



ALCOHOL AND HEALTH

# THE EFFECTS OF MODERATE, REGULAR ALCOHOL CONSUMPTION



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## INTRODUCTION

Seven years ago, when Éduc'alcool published its first monograph on alcohol and health, we noted that the data would have to be updated at some point in the future. That time is now.

There are other reasons why we have published this new version of *Alcohol and Health*.

Our research continues to show that, when it comes to alcohol, Quebecers are most interested in its effect on health.

What's more, the connection between drinking and health is an increasingly hot topic in the headlines. Month after month, new data are reported and commented on in the media. In other words, the subject is far from exhausted.

Finally, Éduc'alcool's mission is to educate, inform and increase public awareness about drinking. The alcohol-health connection thus falls squarely within our scope.

This study, the complete version of which is available in French, is by no means the final word on the subject. Research continues to be done, and we cannot presume to have a monopoly on some ultimate truth. We will no doubt be publishing yet another update several years from now.

This document is a synthesis of the findings of various studies on alcohol and health available today. It draws in particular on two literature reviews whose authors we wish to acknowledge fully:

- n Alberta Alcohol and Drug Abuse Commission (2002). Health Benefits and Risks of Moderate Alcohol Consumption Policy Background Paper, Alberta, Canada: AADAC.
- n American Council on Science and Health (1999). Moderate Alcohol Consumption and Health, New York, USA: ACSH.

We would also like to thank Catherine Paradis, M. Sc., for her rigorous approach and admirable effort in simplifying and untangling the data, as well as Louise Nadeau, Ph.D., titular professor at the University of Montreal, for her valuable contribution.

Great care must be taken when publishing such data, because, after all, each individual is unique. We have therefore included a few reminders that are relevant to the general relationship between drinkers and alcohol. While not part of the current study, these points (on the next page) always bear repeating.

The conclusions of this monograph may be qualified, but they remain clear: **women after menopause and men over the age of 40 generally benefit from regular, moderate drinking.**

In other words, moderation is always in good taste.

The Éduc'alcool Board of Directors





## HIGHLIGHTS

### Each individual is unique

The effects of alcohol on health vary from one person to the next, and generalizations should be avoided. What is good for most people is not necessarily good for everyone. It is important to have correct information and, above all, to know yourself well.

### The beneficial effects of alcohol

Scientific research shows that for most people, regular, moderate drinking, i.e. one or two drinks a day, can provide some protection against cardiovascular disease, peripheral vascular disease, type 2 diabetes and gallstones. It can also have a positive impact on a person's psychosocial condition, and reduce the risk of rheumatism, arthritis and kidney stones.

### Age is a factor

Studies indicate that alcohol has no protective effect on young people. The protective effect increases with age

and the risk of disease. For men, that means after the age of 40; for women, as of menopause. The most significant protective effect is seen in people 60 and older.

### Regularity is the key

The beneficial effects of alcohol are seen only in people who drink regularly, which means drinking about the same amount every day. There is a world of difference between having two drinks a day over seven days, and having seven drinks a day over two days.

### Moderation is important

A drink or two every day may be good for you, but doubling your intake does not double the health benefits. Beneficial effects are noted only when people drink moderately, which is defined as 10 drinks a week for women and 15 a week for men. Over that amount, the benefits disappear.



### **The findings apply to all alcoholic beverages**

The benefits of alcohol may vary from one type of drink to another. Red wine, in particular, may have protective qualities that other alcoholic beverages do not. However, the effects we are talking about here apply to alcohol of all kinds, including wine, cider, beer and spirits.

### **Drinking with food is better**

People appear to derive the greatest health benefits from alcohol if the drinking takes place around mealtime. For example, a pre-dinner cocktail or glass of wine with a meal is not equivalent to drinking on an empty stomach in the morning.

### **A drink is a drink is a drink**

There is as much alcohol in one 341-ml (12-oz) glass of beer or cider (5% alcohol by volume) as there is in one

142-ml (5-oz) glass of wine (12% alcohol) or one 43-ml (1.5-oz) glass of spirits (40% alcohol). These are all considered standard servings, except for cider, which is usually served in a 142-ml glass.

