

Canada's Low-Risk Alcohol Drinking Guidelines

Communicating Alcohol-Related Health Risks

This resource was developed to assist healthcare providers in discussing with their clients the risks of several serious illnesses associated with various levels of alcohol consumption.

Tables 1, 2 and 3 below—taken from the technical, scientific report¹ that provided the basis for *Canada's Low-Risk Alcohol Drinking Guidelines*²—show changes in the risk for a selected number of serious alcohol-related illnesses based on how many drinks a person consumes on average per day. These estimates were based on an analysis of a comprehensive database of scientific studies commissioned as an internal document by the Centre for Addiction and Mental Health.³

Table 1 summarizes the risks for 12 serious illnesses, including seven types of cancer, which apply equally for both men and women under 70 years of age. Of note from this table:

- Drinking just one drink per day increases, by up to 42%, a person's risk of getting any one of the nine listed conditions identified in yellow. For these nine conditions, a person's risk rises as the number of drinks consumed per day increases.
- Tuberculosis was the only condition for which there was no significant change in risk until a particular 'threshold' drinking level (namely, at three or more drinks per day).
- A person is 14–19% less likely to get ischemic heart disease when drinking up to 3–4 drinks per day, with zero risk at 5–6 drinks per day and increased risk with greater consumption.

Table 1. Percentage changes in risks for males and females of premature death from 12 alcohol-related illnesses according to typical daily alcohol intake

Type of Illness or Disease	Proportion of All Deaths, 2002–2005	Percentage Increase/Decrease in Risk				
		1 Drink	2 Drinks	3–4 Drinks	5–6 Drinks	+ 6 Drinks
Tuberculosis	1 in 2,500	0	0	+194	+194	+194
Oral cavity & pharynx cancer	1 in 200	+42	+96	+197	+368	+697
Oral esophagus cancer	1 in 150	+20	+43	+87	+164	+367
Colon cancer	1 in 40	+3	+5	+9	+15	+26
Rectum cancer	1 in 200	+5	+10	+18	+30	+53
Liver cancer	1 in 200	+10	+21	+38	+60	+99
Larynx cancer	1 in 500	+21	+47	+95	+181	+399
Ischemic heart disease	1 in 13	-19	-19	-14	0	+31
Epilepsy	1 in 1,000	+19	+41	+81	+152	+353
Dysrhythmias	1 in 250	+8	+17	+32	+54	+102
Pancreatitis	1 in 750	+3	+12	+41	+133	+851
Low birth weight	1 in 1,000	0	+29	+84	+207	+685



Tables 2 and 3 present separate risk estimates for males and females for conditions where these are significantly different. Of note from the estimates in these tables:

- At the lower levels of alcohol consumption, women experience greater benefits for some conditions such as stroke and diabetes (in green). However, with increasing alcohol intake, women's risk for these conditions increases more rapidly than that of men.
- At even one drink per day on average, a woman's risk of getting liver cirrhosis increases by 139% compared with 26% for males.
- The risk levels from drinking for all the listed illnesses are also significant for persons 70 years of age or older, with similar patterns of protection and increased risk.

Table 2. Percentage changes in risks for men of premature death from five alcohol-related illnesses according to typical daily alcohol intake

Type of Illness or Disease	Proportion of All Deaths, 2002–2005	Percentage Increase/Decrease in Risk				
		1 Drink	2 Drinks	3–4 Drinks	5–6 Drinks	+ 6 Drinks
		Zero or Decreased Risk 0% -1% to -24% -25% to -50% Increased Risk Up to +49% +50% to 99% +100% to 199% Over +200%				
Hemorrhagic stroke (morbidity)	-	+11	+23	+44	+78	+156
Hemorrhagic stroke (mortality)	1 in 30	+10	+21	+39	+68	+133
Ischemic stroke (morbidity)	-	-13	0	0	+25	+63
Ischemic stroke (mortality)	1 in 80	-13	0	+8	+29	+70
Diabetes mellitus	1 in 30	-12	0	0	0	+72
Hypertension	1 in 150	+13	+28	+54	+97	+203
Liver cirrhosis (morbidity)*	-	0*	0*	+33	+109	+242
Liver cirrhosis (mortality)	1 in 90	+26	+59	+124	+254	+691

* **Note:** Rehm and colleagues (2010)⁴ estimate reduced risk of liver cirrhosis morbidity at these levels of consumption (at one or two drinks per day). Given that there is no known biological reason for such a result, the relative risk has been artificially put at zero.

Table 3. Percentage changes in risks for women of premature death from five alcohol-related illnesses according to typical daily alcohol intake

Type of Illness or Disease	Proportion of All Deaths, 2002–2005*	Percentage Increase/Decrease in Risk				
		1 Drink	2 Drinks	3–4 Drinks	5–6 Drinks	+ 6 Drinks
Breast cancer	1 in 45	+13	+27	+52	+93	+193
Hemorrhagic stroke (morbidity)	-	-29	0	0	+78	+249
Hemorrhagic stroke (mortality)	1 in 20	+22	+49	+101	+199	+502
Ischemic stroke (morbidity)	-	-18	-13	0	+31	+121
Ischemic stroke (mortality)	1 in 65	-34	-25	0	+86	+497
Diabetes mellitus	1 in 30	-36	-40	0	+739	+1560
Hypertension	1 in 85	0	+48	+161	+417	+1414
Liver cirrhosis (morbidity)*	-	+21	+70	+125	+182	+260
Liver cirrhosis (mortality)	1 in 160	+139	+242	+408	+666	+1251

* **Note:** Each cause of death in the above tables is reported in the second column as a proportion of total deaths for four years from 2002–2005, using Statistics Canada data.

