

Red Wine is Good for the Intestinal Flora

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A study reports that the polyphenols in red wine promote greater diversity within the intestinal flora, an important marker for good health.

DRINK IN MODERATION

The effect of alcohol on the health is a very complex topic. On one hand, some studies have shown that, for moderate quantities (1 glass per day for women, 2 glasses for men), the consumption of alcohol is associated with a significant decrease (about 20%) in the risk of cardiovascular diseases. On the other hand, as quantities exceed these limits, it is clearly established that excessive consumption of alcohol increases the risk for many serious diseases, particularly certain types of cancers (mouth, larynx, esophagus, colon, liver and breast). These negative effects on health are far from negligible: it is estimated that, worldwide, one death in 20 (about 3 million deaths) is directly linked to excess alcohol.

Alcohol thus represents one of the best examples of a double-edged sword which must be used with many precautions to take advantage of its benefits all while minimizing the chances of harmful effects.

RED WINE

Currently available data suggest that red wine represents the alcoholic drink which best lets us maximize the positive effects of alcohol on health while minimizing its negative effects. For example, a study published last year in *Lancet* showed that moderate consumption of red wine (100-200 g of alcohol per week, corresponding to 1-2 glasses per day) did not increase the risk of premature death, while these quantities of beer or spirits were associated with an increase of about 40% in risk¹.

This difference is due to the very distinct molecular composition of red wine: more than a simple alcoholic drink, red wine is a complex beverage containing significant quantities of polyphenols which are extracts from the skin of the grape during the process of fermentation. These molecules possess properties that are anti-oxidant, anti-inflammatory, anti-platelet and vasodilatory, which could on the one hand generate the positive effects of alcohol on the cardiovascular health, whereas the anti-cancer actions of some of the other polyphenols (notably resveratrol) can diminish the carcinogenic potential of the alcohol.

INTESTINAL MICROBES LIKE RED WINE!

One recent study suggested that another factor which could contribute to the positive effects of red wine is the interaction between these polyphenols and the intestinal microbiome, which is the hundreds of billions of bacteria living in our digestive tract,



particularly within the colon. Research in recent years has shown that this bacterial community exerts a strong influence on several aspects of metabolism and on the immune system and plays a crucial role in maintaining good health.

By examining the drinking habits of volunteers and the composition of their microbiomes, the British researchers observed that people who preferentially consumed red wine showed a much greater microbial diversity than did those who preferred beer or spirits². Those who consumed white wine (fermented without the skin of the grapes and thus essentially lacking polyphenols) also showed a weaker bacterial diversity, which strongly suggests that the effects observed for red wine are truly due to the polyphenols. This greater diversity of bacteria within the microbiome following the consumption of red wine could be very important because several studies have shown that it is associated with the maintenance of a normal blood sugar and even a reduction in the risks for excess weight and obesity.

It is also interesting to note that the researchers found that people who drank red wine were on average thinner and had lower levels of LDL cholesterol, an important risk factor for coronary disease. Overall, these observations thus suggest that the moderate consumption of red wine positively affects the activity of the intestinal microbiome, with beneficial results on the general metabolism.

In terms of impact on health, it is thus clear that not all alcoholic beverages are created equal. For those who consume alcohol, the collective results of these studies indicate that a moderate consumption of red wine remains the best choice to make.

- (1) Wood AM et al. Risk thresholds for alcohol consumption: combined analysis of individual-participant data for 599 912 current drinkers in 83 prospective studies. *Lancet* 2018; 391: 1513-1523.
- (2) Le Roy CI et al. Red wine consumption associated with increased gut microbiota α -diversity in 3 independent cohorts. *Gastroenterology*, published online August 29, 2019.