

Geriatric drinkers: Evaluation and treatment for alcohol overuse

One in six older adults self-report heavy drinking; fortunately older patients have been shown to respond well to brief alcohol use intervention protocols designed for the primary care clinic.

ABSTRACT: Alcohol overuse has a significant impact on the health and health care needs of geriatric patients. Systematic screening of all patients reduces the chance that alcohol overuse will be missed. Once identified, at-risk individuals can benefit from brief interventions in clinic or community settings.

Findings from the Canadian Addictions Survey (2004) indicate that 16% of adults age 55 and older report heavy drinking, defined as more than 14 drinks a week for men and 9 drinks for women, and almost half of these heavy drinkers report consuming more than 5 drinks on one occasion at least once a month.¹ Alcohol overuse has a significant impact on the health and health care needs of these individuals. It is associated with poor mental health functioning,² as well as increased risk of suicide, liver disease, cancer, and falls.³⁻⁵ Although researchers have identified health benefits from light to moderate drinking,⁶ at-risk or heavy drinking is associated with increased mortality.^{5,7}

At-risk drinking patterns in geriatric patients must be identified to initiate treatment of this modifiable health risk.⁸ Geriatric patients often present with multiple medical problems exacerbated by alcohol and may not fit the expected profile of a chronic drinker. It is common for patients to minimize the impact of their alcohol use, and clinicians too may gloss over alcohol use assessment in the elderly patient.⁹ Drinking can increase in later life in response to loneliness and grief,

or persist as an outlet used throughout adult life to dull emotional pain. Cognitively impaired seniors may drink more than they realize.

Impact of alcohol overuse

Alcohol overuse affects all age groups, but poses an additional risk to ill older adults in terms of adverse interactions between alcohol and both prescribed and over-the-counter medications, especially psychoactive medications such as benzodiazepines, anticonvulsants, and antidepressants. In a survey of 83 321 older outpatients, 19% of those taking prescription medications known to adversely interact with alcohol reported concomitant alcohol use.¹⁰

Alcohol use can adversely affect comorbid diseases common in the elderly. Relatively low consumption levels can worsen common chronic medical problems such as hypertension,¹¹

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Table 1. Canadian alcohol use categories.

	Drinks* per week	Grams of alcohol per week	Ounces of alcohol per week
Abstinence†	0	0	0
Light drinking	7	0–96	0–10.5
Moderate drinking	7–14	96–190	10.5–21.0
Heavy drinking	> 14	> 190	> 21

*One drink = 13.6 grams of alcohol = 43 mL (1.5 oz) liquor, 142 mL (5 oz) wine, 341 mL (12 oz) beer.

†No drinking in the past year.

Adapted from Blow FC, Oslin DW, Barry KL¹⁸ and Centre for Addiction and Mental Health (University of Toronto). Low-risk drinking guidelines. April 2010. Accessed 4 July 2011. www.camh.net/About_Addiction_Mental_Health/Drug_and_Addiction_Information/low_risk_drinking_guidelines.html.

coronary artery disease,¹² and diabetes,¹³ as well as increase the difficulty of managing them.

The acute cognitive effects of alcohol use are well known, but less well studied are the long-term effects of chronic alcohol use on brain function, particularly among older individuals.¹⁴ Alcohol intoxication can cause cognitive effects such as disinhibition, ataxia, and short-term memory impairment.¹⁵ Historically, the Wernicke-Korsakoff syndrome was considered to entirely explain the dangers of chronic alcohol use, but current data indicate that alcohol-induced dementia may also be linked to loss of white matter and neurons in the hypothalamus and cerebellum. These areas may have the potential to regrow neural networks in the absence of alcohol over an extended period.¹⁶

So how much alcohol is too much? The National Institute on Alcohol Abuse and Alcoholism¹⁷ recommends that older men (65 years or older) consume no more than one standard drink per day with a maximum of two drinks on any one occasion, or seven drinks on average per week. The standards for older women are stricter—less than one drink per day and a maximum of four drinks per week. Another consideration is the number of drinks consumed in a single session,

with five or more drinks for men and four or more for women constituting risky drinking. Four categories of alcohol use are described in **Table 1**.¹⁸

Assessment tools

Many screening instruments have been developed to assess alcohol use patterns in adult patients. In a survey of 853 primary care physicians and psychiatrists, only 13% used formal alcohol screening tools routinely.¹⁹ The systematic screening of all patients reduces the chance that alcohol overuse will be missed. Self-administered computer or paper-based screening questions may be answered more

truthfully than questions answered in person. Patients with dementia may pose a particular challenge for self-report, and collateral history will be particularly important. The Alcohol-Related Problems Survey (ARPS) was developed specifically for geriatric populations. This survey screens for alcohol's effects among persons with declining health and increased medication use.²⁰ Common screening instruments are described in **Table 2**.^{21–24}

Findings from laboratory tests can be used to corroborate verbal screening results and may also be used to motivate patients to consider treatment.²⁴ However, most laboratory tests are only useful for indicating prolonged heavy drinking. The most sensitive routinely available laboratory tests for excessive alcohol intake include measurement of gamma-glutamyltransferase (GGT), mean corpuscular volume, and the ratio of aspartate aminotransferase to alanine aminotransferase (AST/ALT). The positive predictive value for GGT is only about 25% in a population that has a 10% prevalence rate of problem drinking. Carbohydrate-deficient transferrin (CDT) is elevated in 80% of individuals who have been drink-

Table 2. Common alcohol use screening instruments validated for clinical use.

