Alcohol and Cancer Risk



The Problem

Cancer is the leading cause of death in economically developed countries and the second leading cause in economically developing countries.^{1, 2} Alcohol consumption is one of the top-10 risks for worldwide burden of disease and disability, and is responsible for 3.8% of global deaths³ and nearly 4% of all U.S. cancer deaths.⁴ There is no determined safe threshold for alcohol consumption and cancer risk.^{5, 6, 7}

- The International Agency for Research on Cancer (IARC) has classified beverage alcohol as a Group 1 (cancerous to humans) carcinogen since 1988.^{5, 8}
- Globally, alcohol-attributable cancers account for 25% of alcohol-related deaths for women and 18% for men making it one of the largest entirely avoidable risk factors.⁹
- Seven types of cancer are significantly associated with alcohol consumption:⁴

 Cancer of the oral cavity 	– Esophagus	- Liver
– Pharynx	 Colorectum 	 – Female breast

- Larynx
- Breast cancer is the cause for the majority of female alcohol-related cancer deaths. High alcohol intake is a risk factor for developing cancer, and also has a negative effect on the course of the disease.¹⁰
- Head and neck cancers account for the majority of alcohol related cancers among men.⁹
- The combination of alcohol and tobacco use significantly increases cancer risk for head and neck cancers; however, the positive association of these cancers and alcohol consumption exists independent of tobacco use.
- Alcohol consumption is also associated with the incidence of cancer of the pancreas.^{3,4}
- Increased consumption of alcohol on a regular basis increases the cancer risk in both men and women. An increase
 of just 10g per day is associated with significantly greater cancer risk.^{2-4, 11}
- Light and moderate drinking is associated with greater cancer risk for some cancers when compared to nondrinkers.^{10, 12-14}
- While heavy drinking presents the greatest cancer risk, daily alcohol consumption of up to 1.5 drinks accounts for 26-35% of alcohol-attributable cancer deaths in the United States.⁴
- Alcohol-attributable cancers resulted in an average of 17-19 years of potential life lost per death.⁴

Bottom Line

Alcohol use is a leading cause of cancer – and one of the largest avoidable risk factors – even when used moderately.

Due to the relationship between alcohol consumption and cancer (as well as many other noncommunicable diseases, health problems, and substantial economic costs), the costs of alcohol-related disease and harm significantly outweigh any purported health benefits of moderate drinking.

References

- 1. World Health Organization. The Global Burden of Disease: 2004 Update. Geneva: World Health Organization; 2008.
- Schottenfeld D, Beebe-Dimmer JL, Buffler PA, et al. (2013). Current perspective on the global and United States cancer burden attributable to lifestyle and environmental risk factors. Annual review of public health, 34, 97–117. doi:10.1146/annurev-publhealth-031912-114350
- 3. Rehm J, Mathers C, Popova S, et al. Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. Lancet. 2009;373(9682):2223-2233
- 4. Nelson D, Jarman D, Rehm J, et al. Alcohol-Attributable Cancer Deaths and Years of Potential Life Lost in the United States. American Journal of Public Health. 2013: 641–648. doi:10.2105/AJPH.2012.301199.
- Baan R, Straif K, Grosse Y, et al. WHO International Agency for Research on Cancer Monograph Working Group. Carcinogenicity of alcoholic beverages. Lancet Oncol. 2007;8(4):292-293.
- 6. Alcoholic drinks. In: Food, nutrition physical activity and the prevention of cancer: a global perspective. Washington (DC): World Cancer Research Fund/American Institute for Cancer Research, 2007. p. 157-71.
- Latino-Martel P, Arwidson P, Ancellin R, et al. Alcohol consumption and cancer risk: revisiting guidelines for sensible drinking. *Can Med Assoc J*. 2011; 183:1861-1865 doi:10.1503/cmaj.110363. Available at: http://www.cmaj.ca/content/early/2011/07/11/cmaj.110363.full.pdf+html. Accessed January 10, 2014.
- 8. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: A Review of Human Carcinogens: Personal Habits and Indoor Combustions. Vol 100E. Lyon, France: International Agency for Research on Cancer; 2012.
- Pelucchi C, Tramacere I, Boffetta P, et al. (2011). Alcohol Consumption and Cancer Risk. Nutrition and Cancer. 63(7), 983–990. doi:10.1080/0163 5581.2011.596642
- Holm M, Olsen A, Christensen J, et al. (2013). Pre-diagnostic alcohol consumption and breast cancer recurrence and mortality: Results from a prospective cohort with a wide range of variation in alcohol intake. *International Journal of Cancer*. 132(3), 686–694. doi:10.1002/ijc.27652
- 11. Parry CD, Patra J, Rehm J. (2011). Alcohol consumption and non-communicable diseases: epidemiology and policy implications. *Addiction*. 106(10), 1718–1724. doi:10.1111/j.1360-0443.2011.03605.x
- 12. Allen NE, Beral V, Casabonne D, et al. (2009). Moderate Alcohol Intake and Cancer Incidence in Women. JNCI Journal of the National Cancer Institute. 101(5), 296–305. doi:10.1093/jnci/djn514
- 13. Collaborative Group of Hormonal Factors in Breast Cancer. Alcohol, tobacco and breast cancer-collaborative reanalysis of individual data from 53 epidemiological studies, including 58,515 women with breast cancer and 95,067 women without the disease. *Br J Cancer*. 2002;87(11): 1234–1245.
- 14. Bagnardi V, Rota M, Botteri E, et al. (2012). Light alcohol drinking and cancer: a meta-analysis. Annals of Oncology. 24(2), 301–308. doi:10.1093/ annonc/mds337