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The Canadian Cancer Society's perspective on alcohol and the evidence supporting it

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**Cancer and Alcohol: Myths, Evidence, Action & Precautionary Policies Forum
November 15, 2013**





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Acknowledgements

- Elizabeth Holmes, Policy Analyst, Canadian Cancer Society
- Bryony Sinclair, Policy Analyst, Canadian Cancer Society
- Robert Semenciw, Statistician, Public Health Agency of Canada
- Robert Nuttall, Acting Director, Canadian Cancer Society



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Overview

1. Evidence on alcohol and its link to cancer
2. Patterns and trends in alcohol use in Canada
3. Epidemiology of cancer-related cancers in Canada
4. Public perception of alcohol and its relation to cancer
5. The Society's recommendation on alcohol

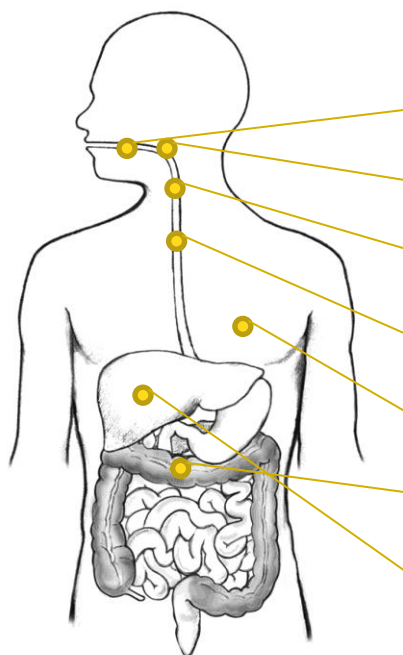


1 | Alcohol and cancer

- Alcohol is carcinogenic to humans (IARC Group 1)
- Alcohol use is one of the top three leading risk factors for cancer death worldwide
- Cancer risk increases in a dose-dependent manner; no safe level of drinking with regard to cancer
- Cancer risk of alcohol is independent of other factors such as smoking, physical activity, diet, BMI and education
- Drinking any type of alcohol raises cancer risk
- Intensity and duration of drinking impacts different cancer types in different ways
- Risk of cancer declines once drinking stops



Alcohol and cancer (cont'd)



Cancer type	RR (with 50g intake per day – approx. 4 drinks)	RR (with <50g of intake per day – light or moderate drinking approx. 1-3 drinks per day)	IARC classification ¹	WCRF/AICR classification ²	PAF
Oral cavity	2-3	1.17-1.64	Group 1	Convincing	27-41%
Pharynx	2-3	1.23-1.66	Group 1	Convincing	27-41%
Larynx	2-3	1.17-1.94	Group 1	Convincing	27-41%
Esophagus	2-3	1.16-1.51	Group 1	Convincing	34-51%
Breast (female)	1.5	1.03-1.67	Group 1	Convincing	11-22%
Colorectal	1.4	1.01-1.21	Group 1	Convincing (men) Probable (women)	5-7%
Liver (hepatocellular carcinoma)	Cannot quantify	Cannot quantify	Group 1	Probable	15-17%

RR=relative risk; IARC=International Agency for Research on Cancer; AICR=American Institute for Cancer Research; WCRF=World Cancer Research Fund; PAF=population attributable fraction

References:

¹IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Volume 100, Part E: Personal habits and indoor combustions. A review of human carcinogens. Lyon, France: IARC, 2012.

²World Cancer Research Fund /American Institute for Cancer Research. Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective. Washington DC: AICR, 2007.

Source: NIH, NIDDK Image Library



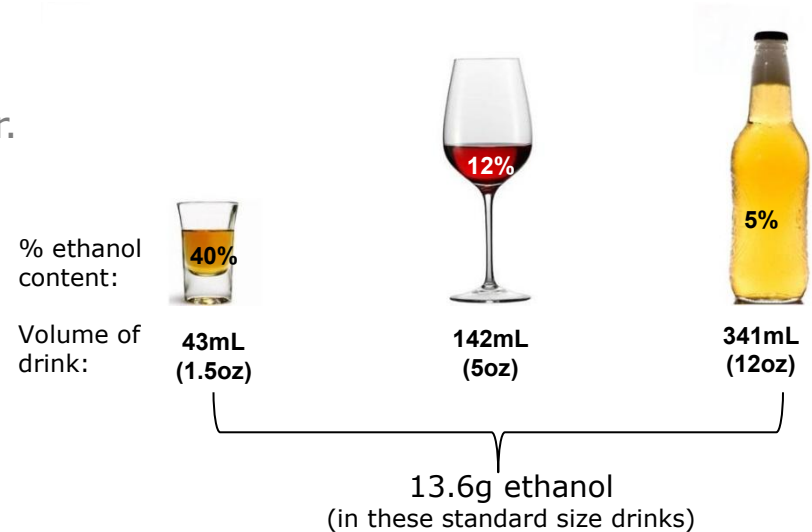
Alcohol and cancer (cont'd)

