%	11.6%	12.6%	27.9%	44.0%	84.2%
Larynx cancer	3.0%	6.0%	9.1%	12.3%	15.5%	18.8%	20.5%	46.3%	73.8%	143.5%
Pancreatitis	-5.3%	-10.3%	-15.0%	-19.2%	-22.7%	-25.5%	-26.7%	-20.8%	14.8%	173.9%
Diabetes Mellitus	-15.2%	-19.9%	-23.0%	-25.2%	-26.9%	-28.3%	-28.9%	-33.5%	-34.6%	-32.7%
Liver cirrhosis	61.5%	94.3%	124.3%	153.3%	182.1%	211.0%	225.5%	444.7%	685.5%	1337.2%
Atrial fibrillation and flutter	1.3%	2.6%	3.9%	5.3%	6.6%	8.0%	8.7%	18.9%	29.2%	53.7%
Hypertension	1.2%	2.4%	3.6%	4.8%	6.0%	7.1%	7.7%	16.1%	24.8%	45.2%
Ischemic heart disease	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%	4.0%	4.0%	15.0%
Ischemic stroke	-10.0%	-10.0%	-10.0%	-10.0%	-10.0%	-8.0%	-8.0%	8.0%	8.0%	14.0%
Intracerebral hemorrhage	-8.0%	-8.0%	-8.0%	-8.0%	-8.0%	-1.0%	-1.0%	25.0%	25.0%	67.0%
Subarachnoid haemorrhage	21.0%	21.0%	21.0%	21.0%	21.0%	11.0%	11.0%	39.0%	39.0%	82.0%
Epilepsy	3.1%	5.7%	8.3%	11.0%	13.8%	16.6%	18.0%	40.2%	64.5%	129.2%
Road injuries	1.9%	3.9%	5.9%	8.0%	10.1%	12.2%	13.3%	29.6%	46.8%	90.2%
Other unintentional injuries	1.6%	3.2%	4.8%	6.4%	8.1%	9.8%	10.6%	23.3%	36.5%	68.3%
Intentional injuries	5.1%	10.5%	16.1%	22.1%	28.3%	34.9%	38.3%	96.1%	171.2%	431.9%

Dark red > 50%; light red 20% to 50%; yellow 10% to < 20%; green < -10%



Back to Relevant Results

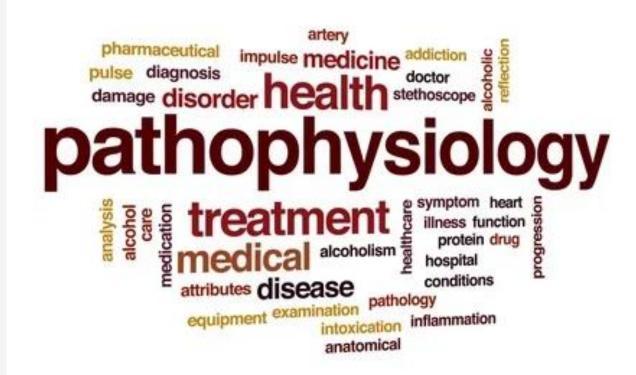
- 1 in 1000 risk: 2 SDs/week
- 1 in 100 risk: 6 SDs/week
- Guidelines provide advice to all Canadians, not specific Canadians
- As always, ask your doctor



How Does It Work?

Mechanisms to Discuss

- Alcohol Related
 Consequences for Self
 & Others
- 2. Types of Cancer
- Heart Disease and Stroke





Violence

"No exact dose—response relationship can be established but consuming alcohol increases the risk of perpetrating alcohol-related violence" – CCSA

