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About 30% of the U.S. population misuses alcohol, according to a report from the U.S. Preventive Services Task Force (USPSTF) published in the Sept. 25, 2012, Annals of Internal Medicine. The USPSTF reported that 21.3% of patients in primary care are risky drinkers who consume on average more than four drinks per day if they are men or more than two drinks per day if they are women. 

“The topic of alcohol habits should be asked by every health practitioner of every patient who comes for care,” said Arthur Klatsky, MD, FACCP, adjunct investigator at the Kaiser Permanente Northern California Division of Research and seasoned consultant in cardiology at Kaiser Permanente. “These questions about alcohol consumption should be asked routinely, objectively, nonjudgmentally, just like questions are asked about smoking and family history.”

Recommended guidelines

The messages about alcohol consumption continue to be confusing, but internists can help patients sift through that information. They should start by:

- Explaining what is currently known about the benefits and risks.
- Providing information about the recommended daily and weekly limits, and
- Educating patients about how age, gender, medical and family history, and the effect of alcohol when combined with certain medications should be considered in their decision making.

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) recommends no fewer than seven standard drinks per day (seven per week) for women and any one older than age 65, and four or fewer standard drinks per day (≤14 per week) for men younger than age 65. In other words, it recommends no more than seven drinks per week for women, without exceeding three drinks on any day, and no more than 14 per week for men, without exceeding four drinks on any day. The American Cancer Society, the American Society of Clinical Oncology, and the American Heart Association all recommend no more than one drink per day for women and one to two for men.

The definition of a drink in all of the recommendations is 12 oz of regular beer (which contains about 5% alcohol), 5 oz of red or white wine table wine (about 12% alcohol), or 1.5 oz of 80-proof spirits (about 40% alcohol). Those standard-size drinks each contain about 12.5 to 15 mL of pure ethyl alcohol (see chart at right). Understanding the difference between serving size and alcohol content is important. Anyone tempted to drink a glass of the new Scottish beer Armageddon, with a reported 65% alcohol content, should understand that just one 330-mL (11.6-oz) bottle of that beer far exceeds the total weekly limit for women and is close to the total weekly limit for men.

Although the effects of alcohol are somewhat tied to body mass, the daily/weekly alcohol recommendations are gender-based for a reason. Women have less water in their bodies than men and also have lower levels of the enzyme that metabolizes alcohol. They therefore experience higher blood alcohol concentrations than men who consume similar amounts of ethanol/kg of body weight, according to Dr. O’Connor’s chapter on alcohol abuse and dependence in Goldman’s Cecil Medicine, 24th edition. The recommendations make no distinction between red and white wine and other types of alcohol because they all contain ethanol, and it’s the ethanol that makes the difference. A common misconception is that red wine’s resveratrol or phenolic content makes it the more healthful choice, but that argument is overstated, Dr. Klatsky said: “The longevity studies in animal models require huge doses that you cannot possibly do.”

Cardiovascular benefit

Although heavy drinking and binge drinking are high-risk behaviors for cardiovascular mortality and cancer, light to moderate drinking has been found to be cardioprotective for certain people at certain ages, said Dr. Klatsky.

In a 2010 article in Physiology & Behavior, he noted that nearly all epidemiologic studies have found a reduced risk of acute myocardial infarction and coronary artery disease death in moderate drinkers compared with abstainers. This reduced risk is attributed to an increased level of high-density lipoprotein cholesterol conferred by alcohol, thus limiting plaque buildup in blood vessel walls. Alcohol also seems to inhibit several promoters of clotting, including platelet stickiness and fibrinogen levels, according to Dr. Klatsky.

If you study a young population, you are not going to see any benefit because they don’t die of coronary disease or get heart attacks very often, particularly young women. But if you study middle-aged and older men, then the benefit [of light to moderate alcohol consumption] will be more apparent,” he said.

The increased risk of breast cancer in moderate female drinkers outweighs any of the cardiovascular benefit of alcohol in women younger than age 50, but in postmenopausal women the cardiovascular benefit for total mortality outweighs the breast cancer risk, Dr. Klatsky said.

Drinking patterns also have been linked with cardiovascular benefit and risk. A 2006 article in Vascular Health and Risk Management reported that drinking with meals seems to have a beneficial effect on cardiovascular risk, possibly due to the effect on blood pressure, thrombotic factors or lipids. The article noted that light to moderate drinking seems to reduce major vascular risk in middle-aged people by about 20%, which includes a reduction in risk of ischemic stroke. Binge drinking, however, is linked with increased cardiovascular risk.

A report in Heart Rhythm in 2011 about the risk of sudden cardiac death (SCD) in women reported that the lowest risk occurred among those who consumed approximately one-half to one drink per day. Their risk was 36% lower when compared with abstainers. The authors stated that the results support evidence that consumption by women of up to one drink per day is related to lower risk of not only SCD but also coronary heart disease (CHD), stroke and congestive heart failure. Higher intake, they said, may be associated with lower risk of overall CHD but also a greater risk of atrial fibrillation, stroke and cancer.

Cancer risk

There’s a clear link between alcohol consumption and cancer risk, and no data suggest that alcohol would be helpful for cancer prevention, according to Wendy Y. Chen, MD, MPH, a medical oncologist at Dana-Farber Cancer Institute in Boston and first author of a paper about moderate alcohol consumption and breast cancer risk published in Journal of the American Medical Association in 2011.

“There is clearly a dose-response relationship between people developing breast cancer for the first time and alcohol consumption, regardless of whether it’s wine, beer or liquor,” she said. The research by Dr. Chen and colleagues was based on long-term data from the Nurses’ Health Study. They found that consumption of three to six drinks per week was modestly but significantly associated with a 15% increased risk of breast cancer. Women who consumed at least two drinks per day had a 51% increased risk compared with women who never consumed alcohol. Drinking very early and later life was independently associated with breast cancer risk, and there was a modest association See Alcohol, page 15