- Tobacco and alcohol:
 - Drinking alcohol together with smoking tobacco increases the risk more than either one alone for oral cavity, pharynx, larynx, esophagus
- Hepatitis B and C infection:
 - Drinking alcohol increases the risk of liver cancer compared to having hepatitis alone
- Prenatal exposure and childhood cancer
 - Some research suggests maternal alcohol consumption during pregnancy associated with increased risk of acute myeloid leukemia (AML) and neuroblastoma in children
 - More research needed



Alcohol and cancer (cont'd)

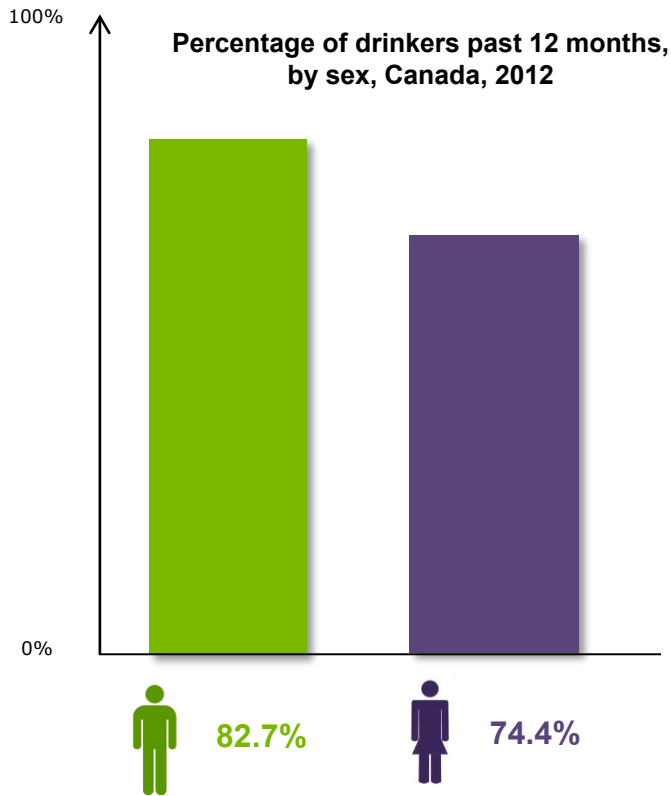
- All types of alcohol raise your risk of cancer.
- The amount of ethanol in a standard drink ranges from 10 to 14 grams.



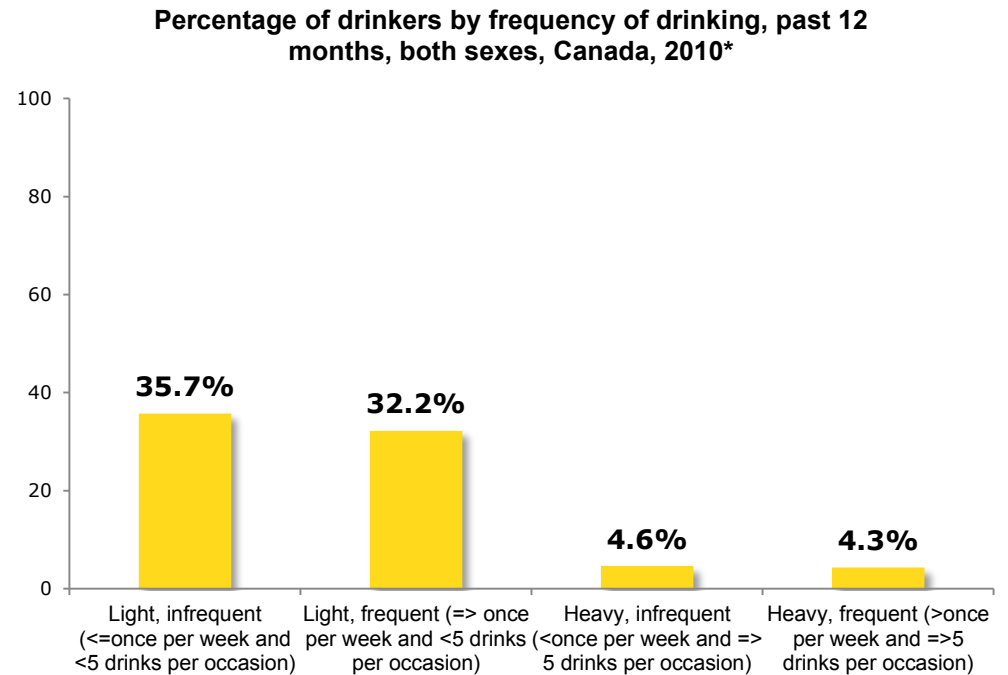
Frequency of drinking	Cancer type
Light (<=1 drink/day)	Breast (female), oral, pharynx, esophagus
Moderate (2-3 drinks/day)	Breast (female), oral, pharynx, esophagus, larynx, colorectal
Heavy (=> 4 drinks/day)	Breast (female), oral, pharynx, esophagus, larynx, colorectal, liver