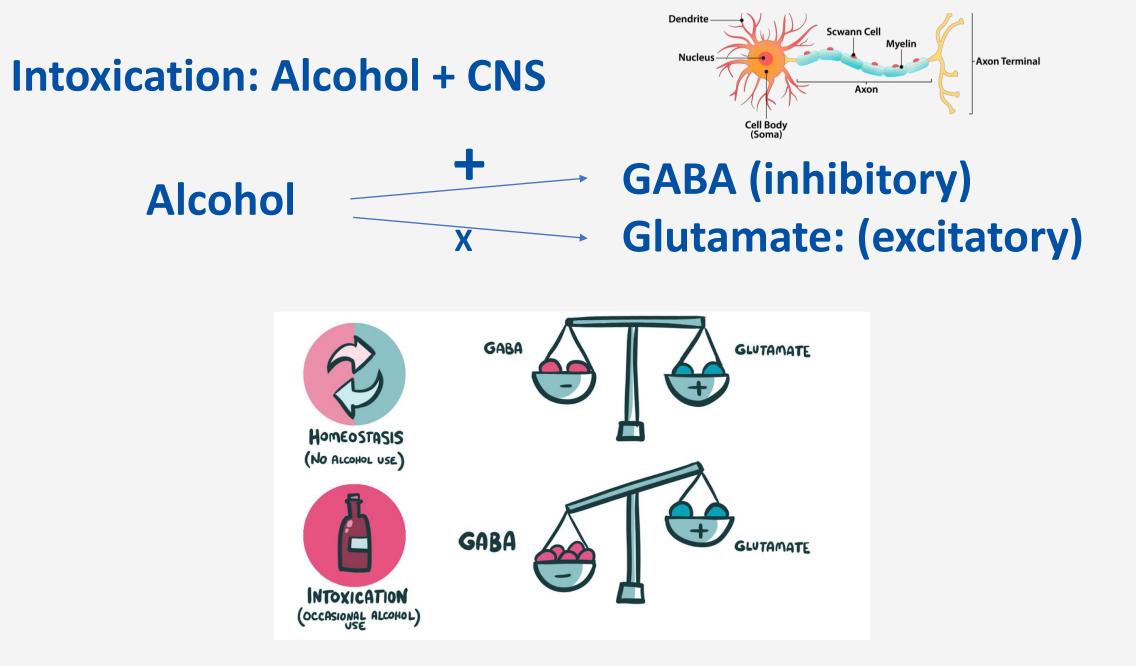
Recommendation: consume no more than 2 standard drinks per occasion



www.ccsa.ca • www.ccdus.

Update of Canada's Low-Risk Alcohol Drinking Guidelines: Overview of Reviews of the Association Between Alcohol Use and Aggression and Violence

August 2022





Which of the following cancers are associated with increased alcohol consumption? (1+ options)

 Liver Cancer

 Breast Cancer

 Colon Cancer

 Throat Cancer





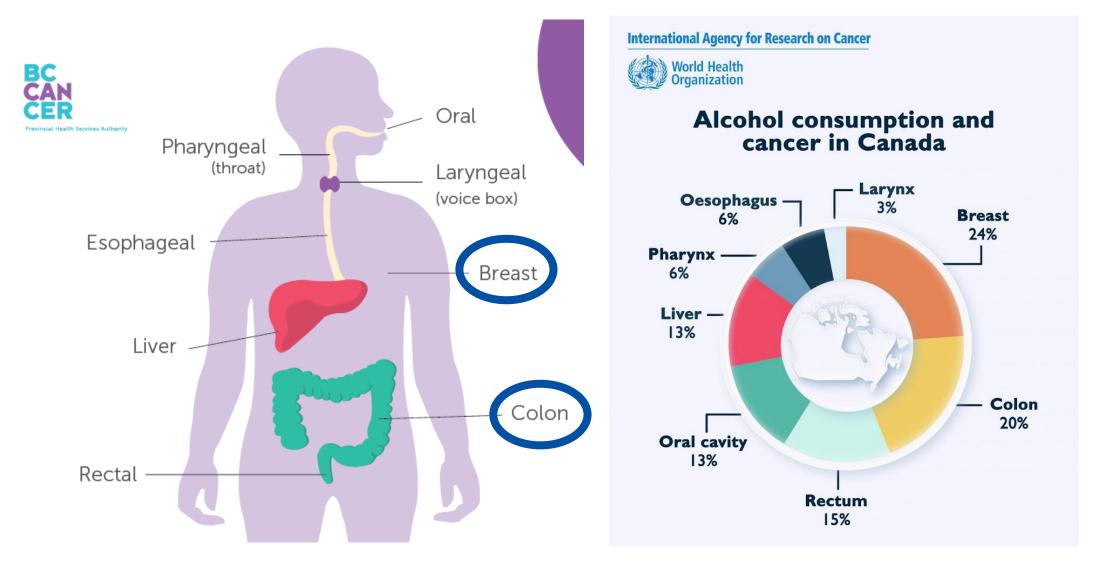
Which of the following cancers are associated with increased alcohol consumption? (1+ options)

