

# Helping Patients Who Drink Too Much



**A CLINICIAN'S GUIDE**

2005 Edition

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES  
National Institutes of Health  
National Institute on Alcohol Abuse and Alcoholism

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## Introduction

This guide is written for primary care and mental health clinicians. It has been produced by the National Institute on Alcohol Abuse and Alcoholism (NIAAA), a component of the National Institutes of Health, with guidance from physicians, nurses, advanced practice nurses, physician assistants, and clinical researchers.

### How much is “too much”?

Drinking becomes too much when it causes or elevates the risk for alcohol-related problems or complicates the management of other health problems. Men who drink 5 or more standard drinks in a day (or 15 or more per week) and women who drink 4 or more in a day (or 8 or more per week) are at increased risk for alcohol-related problems, according to epidemiologic research.<sup>1</sup>

Individual responses to alcohol vary, however. Drinking at lower levels may be problematic depending on many factors, such as age, co-existing conditions, and medication use. Because it is not known whether any amount of alcohol is safe during pregnancy, the Surgeon General urges abstinence for women who are or may become pregnant.<sup>2</sup>

### Why screen for heavy drinking?

- **At-risk drinking and alcohol problems are common.** About 3 in 10 U.S. adults drink at levels that elevate their risk for physical, mental health, and social problems.<sup>3</sup> Of these heavy drinkers, about 1 in 4 currently has alcohol abuse or dependence.<sup>3</sup> All heavy drinkers have a greater risk of hypertension, gastrointestinal bleeding, sleep disorders, major depression, hemorrhagic stroke, cirrhosis of the liver, and several cancers.<sup>4</sup>
- **Heavy drinking often goes undetected.** In a recent study of primary care practices, for example, patients with alcohol dependence received the recommended quality of care, including assessment and referral to treatment, only about 10 percent of the time.<sup>5</sup>
- **You are in a prime position to make a difference.** Clinical trials have demonstrated that brief interventions can promote significant, lasting reductions in drinking levels in at-risk drinkers who are not alcohol dependent.<sup>6</sup> Some drinkers who are dependent will accept referral to addiction treatment programs. Even for patients who do not accept a referral, repeated alcohol-focused visits with a health provider can lead to significant improvement.<sup>7,8</sup>

If you are not already doing so, we encourage you to incorporate alcohol screening, brief intervention, and treatment referral into your practice.

**With this guide, you have what you need to begin.**

## Changes in the 2005 *Clinician's Guide*

This version provides important updates and refinements to the *Guide* published in 2003:

- **Broader audience:** Whereas the previous *Guide* was targeted to primary care practitioners only, this edition is written for both primary care and mental health clinicians. Mental health patients are more likely than those in the general population to have substance use disorders, primarily alcohol use disorders.<sup>9,10</sup> Often the only care these patients receive is mental health care, and heavy drinking can interfere with their response to treatment. Routine screening for heavy drinking is important for these patients as well.
- **Simpler screening method:** The screening method now consists of a single question about heavy drinking days. In addition, for those wishing to incorporate a self-report instrument into their practices, the AUDIT is provided in the appendix. The previous version of the *Guide* recommended using the quantity-frequency and CAGE questions. If you or your practice has adopted that method, you may wish to continue using it, or you may decide to switch to the new method. The changes in this *Guide* are meant to simplify the process and thus increase the number of practitioners using it, but the older method worked as well if fully implemented.
- **New assessment strategy:** The how-to section now includes a step for differentiating among patients with at-risk drinking, alcohol abuse, and alcohol dependence. The outcome shapes the actions to be taken in the brief intervention and followup steps and gives practitioners a more active role in patient management.
- **Guidance for when patients refuse a referral:** Some patients with alcohol use disorders will not accept referral to a specialist. This *Guide* provides primary care and mental health clinicians with help in managing these patients on their own.
- **Medication information:** The appendix has a new section on medications for treating alcohol dependence. Three approved medications provide a potentially important tool for helping patients in primary care and general mental health care. In addition, the pocket guide now contains prescribing information.
- **New forms and frequently asked questions (FAQs):** In the appendix you'll find helpful patient progress note forms, including both baseline and followup versions, for photocopying. New FAQs cover a range of topics including setting up an office-based screening system, helping patients who struggle to abstain, and implementing screening in mental health settings.

## Before You Begin...

### Decide on a screening method

The *Guide* provides two methods for screening: a single question to use during a clinical interview (about heavy drinking days) and a written self-report instrument (the AUDIT—see page 11). The single interview question can be used at any time, either in conjunction with the AUDIT or alone. Some practices may prefer to have patients fill out the AUDIT before they see the clinician. It takes less than 5 minutes to complete and can be copied or incorporated into a health history.

