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Women's Health Care Physicians

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At-Risk Drinking and Alcohol Dependence: Obstetric and Gynecologic Implications

ABSTRACT: Compared with men, at-risk alcohol use by women has a disproportionate effect on their health and lives, including reproductive function and pregnancy outcomes. Obstetrician–gynecologists have a key role in screening and providing brief intervention, patient education, and treatment referral for their patients who drink alcohol at risk levels. For women who are not physically addicted to alcohol, tools such as brief intervention and motivational interviewing can be used effectively by the clinician and incorporated into an office visit. For pregnant women and those at risk of pregnancy, it is important for the obstetrician–gynecologist to give compelling and clear advice to avoid alcohol use, provide assistance for achieving abstinence, or provide effective contraception to women who require help. Health care providers should advise women that low-level consumption of alcohol in early pregnancy is not an indication for pregnancy termination.

The National Institute on Alcohol Abuse and Alcoholism defines *at-risk alcohol use* for healthy women as more than three drinks per occasion or more than seven drinks per week and any amount of drinking for women who are pregnant or at risk of pregnancy. *Binge drinking* is defined as more than three drinks per occasion. Almost 50% of binge drinking occurs among otherwise moderate drinkers (1). *Moderate drinking* is defined as one drink per day (2). When evaluating a patient's drinking habits, it is important to verify the description of "a drink" to determine the actual amount of alcohol consumed (Box 1).

National surveys indicate that American Indian and Alaska Native women (13.7%) were the most likely race to have an alcohol use disorder. This is compared with white non-Hispanic women (5.6%), black non-Hispanic women (3.5%), and Hispanic or Latino women (3.8%) (3). In 2009, 25.6% of individuals aged 18–24 years reported binge drinking (4). Of those individuals, the majority were white non-Hispanic, college graduates who had an average household income greater than $50,000 per year (4). Among women aged 18–34 years who binge drink, approximately one third (31.4%) report drinking eight or more drinks per occasion (5). In 2008, 61% of full-time college students were current drinkers and 40.5% reported binge drinking (3). Binge drinking is associated with a sudden peak in the level of alcohol in the blood, resulting in unsafe behavior and the risk of more reproductive and organ damage than sustained high levels of alcohol consumption (6).

For many people, alcohol use can be a pleasant experience as a method of relaxation and social connection. It also offers some beneficial cardiovascular effects (7). However, women are particularly vulnerable to the physical and psychosocial health risks of at-risk alcohol use. Alcohol-related mortality represents the third leading cause of preventable death for women in the United States (8). As indicated in Box 2, at-risk alcohol use results in multiple adverse health effects. Of note, data indicate that women who drink between two and five drinks

Box 1. What Is a Drink?

One standard drink is equal to 15 mL of pure ethanol

- Beer or wine cooler – 12 oz
- Table wine – 5 oz (25-oz bottle = 5 drinks)
- Malt liquor – 8–9 oz (12-oz can = 1.5 drink)
- 80-Proof spirits – 1.5 oz (a mixed drink may contain 1–3 or more drinks)

per day have up to a 41% increased incidence of breast cancer, and the risk increases linearly with consumption throughout this range (9, 10).

Box 2. At-Risk Alcohol Use: Secondary Consequences Affecting Women

Increased medical and physical risks

- Unplanned pregnancy
- Sexually transmitted diseases*
- Altered fertility [†, ‡]
- Menstrual disorders[§]
- Injuries
- Seizures[§]
- Malnutrition[§, ‖]
- Cardiomyopathies[¶]
- Cancer of the breast, liver, rectum, mouth, throat, and esophagus[§, #, **]

Increased risk of psychosocial problems

- Loss of primary relationships
- Sexual assault
- Loss of income
- Child neglect or abuse and loss of child custody
- Domestic violence
- Driving under the influence
- Altered judgement
- Bartering sex for drugs
- Depression and suicide

*Nicoletti A. The STD/alcohol connection. J Pediatr Adolesc Gynecol 2010;23:53–4.