Other conditions caused by alcohol include:

- alcohol dependence syndrome (alcoholism)
- alcoholic psychosis
- nervous system degeneration due to alcohol
- alcoholic polyneuropathy, myopathy and cardiomyopathy
- alcoholic gastritis
- alcoholic liver diseases and hepatitis
- alcohol-induced pancreatitis
- fetal alcohol spectrum disorder
- alcohol toxicity and poisoning

Reference:

1. Butt, P., Beirness, D., Gliksman, L., Paradis, C., & Stockwell, T. (2011). *Alcohol and health in Canada: A summary of evidence and guidelines for low risk drinking*. Ottawa, ON: Canadian Centre on Substance Abuse. Available at: www.ccsa.ca/2011%20CCSA%20Documents/2011-Summary-of-Evidence-and-Guidelines-for-Low-Risk%20Drinking-en.pdf.
2. National Alcohol Strategy Advisory Committee. (2011). *Canada's low-risk alcohol drinking guidelines*. Ottawa, ON: Canadian Centre on Substance Abuse.
3. Rehm, J., Kehoe, T., Taylor, B., & Patra, J. (2009). *Evidence base for the development of Canadian drinking guidelines: Report prepared for the Low Risk Drinking Guidelines Expert Working Group by the Centre for Addiction and Mental Health, Ontario*. Ottawa, ON: Canadian Centre on Substance Abuse.
4. Rehm, J., Taylor, B., Mohapatra, S., Irving, H., Baliunas, D., Patra, J., & Roerecke, M. (2010). Alcohol as a risk factor for liver cirrhosis: A systematic review and meta-analysis. *Drug and Alcohol Review*, 29, 437–445.



PCL-5

Instructions: This questionnaire asks about problems you may have had after a very stressful experience involving *actual or threatened death, serious injury, or sexual violence*. It could be something that happened to you directly, something you witnessed, or something you learned happened to a close family member or close friend. Some examples are a *serious accident; fire; disaster such as a hurricane, tornado, or earthquake; physical or sexual attack or abuse; war; homicide; or suicide*.

First, please answer a few questions about your *worst event*, which for this questionnaire means the event that currently bothers you the most. This could be one of the examples above or some other very stressful experience. Also, it could be a single event (for example, a car crash) or multiple similar events (for example, multiple stressful events in a war-zone or repeated sexual abuse).

Briefly identify the worst event (if you feel comfortable doing so): _____

How long ago did it happen? _____ (please estimate if you are not sure)

Did it involve actual or threatened death, serious injury, or sexual violence?

_____ Yes

_____ No

How did you experience it?

_____ It happened to me directly

_____ I witnessed it

_____ I learned about it happening to a close family member or close friend

_____ I was repeatedly exposed to details about it as part of my job (for example, paramedic, police, military, or other first responder)

_____ Other, please describe _____

If the event involved the death of a close family member or close friend, was it due to some kind of accident or violence, or was it due to natural causes?

_____ Accident or violence

_____ Natural causes

_____ Not applicable (the event did not involve the death of a close family member or close friend)

Second, keeping this worst event in mind, read each of the problems on the next page and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

<i>In the past month, how much were you bothered by:</i>	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (<i>as if you were actually back there reliving it</i>)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (<i>for example, heart pounding, trouble breathing, sweating</i>)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (<i>for example, people, places, conversations, activities, objects, or situations</i>)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (<i>for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous</i>)?	0	1	2	3	4
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (<i>for example, being unable to feel happiness or have loving feelings for people close to you</i>)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being "superalert" or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

AUDIT questionnaire

Please circle the answer that is correct for you

1. How often do you have a drink containing alcohol?

- Never
- Monthly or less
- 2-4 times a month
- 2-3 times a week
- 4 or more times a week

2. How many standard drinks containing alcohol do you have on a typical day when drinking?

- 1 or 2
- 3 or 4
- 5 or 6
- 7 to 9
- 10 or more

3. How often do you have six or more drinks on one occasion?

- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

4. During the past year, how often have you found that you were not able to stop drinking once you had started?

- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

5. During the past year, how often have you failed to do what was normally expected of you because of drinking?

- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

6. During the past year, how often have you needed a drink in the morning to get yourself going after a heavy drinking session?

- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

7. During the past year, how often have you had a feeling of guilt or remorse after drinking?

- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

8. During the past year, have you been unable to remember what happened the night before because you had been drinking?

- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?

- No
- Yes, but not in the past year
- Yes, during the past year

10. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?

- No
- Yes, but not in the past year
- Yes, during the past year

Scoring the AUDIT

Scores for each question range from 0 to 4, with the first response for each question (eg never) scoring 0, the second (eg less than monthly) scoring 1, the third (eg monthly) scoring 2, the fourth (eg weekly) scoring 3, and the last response (eg. daily or almost daily) scoring 4. For questions 9 and 10, which only have three responses, the scoring is 0, 2 and 4 (from left to right).

A score of 8 or more is associated with harmful or hazardous drinking, a score of 13 or more in women, and 15 or more in men, is likely to indicate alcohol dependence.