### **There's more to it than drinking**

If you want to be healthy and reduce the risk of disease, you have to do more than just drink two alcoholic beverages a day. Eating well, not smoking, and exercising regularly are also important in reducing your risk factor.

### **You don't have to drink**

For a variety of reasons, some people choose not to drink alcohol at all, and nobody is going to recommend that they start because it's good for them. After all, people drink alcohol for pleasure and by personal choice, not for medical reasons.



## ALCOHOL AND HEALTH

This study was commissioned by Éduc'alcool in order to obtain a current scientific view on the benefits of moderate, regular alcohol consumption (MRAC). For the last 20 years or so, considerable research has been showing that alcohol provides protection against certain diseases, particularly cardiovascular disease.

Nonetheless, drinking may also increase the probability of developing various other diseases, specifically certain forms of cancer, cirrhosis of the liver and neuropsychological disorders. What do we mean by moderate, regular alcohol consumption? What are the health benefits? And what are the potential risks?

MRAC may well have a beneficial impact on health; but it is just one factor among many. For example, the positive effects of MRAC cannot compensate for the harmful effects of smoking, poor nutrition, obesity or low socioeconomic status. The decision to drink or not to drink will always be a personal choice that reflects cultural values, religious beliefs, and individual preferences and traits.



### Moderate, regular alcohol consumption (MRAC)

While it is difficult to pinpoint exactly how much constitutes moderate drinking – the same amount of alcohol can have a vastly different impact on different people – the recommended number of drinks are the following:

- n Women:
  - Do not drink more than **2 standard drinks** per day.
  - Limit your consumption to **10 standard drinks** per week.
- n Men:
  - Do not drink more than **3 standard drinks** per day.
  - Limit your consumption to **15 standard drinks** per week.

A standard drink is defined as follows:

1 glass of beer	341 ml	12 oz	5% alcohol
1 glass of wine	142 ml	5 oz	12% alcohol
1 glass of spirits	43 ml	1,5 oz	40% alcohol
1 glass of fortified wine	85 ml	3 oz	18% alcohol

The limits decrease for the elderly, and some people should abstain from drinking altogether, or else drink less than the recommended limits. These include people with specific health problems, people taking medication, people with a personal or family history of alcohol dependence, pregnant women and those trying to conceive, etc. It is also recommended that heavy drinkers reduce their intake of alcohol. And under no circumstances are abstainers advised to begin drinking in order to improve their health!

### Drinking habits make the difference

The key to the beneficial effect of alcohol lies in your drinking habits: how much and how often you drink. In terms of the impact on your health and your life, there is a world of difference between having two drinks a day and downing 14 drinks on a Saturday night, then abstaining the rest of the week. Moderate, regular and responsible alcohol consumption requires that you limit the amount you drink on each occasion as well as how much you drink over the course of an average week.



## THE HEALTH BENEFITS OF MRAC

### Cardiovascular disease

Not counting other risk factors, such as smoking, poor nutrition and obesity, MRAC is associated with a reduced risk of cardiovascular disease. *One or two drinks a day reduces the risk by at least 30%*; more than that and the beneficial effect disappears. Thus far, the protective effect of alcohol has been observed in men over the age of 40 and in women as of menopause. The beneficial impact is most notable in people over the age of 60.

The protective effect comes primarily from the fact that, over the long term, MRAC increases the level of high-density lipoproteins (HDL, or the “good” cholesterol) in the blood. HDL helps clear “bad” cholesterol (fat molecules or LDL) from arterial walls to prevent buildup and blockages. In the short term, alcohol also appears to inhibit the formation of blood clots.

All kinds of alcohol are associated with the reduced risk of cardiovascular disease, although some researchers note that wine may have somewhat more of a protective effect than other alcoholic beverages.