Liver Cancer	
Breast Cancer	
Colon Cancer	
Throat Cancer	



Cancer and Alcohol

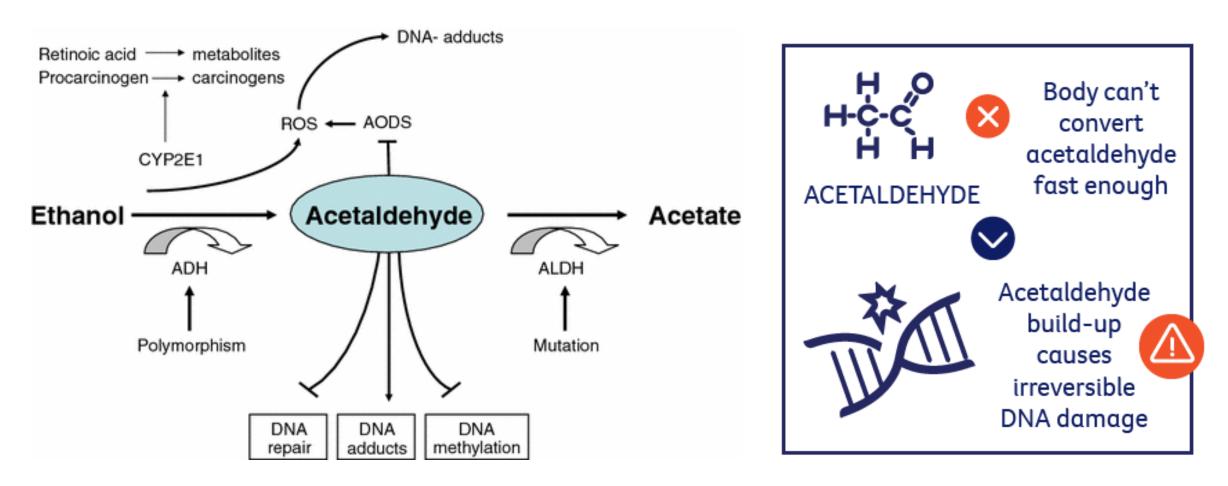




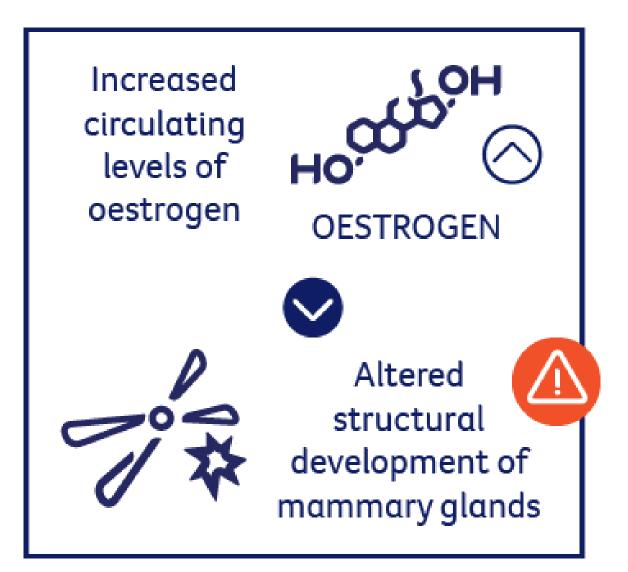
Known carcinogen – 7,000 alcohol attributable cancer deaths in Canada (2020)



Metabolism: Acetaldehyde







Heart Disease/Stroke

Associated with

- High Blood Pressure
- Stroke
- Heart Failure* specific
- Arrhythmias

Ischemic Heart Diseases (CAD): not negative nor protective BUT still risk factor for above!