2 | Patterns and trends in alcohol use in Canada



Reference: Health Canada, Canadian Drug Use Monitoring Survey 2012.



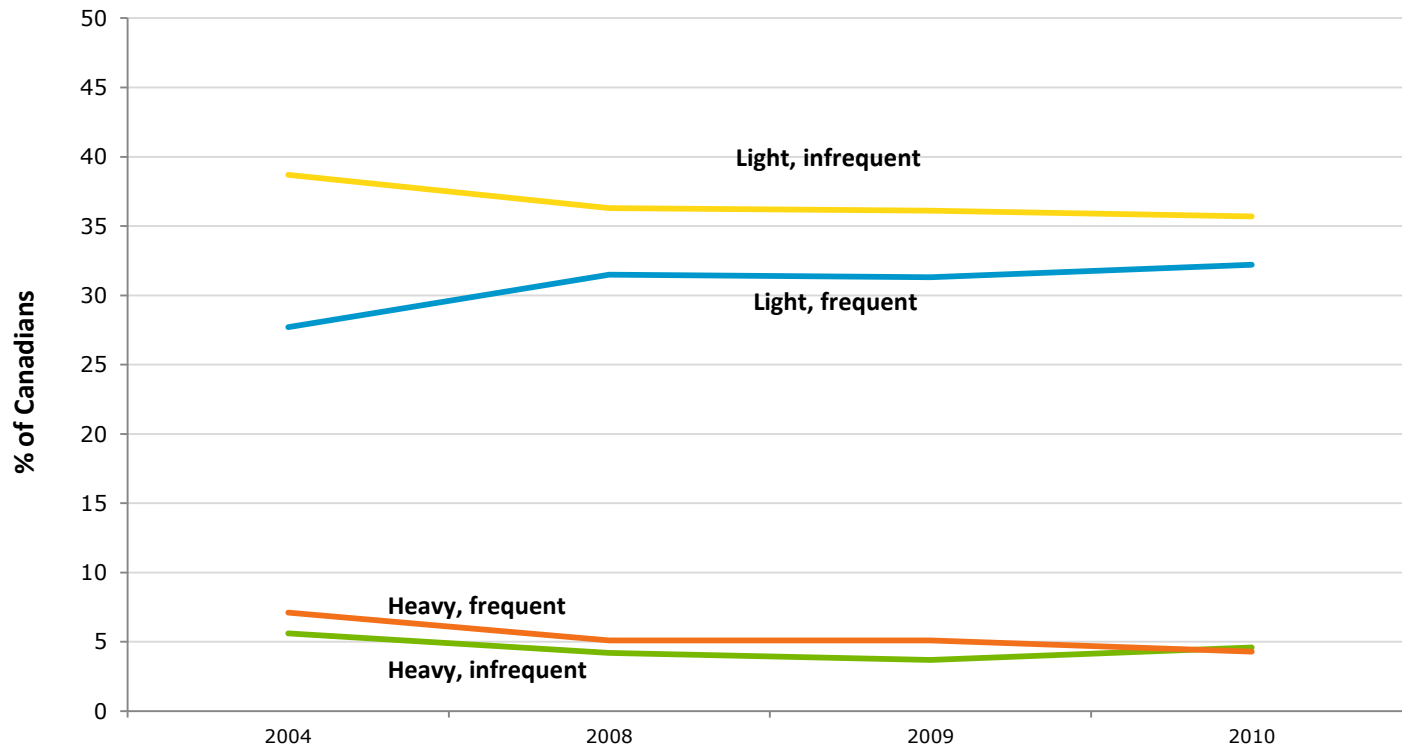
*24.5% were never or former drinkers (i.e. did not drink in the past year)