Since alcohol protects against cardiovascular disease, it may also protect against other diseases, such as strokes and peripheral vascular disease, which are caused by atherosclerosis (the build-up of plaque, which is an accumulation of cholesterol and calcium, in the inner lining of the arteries).

### Strokes

It is very difficult to define the specific link between MRAC and strokes. Since alcohol raises HDL (the “good” cholesterol), one would expect that MRAC would reduce the risk of ischemic strokes, which are those caused by blood clots or blockages in the arteries of the brain. Conversely, the same effect that alcohol has on inhibiting the formation of blood clots may increase the risk of hemorrhagic strokes, which are those caused by the rupture of an artery in the brain, due to an aneurism or sclerosis of brain . In short, the information about *the relationship between alcohol and strokes is inconclusive*.





### Peripheral vascular disease

Peripheral vascular disease refers to diseases of blood vessels outside the heart and brain. Blood circulation in the arms and legs may be compromised due to a narrowing of the blood vessels, which leads to a loss of sensation and muscle weakness. Since the pathology is similar to that seen in strokes, i.e. the presence of atherosclerosis, *it is suspected that the protective effect of alcohol would be similar.*

### Diabetes

Moderate drinkers are about *30% less likely than non-drinkers to develop type 2 diabetes*, which generally develops after age 45 and occurs when, for various reasons, the body either does not produce enough insulin or the cells ignore it. The beneficial effect of alcohol is that it helps the body moderate glucose levels in the blood.

### Gallstones

A number of studies show that MRAC is associated with a reduced risk of gallstones. As it turns out, the way that alcohol affects bile production and “good” cholesterol (HDL) helps *prevent the formation of gallstones.*

### Psychosocial effects

The research confirms the common knowledge that alcohol has *some beneficial effects on psychosocial condition.* MRAC promotes relaxation, reduces stress, improves mood and sociability; it can also have a positive impact on social cohesion, creativity and leisure time. These psychosocial benefits, like all others attributed to alcohol, may vary from one culture to another and depend on the amount of alcohol consumed.

### Other beneficial effects

Other beneficial effects are suggested by the research. For example, alcohol may *reduce the risk of rheumatism and rheumatoid arthritis* (in women), as well as osteoarthritis, kidney stones, infection and even the common cold.

However, the impact of MRAC on cognitive abilities, such as memory, reasoning and thinking, remains largely unexplored.