†Rossi BV, Berry KF, Hornstein MD, Cramer DW, Ehrlich S, Missmer SA. Effect of alcohol consumption on in vitro fertilization. Obstet Gynecol 2011;117:136–42.

‡Grodstein F, Goldman MB, Cramer DW. Infertility in women and moderate alcohol use. Am J Public Health 1994;84:1429–32.

§Corrao G, Bagnardi V, Zambon A, La Vecchia C. A meta-analysis of alcohol consumption and the risk of 15 diseases. Prev Med 2004;38:613–9.

‖National Institute on Alcohol Abuse and Alcoholism. Alcohol and nutrition. Alcohol Alert No. 22 PH 346. Bethesda (MD): NIAAA; 1993. Available at: http://pubs.niaaa.nih.gov/publications/aa22.htm. Retrieved April 18, 2011.

¶Urbano-Marquez A, Estruch R, Fernandez-Sola J, Nicolas JM, Pare JC, Rubin E. The greater risk of alcoholic cardiomyopathy and myopathy in women compared with men. JAMA 1995;274:149–54.

#Ferrari P, Jenab M, Norat T, Moskal A, Slimani N, Olsen A, et al. Lifetime and baseline alcohol intake and risk of colon and rectal cancers in the European prospective investigation into cancer and nutrition (EPIC). Int J Cancer 2007;121:2065–72.

**Kuper H, Tzonou A, Kaklamani E, Hsieh CC, Lagiou P, Adami HO, et al. Tobacco smoking, alcohol consumption and their interaction in the causation of hepatocellular carcinoma. Int J Cancer 2000;85:498–502.

Obstetrician–gynecologists have important opportunities for at-risk alcohol use intervention in three key areas: 1) identifying women who drink at risk levels, 2) encouraging healthy behaviors through brief intervention and education, and 3) referring patients who are alcohol dependent for professional treatment.

Identification of At-Risk Drinking

The U.S. Preventive Services Task Force recommends that all adult patients in a primary care setting be screened for alcohol misuse and provided counseling for identified risky or harmful drinking. Referral for specialist treatment may be appropriate for those with alcohol abuse or dependence (11). All women seeking obstetric–gynecologic care should be screened for alcohol use at least yearly and within the first trimester of pregnancy. It should be noted that women who drink at risk levels are less likely to maintain routine annual visits, and screening should be considered for episodic visits if not completed within the past 12 months. Screening can be accomplished using a variety of simple validated tools, like TACE with additional questions about the quantity and frequency of alcohol use, within the context of the routine visit (Box 3). Although the CAGE mnemonic screening tool has been taught in most medical schools and residency programs, it has not proved to be sensitive for women and minorities (12). Using a validated screening tool decreases false-positive and false-negative responses. Women may fear disclosure of their alcohol use will result in the loss of employment, their children, or their relationships. Therefore, it is crucial that the clinician assure the patient before screening that the information disclosed is privileged and confidential. Seeking obstetric–gynecologic care should not expose a woman to criminal or civil penalties or the loss of custody of her children (13).

Women who develop alcohol or substance use dependence are often more likely than men to deny that they have a problem and to minimize the problems associated with their use. However, when they do seek help for the problem, it often is from their primary care providers (14). Importantly, most women who use alcohol at risk levels have no signs on physical examination. A detailed medical history obtained by a trusted clinician remains the most sensitive means of detecting alcohol abuse (15).

Encouraging Healthy Behaviors and Early Intervention Strategies

Many women may be surprised to learn that their drinking exceeds a safe level of alcohol consumption. They may live or associate with others who drink similar amounts of alcohol and consider their alcohol use as "normal." Offering compassionate education, exploring practical strategies to reduce use, and requesting a follow-up appointment is a successful strategy for many women

Box 3. Alcohol Use Screening Tools

TACE

- **T** – Tolerance
  How many drinks does it take to make you feel high?
  (More than 2 drinks = 2 points)
- **A** – Annoyed
  Have people annoyed you by criticizing your drinking?
  (Yes = 1 point)
- **C** – Cut down
  Have you ever felt you ought to cut down on your drinking?
  (Yes = 1 point)
- **E** – Eye-opener
  Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?
  (Yes = 1 point)