Instrument	Population	Sensitivity	Specificity	Number of items	Time to administer (minutes)
AUDIT Alcohol Use Disorders Identification Test	Adults	81%	86%	10	2
CAGE Questionnaire	Adults and adolescents	75%	92%	4	1
SMAST Self-Administered Michigan Alcoholism Screening Test	Adults and adolescents	90–98%	57–82%	13	8
ARPS Alcohol-Related Problems Survey	Adults >65	82%	82%	18	10

Adapted from Fink A, Tsai MC, Hays RD, et al.²⁰ National Institute on Alcohol Abuse and Alcoholism,²¹ Bradley KA, Bush KR, Epler AJ, et al.,²² Aertgeerts B, Buntinx F, Kester A,²³ Hoeksema HL, de Bock GH.²⁴

ing heavily within the past week, but this test is not available in all laboratories. Blood alcohol and urine alcohol testing are only useful for detection of drinking within the previous 24 hours.²⁵

Treatment

Community resources for alcohol treatment vary greatly by region. Although the senior-specific addictions treatment available in larger centres may appeal to some patients, the literature supports good outcomes for mixed-age treatment. Geriatric patients have also been shown to respond well to brief intervention protocols designed for the primary care clinic (see

Figure).^{26,27}

Two oral medications (naltrexone and disulfiram) are currently approved in Canada for treating alcohol dependence in the general adult population. Naltrexone is an opiate antagonist that targets the endogenous endorphin system, reducing both the pleasure derived from drinking and the craving to drink, while disulfiram blocks the action of aldehyde dehydrogenase and causes the accumulation of acetaldehyde when combined with alcohol for a deterrent effect. Both agents help patients reduce drinking, avoid relapse to heavy drinking, and achieve and maintain abstinence.

In a trial involving naltrexone and supportive psychosocial therapy, Oslin and colleagues (2002) compared older adults (mean age 62.6 years) with younger adults (mean age 41.7 years) in terms of compliance and treatment efficacy. The psychosocial therapy component focused on enhancing adherence to naltrexone use and motivational techniques to change addictive behaviors. Oslin found that the older adults did better in terms of treatment adherence and reduced relapse rates,²⁶ significant findings given that adherence to naltrexone therapy can be poor

1. Identify patient's future goals: physical and emotional health; activities and hobbies; relationships and social life; financial stability.
2. Give feedback about patient's responses to screening questions.
3. Review where patient's drinking fits into population norms for age group.
4. Introduce the concept of standard drinks and advise on safe amounts of drinking (men: < 2 drinks/day, < 7 drinks/week, < 4 drinks/occasion; women: < 1 drink/day, < 5 drinks/week, < 3 drinks/occasion)
5. Weigh the pros and cons: reasons for drinking versus reasons to cut down or quit.
6. Consider change: quitting or cutting down on drinking.
7. Discuss sensible drinking limits and strategies for cutting down/quitting.
8. Create a drinking agreement in form of a prescription.
9. Discuss coping with risky situations, develop relapse prevention strategies.
10. Summarize discussion.

Figure. Brief alcohol use intervention for geriatric patients.

Adapted from Barry KL, Blow FC, Cullianane P, et al.²⁷

because of gastrointestinal side effects. The side effects from disulfiram use are also of concern and can lead to serious and extremely unpleasant consequences. The accumulation of acetaldehyde is potentially dangerous in the elderly, and disulfiram should never be given to a patient with cognitive impairment. Pharmacological treatment for comorbid anxiety and depressive disorders should be considered, but is most effective after initial alcohol reduction. Many geriatric drinkers do not benefit from additional medication, and clinicians may consider offering brief but effective behavioral support to promote recovery.^{27,28}

Reduction of alcohol intake can have multiple health benefits for patients with alcohol use disorders. There is demonstrated gradual improvement of cognitive ability with increasing duration of abstinence.²⁹ However, in a clinically healthy population of abstinent alcohol-dependent subjects, learning and memory deficits have been reported to persist despite prolonged periods of abstinence.³⁰ Such deficits in executive functioning, learning, and concentration may lead to poor treatment outcomes even in

alcohol-dependent individuals who appear to be healthy and wish to limit their drinking. Early intervention while cognitive deficits and comorbidities may be reversible is by far the better option.

Summary

Alcohol overuse in the elderly is a common and significant problem that often goes unrecognized. Clinicians can help geriatric patients avoid serious health consequences by making thoughtful inquiries, using a screening tool, and developing an appropriate treatment strategy.

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Competing interests

None declared.

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