Reference: Health Canada, Canadian Drug Use Monitoring Survey 2010.



Patterns and trends (cont'd)

Trends in light and heavy drinking, Canada, 2004-2010

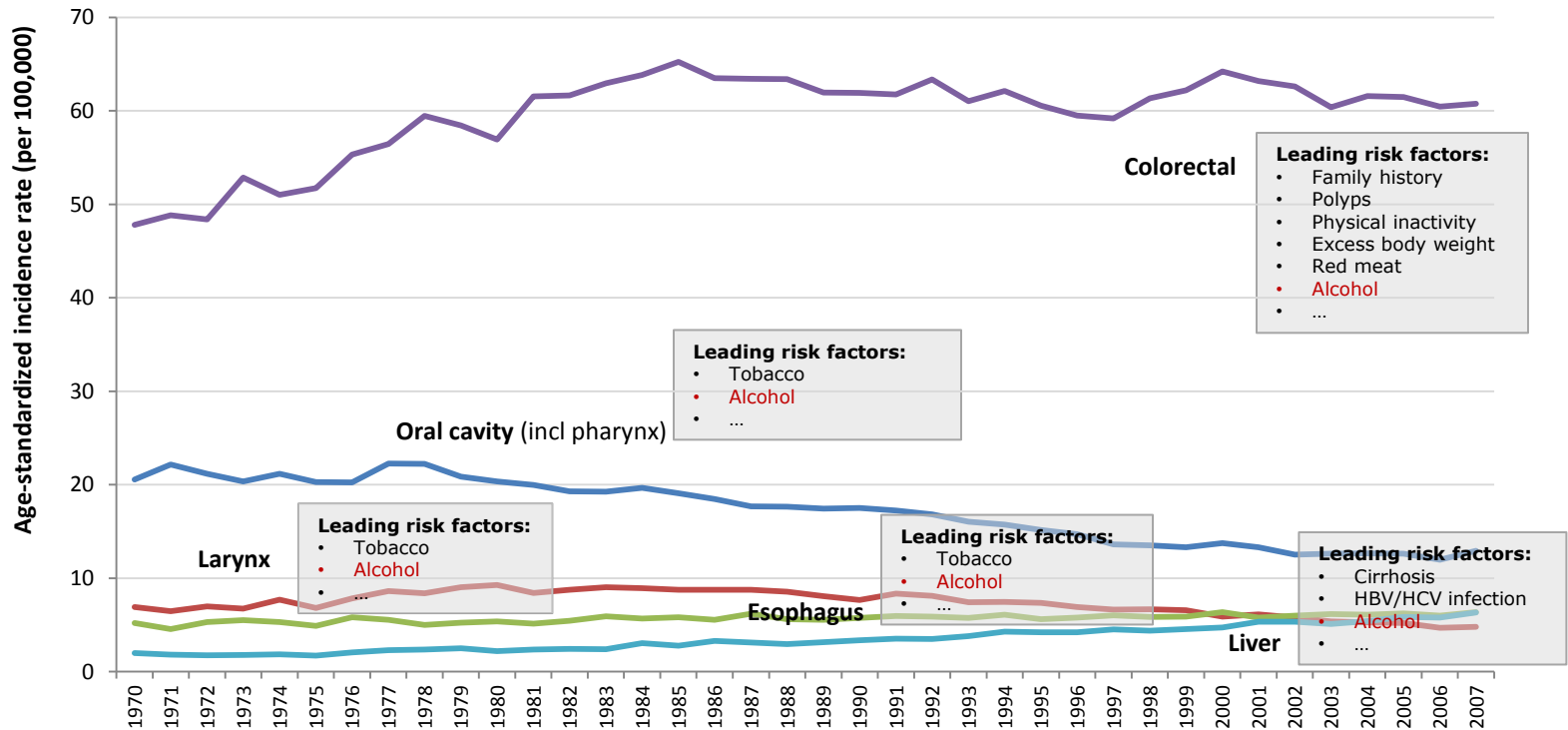


Source: Canadian Addiction Survey (2004), Canadian Drug Use Monitoring Survey (2008, 2009, 2010)