A total score of 2 points or more indicates a positive screening for at-risk drinking

Alcohol Quantity and Drinking Frequency Questions

- In a typical week, how many drinks do you have that contain alcohol?
  (Positive for at-risk drinking if more than 7 drinks)
- In the past 90 days, how many times have you had more than 3 drinks on any one occasion?
  (Positive for at-risk drinking if more than one time)

Data from Sokol RJ, Martier SS, Ager JW. The T-ACE questions: practical prenatal detection of risk-drinking. Am J Obstet Gynecol 1989;160:863–8; discussion 868–70 *and* National Institute on Alcohol Abuse and Alcoholism. Helping patients who drink too much: a clinician's guide. Updated 2005 edition. Bethesda (MD): NIAAA; 2005. Available at: http://pubs.niaaa.nih.gov/publications/practitioner/CliniciansGuide2005/Guide_Slideshow.htm. Retrieved April 18, 2011.

who are not physically or psychologically dependent on alcohol. There are effective alcohol educational materials available for patients that are free or offered at a very low cost (see Resources).

Brief, motivation-enhancing interventions are associated with a sustained reduction in alcohol consumption (16–18). Following is an example of a brief intervention:

> "You indicated that you are drinking five or six drinks one evening a week and that you often do not feel drunk when you drink that amount. This is considered at-risk drinking. What do you think about that?"
>
> (Wait for her response.)
>
> "As your obstetrician–gynecologist, I am concerned that your menstrual irregularities or other clinical findings may be associated with your drinking. This level of drinking also puts you at risk of unplanned pregnancy and injuries. Are you willing to try and reduce your drinking? I can offer you resources to help."
>
> (Wait for her response.)
>
> "Getting pregnant at this time could be very harmful for you and your baby. I want you to consider using a more effective contraception method while you are working on reducing your alcohol intake."
>
> (Wait for her response.)

At the conclusion of the brief intervention, it is important to assist the patient in setting a goal (eg, "I will not have more than three drinks at the Friday happy hour"), record the goal, and let her know that there will be a follow-up discussion at the next visit. If she does not consistently meet her goal, restate the advice to quit or cut back on drinking, review her plan, and encourage her to seek additional support. A failed attempt is a motivating moment toward seeking help.

Referral

Women who continue to drink or use alcohol at risk levels and women who exhibit signs of alcohol dependence require referral to a substance abuse specialist. This referral is best made while the patient is in the clinician's office so that she is involved in making the appointment with the encouragement of her health care provider. Local substance abuse treatment programs can be found through the Substance Abuse and Mental Health Services Administration treatment locater (19). If the patient refuses treatment, the health care provider should respect her decision, make a short-term follow-up appointment with her, and assure her that she will be welcomed back in the clinician's office. It may take a number of offers before the patient is ready to accept a treatment referral. The patient's trust in her medical provider may be key in taking the step toward treatment.

Alcohol Use and Pregnancy and Breastfeeding

Alcohol is a teratogen. Fetal alcohol syndrome is the most severe result of prenatal drinking. Fetal alcohol syndrome is associated with central nervous system abnormalities, growth defects, and facial dysmorphia. However, for every child born with fetal alcohol syndrome, many more are born with neurobehavioral defects caused by prenatal alcohol exposure. Alcohol-related birth defects include growth deformities, facial abnormalities, central nervous system impairment, behavioral disorders, and impaired intellectual development. Alcohol can affect a fetus at any

stage of pregnancy, and the cognitive defects and behavioral problems that result from prenatal alcohol exposure are lifelong. In early pregnancy during organogenesis and perhaps before the patient's recognition of pregnancy, the fetus may be particularly vulnerable to maternal binge or heavy alcohol use. Alcohol-related birth defects are completely preventable (20). Even moderate alcohol consumption during pregnancy may alter psychomotor development, contribute to cognitive defects, and produce emotional and behavioral problems in children, although patient denial and underreporting make it difficult to quantify these effects (21). There is evidence of varying susceptibility to alcohol's effect on the developing fetus. Although alcohol consumption may have negative consequences for any pregnant woman, the effects of alcohol may be more potent in mothers who are older, in poor health, or who also smoke or use drugs (22).