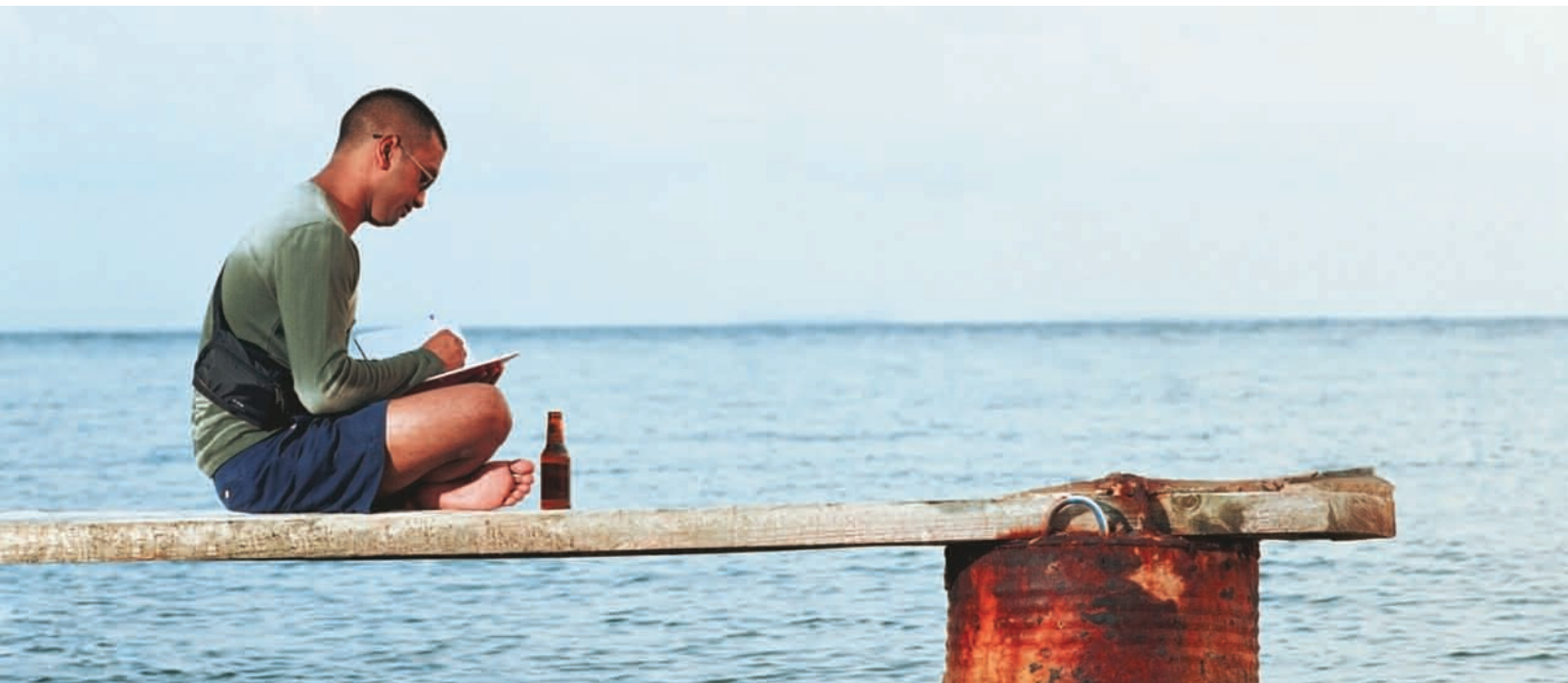
## RISKS ASSOCIATED WITH MRAC: NO DEFINITIVE ANSWER

While there is no doubt about the fact that alcohol abuse is harmful to one's health, the potential risks of MRAC are less well known and sometimes controversial. Aside from the increased risk of injury and accident (after only one or two drinks, in some cases), the most frequently noted diseases are breast cancer, colorectal cancer and cirrhosis of the liver.

Some studies show a link between alcohol and breast cancer among both pre-menopausal and post-menopausal women. However, *no causal relationship has been shown between moderate drinking and breast cancer.*

Similarly, while some research has shown a connection between drinking and the risk of developing colorectal cancer, *there is no proven causal link or even association between low alcohol consumption and colorectal cancer.*

As for liver disease, *the amount of alcohol at which the risk increases is not precisely known.* Unlike other cases involving the negative effects of alcohol, where regular drinking is less harmful than the occasional consumption of large amounts of alcohol, the opposite is true for liver diseases: it would appear that the daily drinkers are more at risk than the occasional bingers.







## CONCLUSION

The effects of MRAC on health vary from one person to the next. At this time, it is not possible – and it will likely never be possible – to make recommendations that apply to all people.

Since alcohol provides protection essentially against cardiovascular diseases, which are very rare among young adults, no positive impact on mortality has been observed in this group. MRAC may protect them later against this type of disease, but this remains to be shown.

The beneficial effects of alcohol on health can be observed at low levels of consumption and among certain groups of people. In the case of a number of diseases, while some studies are encouraging, more research is necessary in order to confirm the positive impact of alcohol.

Among post-menopausal women and men over 40, MRAC is associated with reduced mortality due to the protective effects of alcohol on fatty deposits in the blood vessels.

One recent study shows that four factors – when combined – were associated with a reduced risk of mortality among people 70 to 90 years old:

- n a Mediterranean diet;
- n physical activity;
- n not smoking;
- n moderate drinking.

Despite the potential positive impact of MRAC on health, no one should feel compelled to drink. As for abusive drinking, its harmful impact on health and safety are well known, not to mention the way it can endanger the safety of others.

Whatever the circumstances, moderation is always in good taste.





***Moderation is always in good taste.***

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