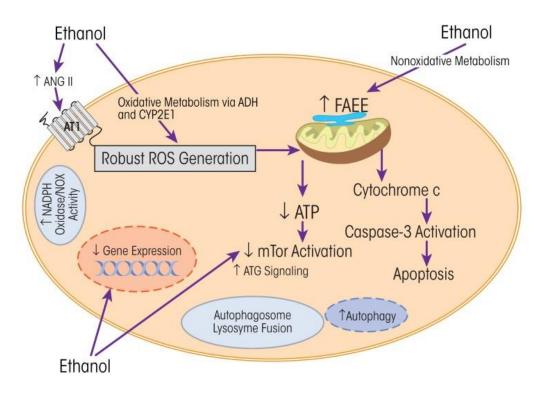


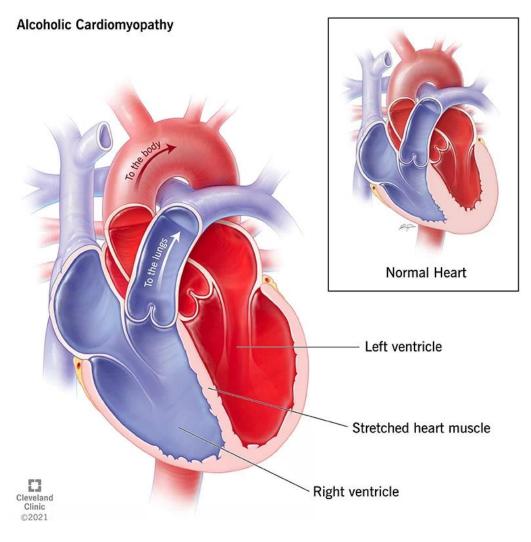


Alcohol consumption increases the risk of many CVDs



Mechanisms:



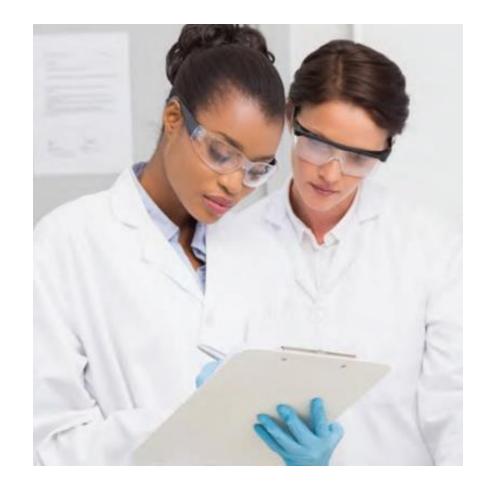




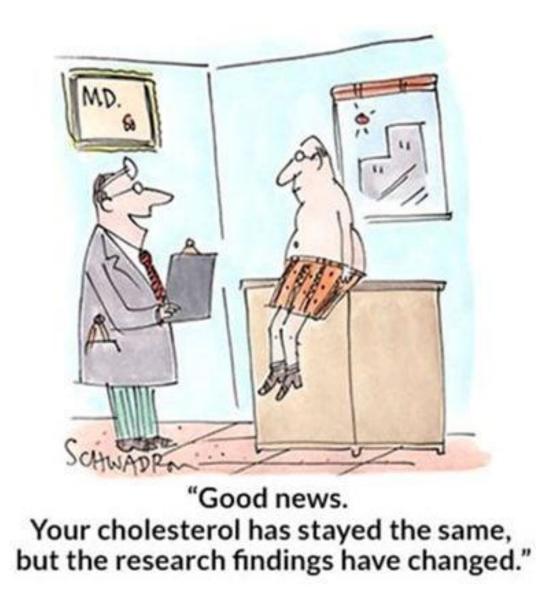
Summary: Mechanisms

Complicated! Each could have their own full lectures

Important to recognize that (1) We see associations at a population level (2) We are theorizing and testing mechanisms









Todays Agenda

New Canadian Alcohol Use Guidelines

Background Information

Current Guidelines

10 min BREAK

Risks, Evidence, & Mechanisms

Takeaways

Canada's Guidance on Alcohol and Health

Per week





Canadian Centre on Substance Use and Addiction

Evidence. Engagement. Impact.

Drinking less is better

We now know that even a small amount of alcohol can be damaging to health.

Science is evolving, and the recommendations about alcohol use need to change.

Research shows that no amount or kind of alcohol is good for your health. It doesn't matter what kind of alcohol it is — wine, beer, cider or spirits.

Drinking alcohol, even a small amount, is damaging to everyone, regardless of age, sex, gender, ethnicity, tolerance for alcohol or lifestyle.

That's why if you drink, it's better to drink less.