The U.S. Surgeon General advises that pregnant women should not drink any alcohol. Women who have already consumed alcohol during a current pregnancy should stop in order to minimize further risk, and those who are considering becoming pregnant should abstain from drinking alcohol. Recognizing that nearly one half of all births in the United States are unintended, women of childbearing age should discuss with their clinicians steps to reduce the possibility of prenatal alcohol exposure (20). Health care providers should advise women that low-level consumption of alcohol in early pregnancy is not an indication for pregnancy termination.

A recent study indicated that the highest prevalence of late-pregnancy alcohol use was reported by women who were white non-Hispanic, college graduates, and aged 35 years or older (23). However, these same women were those who reported the least screening and counseling for alcohol use by their health care providers. There is strong evidence that brief behavioral counseling interventions with women who engage in at-risk drinking reduce the incidence of alcohol-exposed pregnancy (24, 25). Pregnant women are generally motivated to change their drinking behavior, and alcohol dependence is relatively rare (24). In one multicenter project, nearly 70% of women who were drinking at risky levels and not using effective contraception reduced their risk of alcohol-exposed pregnancy 6 months after a brief intervention because they stopped or reduced their drinking below risky levels or they started using effective contraception (26). Randomized studies report significant reductions in alcohol use and improved newborn outcomes after interventions with women who are already pregnant. Women who are alcohol dependent need intense specialized counseling and medical support during the process of withdrawal. They should be given priority access to withdrawal management and treatment (24). If a woman continues to use alcohol during pregnancy, harm reduction strategies should be encouraged (24). Postpartum, many women who were abstinent during pregnancy rapidly resume at-risk levels of alcohol use and should be monitored at the postpartum and follow-up visits (27). It is important to educate the at-risk patient about pregnancy prevention and offer and provide effective, long-term reversible contraception until at-risk alcohol use has been curtailed.

Contrary to cultural folklore, alcohol consumption does not enhance lactational performance. There is consistent evidence showing that when lactating mothers consume alcohol, there is reduced milk consumption by the infant (28). Alcohol consumption during lactation is associated with altered postnatal growth, sleep patterns, and psychomotor patterns of the offspring (29). After breastfeeding is well established, a mother should be encouraged by her health care provider to wait 3–4 hours after a single drink before breastfeeding her infant. By doing so, the infant's exposure to alcohol would be negligible (30).

Coding for Screening and Assessment and Brief Intervention

There are two *Current Procedural Terminology* codes to report for alcohol abuse structured screening and brief intervention services. Report *Current Procedural Terminology* codes 99408 (alcohol abuse structured screening and brief intervention services; 15 to 30 minutes) and 99409 (greater than 30 minutes) for screening and brief intervention services for patients without Medicare. These codes are only reportable for structured screening using a validated screening tool, such as TACE, and brief intervention. They are not reportable when physicians ask patients about their alcohol use as part of a comprehensive medical history. The services under these new codes may be conducted as part of a periodic, scheduled, preventive care office visit or in an acute setting.

Resources

American College of Obstetricians and Gynecologists. Alcohol, tobacco, and other substance use and abuse. *Guidelines for Adolescent Health Care* [CD-ROM]. 2nd ed. Washington, DC: ACOG; 2011.

National Institute on Alcohol Abuse and Alcoholism (NIAAA), has free brochures on women and alcohol as well as pregnancy and drinking available in English, Spanish and for American Indians. They also have videotaped screening and brief intervention interviews to guide physician–patient interaction.

National Institute on Alcohol Abuse and Alcoholism. Helping patients who drink too much: a clinician's guide and related professional support resources. Available at: http://www.niaaa.nih.gov/Publications/EducationTrainingMaterials/Pages/guide.aspx. Retrieved April 18, 2011

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