

# Q&A

# Women and Alcohol



JACKIE LORENTZ

Sharon Wilsnack, Ph.D.

**W**omen tend to drink less than men do, but alcohol can affect them more strongly—and not just because of differences in body size. **SHARON WILSNACK, Ph.D.**, of the University of North Dakota School of Medicine and Health Sciences, discusses the topic of women, alcohol and alcoholism with **MIA SCHMIEDESKAMP**, special correspondent for *SCIENTIFIC AMERICAN*.

## Q Which women are most at risk for alcoholism?

**A** About 4 percent of women in the U.S. abuse or are dependent on alcohol; these are women who are physically addicted to alcohol or who suffer negative social or personal consequences because of their drinking patterns. We know that heredity accounts for some of this problem drinking: women whose close relatives abuse alcohol are more susceptible to alcoholism than average, and studies of twins and adopted children have shown that this is partly because of their genes. But genetics do not tell the whole story. Many environmental factors also correlate with problem drinking in women. These include physical or sexual abuse in childhood, involvement with a partner who drinks heavily, social isolation and dependence on other substances. Women who suffer from depression or anxiety are also at increased risk for alcohol abuse, as are bulimic women and women experiencing chronic sexual difficulties, such as inability to reach orgasm.

Young women experience drinking-related problems at particularly high rates. Nearly 10 percent of women between the ages of 18 and 29 abuse or depend on alcohol, compared with only 0.3 percent of women older than 65. And young women are especially prone to episodes of heavy drinking—putting them at increased risk of engaging in drunk driving and becoming victims of violence, including sexual assault.

## Do women handle alcohol differently than men?

We know that women become more intoxicated than men when they consume equal amounts of alcohol, even when we adjust the dose for differences in weight. One reason for this variation is that women have more fatty tissue than men do. Fatty tissue contains less water than muscle does, so women typically have less body water available to dilute alcohol.

In the past few years we have learned that women also metabolize alcohol differently. The activity of a key gastric enzyme that degrades alcohol—alcohol dehydrogenase—is lower in women than in men, allowing more alcohol to pass through the stomach and enter the blood. The resulting disparity in blood alcohol levels may explain why women are more vulnerable to several tissue diseases, including liver disease. Current guidelines for safe levels of alcohol consumption reflect these differences, recommending that women consume on average no more than one drink per day and men no more than two.

## What impact does alcohol have on women's health?

Women who are alcoholics die at higher rates than male alcoholics with the same drinking habits. In particular, women are more likely to develop alcoholic hepatitis and cirrhosis of the liver, and their liver disease seems to progress especially rapidly. Women are also more susceptible to alcohol-related cardiomyopathy, a weakening of the heart muscle. And recent studies have found that breast cancer risk increases by 41 percent in women who consume two to five drinks per day and by 9 percent in women who have a bit less than one drink per day.

We know that alcohol raises estrogen levels in women; this rise may account for the link between alcohol consumption and breast cancer. Enhanced estrogen levels may also explain some of the health benefits of alcohol, including protective effects against osteoporosis and heart disease. But this protection seems to level off at a drink or so a day. Women who drink heavily are actually at increased risk for osteoporosis, and they may face early menopause.

Chronic, heavy drinking during pregnancy can lead to fetal alcohol syndrome, a cluster of severe physical and neurological birth defects. We have also identified more subtle alcohol-related behavioral problems in the children of women who report consuming as little as one drink per day while pregnant. Current guidelines recommend that women abstain from drinking during pregnancy, because no studies have established a safe upper limit for their drinking.

## What treatments are useful for alcoholics?

The news here is positive: the great majority of problem drinkers, both women and men, do better once in treatment. For women, the key is addressing a wide range of life issues that tie into alcohol abuse, including sexual abuse and violence, relationship and job problems, and child rearing. Several medications can also help, including drugs that reduce cravings, such as naltrexone, and deterrents such as Antabuse.

## What health issues should light drinkers be aware of?

Women should remember they are more sensitive to alcohol than men. Although they might be tapped to drive because they have had less to drink than their male companions, their driving skills might be just as impaired, if not more. Many medications have sedative effects or undesirable interactions with alcohol—antihistamines are a prime example. Anyone taking these should avoid alcohol. Finally, an amount of alcohol that is safe for a woman may be risky for her fetus. Any woman who might become pregnant should keep this in mind. 5A

**For more information, contact the National Clearinghouse for Alcohol Information at 800-729-6686.**