CCSA – Canada's Guidance on Alcohol and Health

"...instead of providing people with strict rules and recommendations, people in Canada should be presented with a **continuum of risk** associated with various levels of alcohol use. The experts anticipate that a continuum of risk **will allow people to situate themselves where they are on that continuum** and understand in which risk zone their alcohol use places them..." Canada's Guidance on Alcohol and Health



Canadian Centre on Substance Use and Addiction

Evidence. Engagement. Impact.

It's time to pick a new target

What will your weekly drinking target be?



Tips to help you stay on target

- Stick to the limits you've set for yourself.
- Drink slowly.
- Drink lots of water.
- For every drink of alcohol, have one non-alcoholic drink.
- Choose alcohol-free or low-alcohol beverages.
- Eat before and while you're drinking.
- Have alcohol-free weeks or do alcohol-free activities.



References

- 1. CCSA Canada's Guidance on Alcohol and Health Final Report: <u>https://www.ccsa.ca/sites/default/files/2023-</u>01/CCSA Canadas Guidance on Alcohol and Health Final Report en.pdf
- 2. Canadian Alcohol and Drugs Survey 2019 / Statistics Canada https://www.statcan.gc.ca/o1/en/plus/2877-dry-february-you-say
- 3. UVIC CISUR LRDGs: https://www.uvic.ca/research/centres/cisur/assets/docs/report-alcohol-and-health-in-canada.pdf
- 4. UVIC CISUR CAPE: https://www.uvic.ca/research/centres/cisur/assets/docs/cape/20231025 guidance combinedslides en.pdf
- 5. CAMH: https://www.camh.ca/en/health-info/mental-illness-and-addiction-index/alcohol
- 6. WHO: https://www.who.int/news-room/fact-sheets/detail/alcohol
- 7. CCSA Lifetime Risk of Alcohol Attributable Death and Disability: <u>https://www.ccsa.ca/sites/default/files/2022-08/CCSA-LRDG-Lifetime-risk-of-alcohol-attributable-death-and-disability-en.pdf</u>
- 8. Alcohol / Brain / Violence: <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6826797/</u>
- 9. Alcohol Metabolism: https://www.niaaa.nih.gov/publications/alcohol-metabolism
- 10. Alcohol / Cancer (BC CANCER): <u>http://www.bccancer.bc.ca/prevent/alcohol/the-science</u>
- 11. Alcohol / Cancer (Australia): <u>https://www.cancervic.org.au/cancer-information/preventing-cancer/limit-alcohol/how-alcohol-causes-</u> cancer
- 12. Alcohol / Acetaldehyde Mechanisms: <u>https://tinyurl.com/2jwcsmzx</u>
- 13. Alcohol / Heart Disease (HealthLink BC): <u>https://www.healthlinkbc.ca/health-topics/coronary-artery-disease-and-alcohol#:~:text=Having%20more%20than%202%20alcohol,heart%2C%20leading%20to%20heart%20failure</u>
- 14. World Heart Federation: <u>https://world-heart-federation.org/wp-content/uploads/WHF-Policy-Brief-Alcohol.pdf</u>
- 15. Cleveland Clinic: Alcohol Induced Cardiomyopathy: <u>https://my.clevelandclinic.org/health/diseases/21994-alcoholic-cardiomyopathy</u>



Helpful Resources

- 1. UVIC / CISUR Drink Counter: http://aodtool.cfar.uvic.ca/index-stddt.html
- 2. CCSA Website & Full Report: http://www.ccsa.ca
- **3. Dr. Gair's Website (Lecture Recording):** https://www.uvic.ca/medsci/people/instructors/gairjane.php
- 4. UVIC CISUR Website: https://www.uvic.ca/research/centres/cisur/index.php

MINI MED SCHOOL LECTURE SERIES

Future Talks:

Nov 18th, 2023 - New Canadian Alcohol Use Guidelines

Nov 25th, 2023 - Accessing a Family Doctor in BC

Jan 13th, 2024 - Skin: Conditions and Concerns

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Feb 3rd, 2024 - Ozempic and other GLP-1 Agonist

Feb 10th, 2024 - Artificial Intelligence (AI) in Health Care



Thank you!

Any Questions?



PLEASE CONSIDER FILLING OUT OUR POST-LECTURE SURVEY!

https://ubc.ca1.qualtrics.com/jf e/form/SV_3xF4D1UPtUzkcbl

