

Medical Experts Debate Value of Alcohol Use

This is SCIENCE IN THE NEWS in VOA Special English. I'm Barbara Klein.

And I'm Bob Doughty.

Drinking alcohol is socially acceptable behavior in many parts of the world. Some medical experts say light drinking may be good for your health, especially for the heart. But they say these health benefits should be compared to the many health risks linked to alcohol use.

Today we report on some of the issues involving alcohol. And we tell about findings that may help people who have grown dependent on alcohol.

Millions of people around the world have a glass of wine with dinner, drink a beer at a sporting event, or accept alcoholic drinks at a party.

The use of alcohol dates back more than ten thousand years. From then until now, alcohol has played an important part in human civilization. It is used in cultural and religious ceremonies, at social gatherings, and even for medical purposes.

Records of alcohol's effects date back to ancient times. Alcohol has been called both a tonic and a poison. And medical experts continue to debate its value.

Alcohol is created through a process called fermentation. During this process, yeast is used to turn sugar into a simple molecule – ethanol, also called ethyl alcohol. Different kinds of sugar are used to make different alcoholic drinks. For example, the sugar from grapes is used to make wine. Sugar from grain is used to produce vodka and gin. And sugar from sugarcane or molasses can produce rum.

Alcohol affects every organ in the body. When alcohol enters the body, some of it goes immediately to the stomach and the bloodstream. The rest of it, about eighty percent, goes to the small intestine and is released into the bloodstream. Once alcohol enters the blood, it is pumped throughout the body by the heart.

The liver is responsible for detoxifying the alcohol and removing it from the blood. But, the liver can only process a small amount of alcohol at a time. The rest continues to move throughout the body. It mixes with the water in bodily tissue. It also enters the central nervous system and the brain. Ethanol acts as a drug, affecting emotions, coordination and thinking ability.

There has been a large amount of research done on alcohol and its effects on human health. Much of the research has examined the harmful effects. But, some research suggests that having one to two drinks of alcohol a day may offer some health benefits.

Several large studies have shown that this type of moderate drinking may lower the risk of coronary heart disease, cardiovascular disease, ischemic stroke and diabetes. Moderate drinking has also been linked to a reduced risk of death from heart attack and a decreased risk of Alzheimer’s and other dementias.

A study earlier this year suggested that drinking small amounts of red wine may help lower the risk of breast cancer in women.

Researchers at Cedars-Sinai Medical Center in California studied thirty six women. Each woman drank a glass of red or white wine every day for almost a month. Researchers collected blood samples from the women two times a month to measure their hormone levels.

The next month the women who drank red wine were told to drink white wine instead. The white wine drinkers were told to drink red wine. The researchers found that the women who drank red wine had lower levels of the female hormone estrogen than the white wine drinkers. Estrogen levels are known to increase the growth of cancer cells in the body.

Glenn Braunstein helped to prepare a report on the study. He said red grapes have chemicals that are not found in white grapes. He said the study suggests that these chemicals may help to lower the risk of breast cancer.

The report was published in the Journal of Women’s Health. Both Dr. Braunstein and study organizer Chrisandra Shufelt called for larger studies to measure the safety and effectiveness of red wine in reducing breast cancer risk. They said other recent studies suggested that even small amounts of alcohol may generally increase the risk of breast cancer in women.

Researchers at Harvard University carried out one such study. It found that women who drink four small glasses of wine a week increase their risk of breast cancer by fifteen percent.

Many other studies have examined the harmful effects of alcohol use on the body. Medical experts say the deciding issues are how much alcohol you drink, and how you drink it. For example, experts say having three drinks in one day is not the same as having one drink a day for three days.

Alicia Ann Kowalchuk is medical director of an alcohol and drug intervention program called InSight, at the Harris County Hospital District of Houston, Texas. She is also an assistant professor at the Baylor College of Medicine.

“We think of substance use issues along a continuum now, going all the way from abstinence, to healthy use, to misuse, to abuse and to dependency. Healthy use for adults -- that’s men under age sixty-five -- is no more than four drinks in a day and no more than fourteen drinks in a week. And for women of all ages, it’s no more than seven drinks in a week and no more than three drinks on a day.”

Dr. Kowalchuk says that to get the health benefits linked to alcohol, men and women should limit their drinking even more.

“Pretty much all the literature that I’ve seen really shows that when you go above about one drink on average per day for women and two drinks on average per day for men younger than sixty-five, you start negating all of those positive health benefits.”

She also says staying within those limits is considered safe or non-hazardous drinking.

“For misuse you’re drinking above those limits, but you haven’t had a lot of consequences from your drinking. Once you get to abuse you start having consequences and despite the consequences you keep using. So that’s the hallmark of abuse, to continue using for at least a year despite having maybe a DUI (drinking under the influence), a health consequence, a work consequence or a family consequence.”

And, she says, alcohol dependency is further marked by a complete loss of control over alcohol use.

Kim Dennis is medical director of the Timberline Knolls Residential Treatment Center in Illinois. She notes another consideration when talking about alcohol limits.

“When we talk about an alcoholic beverage, we need to be very clear about what we’re talking about because many of my patients at Timberline Knolls would consider a thirty-two ounce glass of beer one alcoholic beverage. And when we talk about having one alcoholic beverage, we’re referring specifically to twelve ounces of beer, five ounces of wine or one and a half ounces of hard liquor.”

Dr. Dennis says whether drinking alcohol is a good choice for you will depend on several things.

“If a person has risk factors for developing alcoholism -- family members with alcoholism, difficult early life experiences, other addictive disorders - - the risk to benefit ratio of drinking alcohol for that person would be very, very high.”

Excessive alcohol use has been linked to chronic conditions like cirrhosis of the liver, pancreas disease and cardiovascular disease. It has also been linked to many forms of cancer, including cancer of the mouth, throat, larynx, esophagus, breast, colon and rectum.

The World Health Organization says the harmful use of alcohol results in two million five hundred thousand deaths each year. This number includes more than three hundred thousand people between the ages of fifteen and twenty-nine. The WHO says alcohol use is the world’s third leading cause of disease, after childhood malnourishment and unsafe sex.

One recent study involving alcohol could lead to more effective methods for treating alcohol abuse.

Researchers at the University of California, San Francisco, believe they may have found why so many people are dependent on alcohol. Researchers at the university’s Ernest Gallo Clinic and Research Center were able to prove scientifically what many have long believed: drinking alcohol increases the release of endorphins in the brain.

Endorphins are small chemical proteins. They produce feelings of pleasure and reward. The researchers say this may explain why alcohol can become so addictive. The researchers used imaging technology to study the immediate effects of alcohol in the brains of twenty-five people.

The researchers say the study suggests that the brains of heavy drinkers change in a way to make alcohol more pleasing. They say this could explain how problem drinking becomes a problem in the first place. And, they say discovering the exact areas of the brain where endorphins are released could lead to the development of more effective drugs to help treat alcohol addiction.