3 | Epidemiology of alcohol-related cancers

Trends in incidence rates for alcohol-related cancers, males, Canada, 1970-2007

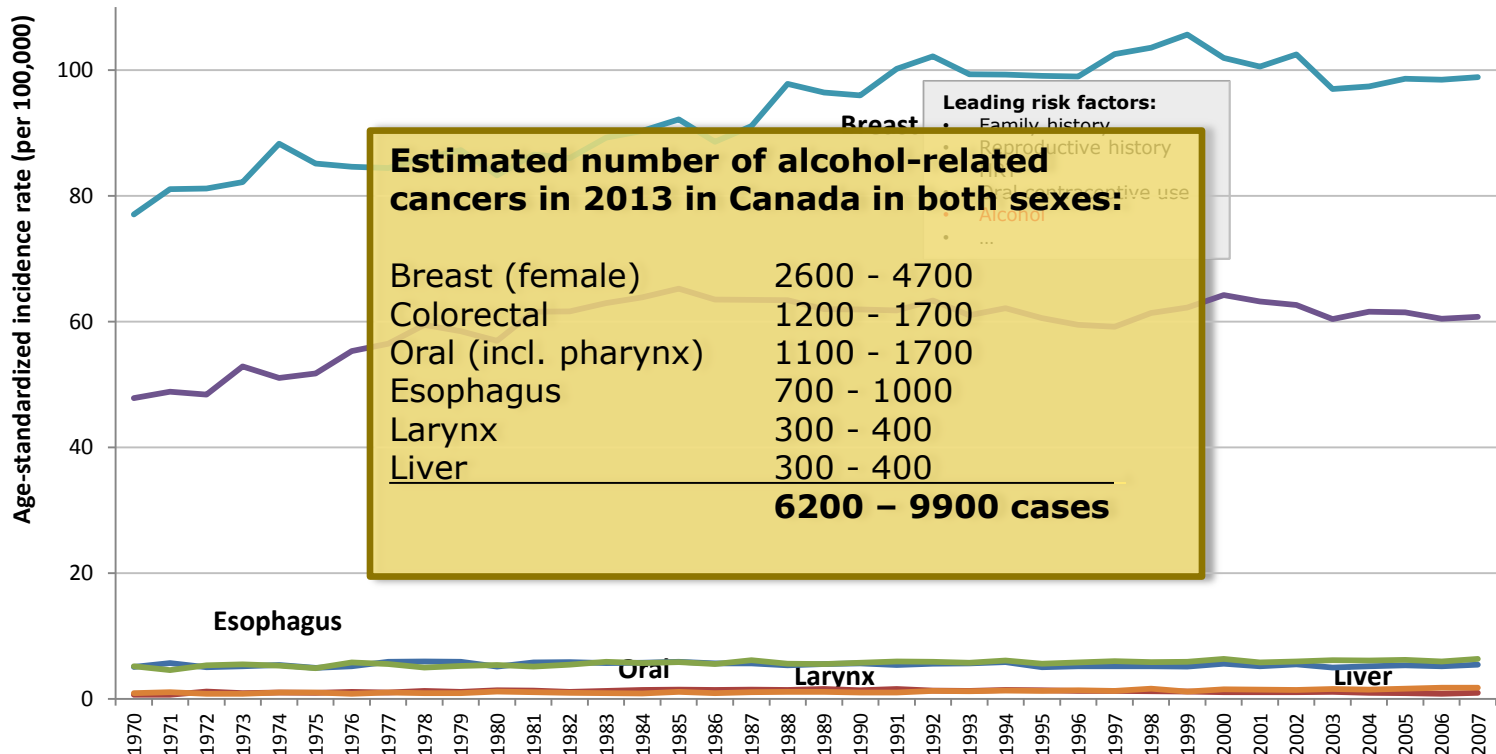


Source: Canadian Cancer Registry, 2012



Epidemiology (cont'd)

Trends in incidence rates for alcohol-related cancers, females, Canada, 1970-2007



