Early writers suggested that women’s heavy drinking was associated with specific life crises, including menopause and the “empty nest” life stage. However, recent epidemiologic research has failed to find increased risks of heavy drinking or alcohol use disorders (AUDs) in midlife women. In North America, rates of drinking, heavier drinking, and AUDs generally decline with increasing age.

Research limitations. The medical literature provides limited guidance about women’s alcohol consumption in midlife. When drinking is associated with health changes, it is hard to tell to what extent drinking actually caused those health changes and how large are the supposed effects of drinking. Furthermore, clinically relevant information about alcohol and menopause is largely limited to postmenopausal women and poorly distinguishes effects of menopause from other effects of aging.

Definitions and screening. Although the National Institute on Alcohol Abuse and Alcoholism (NIAAA) Clinician’s Guide does not distinguish between “light” and “moderate” drinking, many recent US surveys define light drinking for women as one to three standard drinks per week and moderate drinking as four to seven drinks per week. In the 2008 National Health Interview Survey, 5.6% of women aged 45 to 54 years, 4.4% of women aged 55 to 64 years, and 3.2% of women aged 65 years and older reported consuming more than one drink per day. Rates of heavy drinking and AUDs do not increase during and after menopause, but risky drinking patterns are common enough in this period to merit screening efforts. The NIAAA defines at-risk drinking for women as more than seven standard drinks per week or more than three standard drinks in a drinking day. (One standard drink equals 12 oz of beer, 5 oz of wine, and 1.5 oz of 80-proof liquor.) At-risk drinking for men is defined as more than 14 standard drinks per week or more than four standard drinks in a day, reflecting sex differences in body size, water content, and alcohol metabolism. The NIAAA clinician guidelines recommend a brief intervention with patients who report at-risk drinking and for referral to specialists of patients who do not respond to brief interventions and/or who meet diagnostic criteria for AUDs.
**Breast cancer.** In postmenopausal women, an alcohol dose-related increase in risk of breast cancer is well documented. The Nurses’ Health Study found that even low alcohol consumption (equivalent to 3-6 glasses of wine/wk) was modestly associated with breast cancer risk (relative risk [RR], 1.15; 332 cases/100,000 person-years). Women who drank at least two drinks per day had a greater risk of breast cancer (RR, 1.51; 413 cases/100,000 person-years) compared with women who did not consume alcohol. Some investigators contend that clinicians should not try to reduce light/moderate drinking by postmenopausal women because the effects of alcohol on breast cancer risk may be cumulative from long-term exposure to alcohol as a low-level carcinogen, so postmenopausal drinking reductions may accomplish little, and cardiovascular benefits of such drinking outweigh risks for breast cancer.

**Depression.** Evidence strongly links AUDs with major depression. Evidence also consistently shows that women in the menopause transition or with menopausal symptoms are more likely to experience depressive symptoms. However, drinking is not more strongly associated with depression in women during and after menopause. Light to moderate drinking is unlikely to increase menopausal depression.

**Sleep disturbances.** From midlife on, women are increasingly likely to have sleep disturbances, particularly from menopausal hot flashes and night sweats. Alcohol consumption makes it easier for most people to get to sleep, but it can disrupt later stages of sleep. Sleep-disruptive effects of alcohol may occur in women with AUDs, but middle-aged women who drink moderately are likely to find that alcohol either helps them get to sleep or has no effect on their sleep. It is therefore probably not necessary to discourage drinking by menopausal patients with sleep disturbances unless the drinking is heavy enough to cause other problems.

**Cardiovascular disease.** Multiple studies have shown that women who drink moderately (eg, averaging up to a drink/d) have reduced risks of cardiovascular disease and specifically lowered risk of coronary heart disease. Debate continues about whether such benefits are caused by alcohol consumption itself (via increased high density lipoproteins and thrombolytic effects) or by other lifestyle characteristics associated with light to moderate drinking. Heavy drinking adversely affects risks of atrial fibrillation, cardiomyopathy, and congestive heart failure.

**Bone health.** Heavy drinking is also clearly harmful for bone health. However, light to moderate drinking after menopause is consistently associated with improved bone mineral density, possibly because alcohol reduces bone loss through decreased bone turnover in menopausal women by increasing circulating estrogen levels. Whether the positive effect of moderate alcohol consumption on bone density reduces fractures is unknown, particularly if alcohol use increases risks of falls.

**Diabetes.** Compared with abstaining, light to moderate drinking lowers women’s risks of type 2 diabetes, a finding not limited to postmenopausal women. Moderate alcohol consumption increases insulin sensitivity and reduces fasting insulin levels in the blood. Such protective effects of alcohol are hypothesized to occur by increasing the body’s levels of estradiol and adiponectin and possibly by reducing abdominal adiposity. However, some studies have found that heavier drinking, particularly of distilled spirits, may actually increase diabetes risks.
**Weight gain.** Women tend to gain weight during and after menopause, but it is unclear to what extent this results from menopausal hormonal changes. Effects of alcohol consumption on such weight gains are unclear.\(^{10}\) Two general conclusions are possible: 1) Light to moderate drinking is unlikely to cause much weight gain and is not a major concern, even in women who are overweight or obese, and 2) Heavy drinking or associated lifestyle patterns may be a risk factor for women’s weight gain during and after menopause.

**Rheumatoid arthritis.** Several studies indicate that alcohol consumption may reduce women’s risks of rheumatoid arthritis (RA), particularly if they have indicators of RA vulnerability (such as anti-citrullinated protein antibodies).\(^{11}\) It is not clear whether these benefits are gender-specific or affected by menopause. If drinking does reduce some women’s risks of developing RA, this hypothetically may result from anti-inflammatory effects of alcohol, such as suppression of proinflammatory cytokines and chemokines.

**Menopause characteristics.** Finally, alcohol consumption may be associated with characteristics of menopause per se. Multiple studies have found that the onset of menopause occurs later among moderate or heavy drinkers than among abstainers, but it remains unclear whether alcohol consumption itself delays menopause or is merely an indicator of other demographic and lifestyle characteristics that delay menopause. Most perimenopausal and postmenopausal women at some time experience hot flashes and/or night sweats, but how these symptoms are related to drinking is unclear. Different studies have found positive, negative, or no associations of alcohol with these symptoms, with little time-ordered data.\(^{12}\) Any concerns that women’s drinking may adversely affect such symptoms should probably focus on heavier drinking (more than a drink/d).

**Some final considerations.** Given the mixed picture of how alcohol consumption affects health, how should clinicians respond to midlife patients who ask how much drinking is “safe”? We suggest three guidelines:

- Advise patients not to exceed low-risk consumption guidelines.
- Individualize your recommendations on the basis of risk factors such as family history (FH). For example, a patient with FH of breast cancer but little cardiovascular disease or a patient with FH of AUDs might best be advised to abstain or drink lightly (≤3 drinks/wk); whereas a patient with an extensive FH of cardiovascular disease might be advised to consider moderate consumption (approximately 4-7 drinks/wk).
- Even when evidence of health benefits is strong, effect sizes are not large enough to justify encouraging long-term abstainers to begin drinking. Concerns about such an intervention include possible risks of alcohol misuse, particularly among midlife and older women also using prescription drugs, and conflict between a clinician’s advice and longstanding abstention based on religious beliefs or on FH of alcohol-related problems.

**References**


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