

Red and white wine-related mortality rates due to circulatory and cancer diseases in 33 European countries, in relation to wine consumption, gross domestic product, life style and life expectancy

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Background. There is a lack of scientific data on a high number of populations to differentiate between the effects of red and white wines on mortalities related to circulatory and cancer diseases. *Objective.* We statistically compared the actual age-adjusted death rates (AADR) of circulatory and cancer diseases in 33 European countries due to the predominantly red or white wine consumption completed with the aspects of economic health (gross domestic product, GDP) and life expectancy. *Methods.* Collection of actual and available data from international databases and their evaluation by statistical methods. *Results.* In the countries with higher red wine consumption, the circulatory mortality was significantly less than that in the white wine countries (355 versus 407, $p=0.021$). Concerning cancers, this positive red wine effect was not found. However, the good red wine results concerning circulation did not improve life expectancy alone. The high GDP values significantly correlated with reducing both circulatory and cancer mortalities, with better life expectancy and increased wine consumption. There was a significant difference in the mortality rates of circulatory diseases between the countries with dominantly red and white wine consumption. However, only the high GDP values were found to decrease the mortality rates for circulatory and cancer diseases and improve life expectancy. *Conclusion.* The novelty of this study is shown in the simultaneous and complex investigation of crucial factors of wine consumption, which can determine its health effects on the most frequent mortalities in Europe depending on the types of wines and economic background approached from the aspect of life expectancy. It was an important observation that the decreased circulatory mortality found in countries with high red wine consumption was not enough alone to improve the life expectancy. A significant part of observations was already known, but the large European population gives them a significant impact. However, we also emphasize the potential and individual dangers of uncontrolled wine consumption. Therefore, we recommend moderated forms of wine drinking, as well as the stimulation of wine – type – specific wine research. These mortality data are valid only for this population of Europe.

Keywords: Circulatory mortality; Cancer mortality; Gross Domestic Product; Life expectancy; Red wine; White wine

Thematic areas:

Lifestyle; Longevity (life expectancy); Wine and science

Suggested session: Session 1: Lifestyle – related diseases – how to prevent the new epidemics