Source: Canadian Cancer Registry; analysis by Public Health Agency of Canada



4 | Public awareness of alcohol as a risk for cancer

- Most Canadians unaware that they can lower their cancer risk by limiting their consumption of alcohol
 - 2/3 of Canadians do not think that drinking alcohol is linked to cancer¹

Country of survey	Year	Respondents aware of risk	Other findings
Canada ¹	2008	33%	<ul style="list-style-type: none"> • more likely to see drinking alcohol as a risk factor for heart disease and diabetes (53% and 45%, respectively).
Ireland ²	2012	42%	<ul style="list-style-type: none"> • 63% were misinformed that some types of alcoholic drinks are more dangerous than others • 39% are misinformed that red wine is protective and it appears this message has been mixed up with the benefits for heart disease
European Union ³	2009	67% (36% totally agree, 31% tend to agree that alcohol causes cancer)	
Australia ⁴	2013	48%	<ul style="list-style-type: none"> • Women are more likely than men to believe that alcohol causes cancer (51% compared to 46%), breast cancer cases (21% compared to 16%) • Men more likely than women (28 vs 22%) to believe that pregnant women can safely drink small amounts of alcohol • Gen Y (53%) are more likely than Gen X (45%) and baby boomers (45%) to believe that alcohol causes cancer

Note: different methods were used for the various surveys, so results should be compared with caution

¹ Canadian Partnership Against Cancer. Alcohol use and cancer in Canada; Cancer Control Snapshot 5, 2011.

² Cancer Research and the Irish Cancer Society, 2012

³ European Commission. EU citizens' attitudes towards alcohol. Directorate-General Health and Consumers, April 2010.

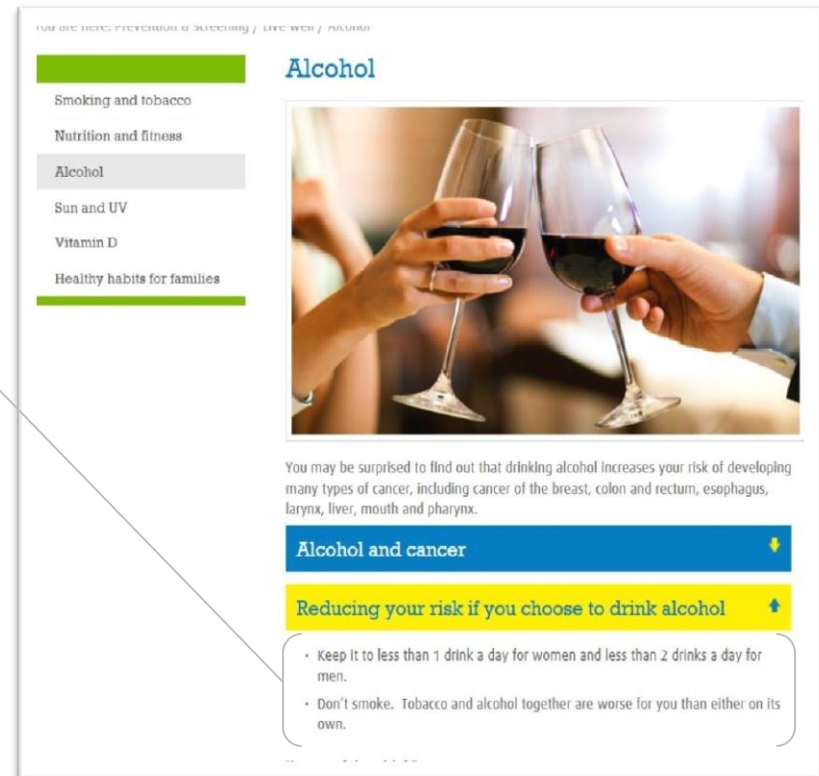
⁴ Foundation for Alcohol Research and Education. Annual Alcohol Poll: Attitudes and Behaviours, 2013.



