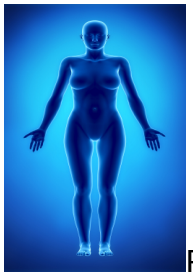
Alcohol and Bodily Harm to Women

Written by Geoff Kane, MD, MPH Tuesday, 03 July 2012 05:37



Popular belief does not expect women to "hold their liquor" as well as men, and this is one of those instances when science agrees with popular belief. If a man and a woman drink the same amount of alcohol, even if they are equal weight, the woman will have a higher concentration of alcohol in her blood. That's because a greater proportion of the man's body weight is water, which dilutes the alcohol; and also because the stomach walls of women compared to men contain less alcohol dehydrogenase, an enzyme that breaks down alcohol. Therefore, repeatedly drinking the same quantity of alcohol is likely to damage a woman's organs—liver, heart muscle, brain—more quickly than a man's. (Alcohol Metabolism) Published dietary guidelines reflect these differences and, for example, define moderate drinking as up to 1 drink per day for women and up to 2 drinks per day for men. (Dietary Guidelines)

Treatment centers have noticed that some patients with alcohol dependence, more often women, did not have issues with alcohol until after gastric bypass surgery for weight reduction. This likely relates to alcohol dehydrogenase because these operations greatly reduce stomach size and decrease the action of this enzyme on ingested alcohol. There is also less room in the stomach for food that would otherwise absorb alcohol and delay gastric emptying. Research subjects who have had gastric bypass have shown breath alcohol concentrations of 0.08 percent—enough to qualify as legally intoxicated—after only one standard drink! (Gastric Bypass) Various theories seek to explain how this increased sensitivity to alcohol and other effects of the surgery increase the risk of alcohol dependence. Some invoke the notion of "substitution" or "addiction transfer" where the person who can no longer obtain comfort from food takes comfort from alcohol and then becomes addicted to it. (Addiction)

With or without weight loss surgery, individuals who are prone to soothing themselves by eating—or any other potentially addictive behavior such as work, gambling, shopping, or sex—will be wise to seek comfort from positive interpersonal relationships rather than those behaviors, and to deal with their stories and feelings openly in individual or group therapy and 12-Step fellowship.

In the United States about 1 in 8 women develop breast cancer, resulting in nearly 40,000 deaths per year. Drinking one alcoholic drink per day raises a woman's risk of breast cancer 10 percent higher than that of women who do not drink. Researchers may have found the link between alcohol and breast cancer in a protein called CYP2E1, which is present in breast epithelial cells and, as it breaks down alcohol, creates highly reactive free radicals that may contribute to cancer by damaging cellular DNA. (Breast Cancer)

Women who have experienced bodily harm through sexual or other forms of physical abuse are at higher risk for alcohol dependence if they drink. Women who drink alcoholically—and to a lesser extent women who drink moderately—are at higher risk for bodily harm through violence especially with intimate partners, and through drowning and injuries from falls and motor vehicle crashes.

Women should not drink at all if they are alcohol dependent, under the age of 21, taking a medicine that is dangerous when combined with alcohol, pregnant, or trying to conceive. (Women and Alcohol--NCADD, and Women and Alcohol--NIAAA)

> The NCADD Addiction Medicine Update provides NCADD Affiliates and the public with authoritative information and commentary on specific medical and scientific topics pertaining to addiction and recovery.