5 | The Society's recommendation on alcohol

Reduce your risk if you choose to drink alcohol:

- **Limit the amount you drink:**
Women: <1 drink/day
Men: <2 drinks/day
- *Pregnant women should not drink*
- **Be a non-smoker:** *Tobacco and alcohol together are worse for you than either one on its own.*

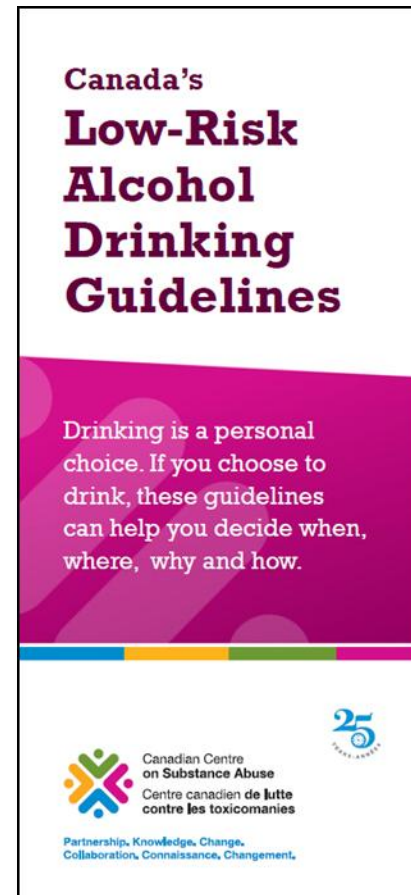


- Tips to reduce drinking at cancer.ca



Recommendations: Society vs other organizations

- **Canadian Centre for Substance Abuse**
Canada's Low-Risk Drinking Guidelines
 - Reduce your long-term health risks by:
 - **Women:** no more than 2 drinks a day most days (up to 10 drinks a week)
 - **Men:** no more than 3 drinks a day most days (up to 15 drinks a week)





Recommendations: Society vs other organizations (cont'd)

Organization	Recommendation	Other supporting statements or perspective
WCRF/AICR¹	<ul style="list-style-type: none"> If consumed at all, alcoholic drinks should be limited to: 2 drinks for men and 1 for women a day. 	<ul style="list-style-type: none"> For cancer prevention, we recommend not drinking alcohol at all.
American Cancer Society²	<ul style="list-style-type: none"> Limit intake to: no more than 2 drinks per day for men and 1 drink a day for women. 	
Cancer Council Australia³	Limit consumption of alcohol, or better still avoid alcohol altogether. For healthy men and women: no more than 2 standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.	<ul style="list-style-type: none"> consumption should occur within in the Australian National Health and Medical Research Council (NHMRC) guidelines. The lifetime risk of harm from drinking alcohol increases with the amount consumed.
Cancer Research UK⁴	Stick with the guideline amounts which are around: 1 standard drink a day for women [e.g. a glass (175ml) of wine or a pint of beer or cider] 2 standard drinks a day for men [e.g. 2 glasses (175ml) of wine or 2 pints of beer or cider]	<ul style="list-style-type: none"> as the amount of alcohol increases, so does the risk. Some drinks may contain more alcohol than you think.
European Code Against Cancer⁵	Moderate your consumption to: 2 drinks per day (men) 1 drink per day (women)	<ul style="list-style-type: none"> The limit should not exceed between 20g of ethanol per day (i.e. approximately two drinks of either beer, wine or spirit each day) and it should be as low as 10g per day for women.

¹World Cancer Research Fund /American Institute for Cancer Research. Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective. Washington DC: AICR, 2007.

²American Cancer Society. Alcohol Use and Cancer. Available at: <http://www.cancer.org/cancer/cancercauses/dietandphysicalactivity/alcohol-use-and-cancer> (accessed Nov 1, 2013)

³Cancer Council Australia. Alcohol and Cancer. Available at: <http://www.cancer.org.au/policy-and-advocacy/position-statements/alcohol-and-cancer/> (accessed Nov 1, 2013)

⁴Cancer Research UK. Alcohol and cancer. Available at: <http://www.cancerresearchuk.org/cancer-info/healthyliving/alcohol/> (accessed Nov 1, 2013)

⁵European Code Against Cancer. Available at: <http://www.cancercode.eu/> (accessed No 1, 2013)



6 | Summary and conclusions

- Evidence shows that alcohol use increases risk of specific types of cancer, regardless of type of alcohol or amount consumed.
- The more you drink, the higher the risk of certain cancers.
- Survey data suggest 1/3 of Canadians are light-infrequent or light-frequent drinkers. Coincidentally, only 1/3 of Canadians are aware that alcohol causes cancer.
- The Society recommends that if you choose to drink alcohol, limit it to <1 drink/day for women and <2 drinks/day for men, and don't smoke.
- The Society's recommendations are in-line with international recommendations



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Thank you!

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