### Think about clinical indications for screening

Key opportunities include

- As part of a **routine examination**
- Before **prescribing a medication** that interacts with alcohol (see box on page 25)
- In the **emergency department** or urgent care center
- In patients who
  - are **pregnant** or trying to conceive
  - are **likely to drink heavily**, such as smokers, adolescents, and young adults
  - have **health problems that might be alcohol induced**, such as
 

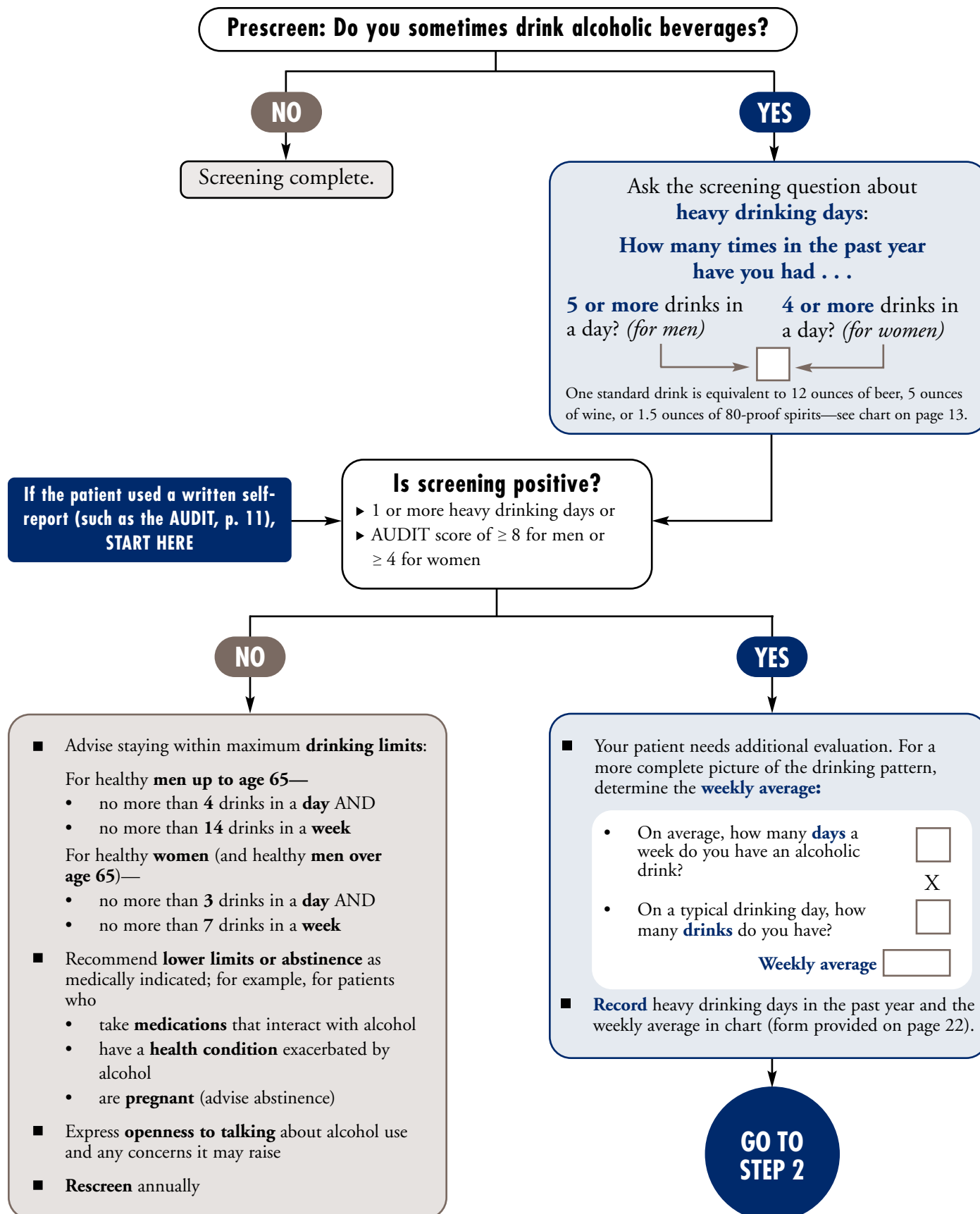
cardiac arrhythmia	dyspepsia	liver disease
depression or anxiety	insomnia	trauma
  - have a chronic **illness that is not responding to treatment as expected**, such as
 

chronic pain	diabetes	gastrointestinal disorders
depression	heart disease	hypertension

### Set up your practice to simplify the process

- Decide who will conduct the screening (you, other clinical personnel, the receptionist who hands out the AUDIT)
- Use pre-formatted progress notes (provided on pages 22 and 23)
- Use computer reminders (if using electronic medical records)
- Keep copies of the pocket guide (provided) and referral information in examination rooms
- Monitor your performance through practice audits

**STEP 1** Ask About Alcohol Use



## STEP 2 Assess for Alcohol Use Disorders

Next, determine whether there is a *maladaptive pattern of alcohol use*, causing *clinically significant impairment or distress*. It is important to assess the severity and extent of all alcohol-related symptoms to inform your decisions about management. See pages 14 and 15 for sample phrasing of the questions, which are adapted from the *Diagnostic and Statistical Manual of Mental Disorders, 4th edition, revised (DSM-IV, revised)*.

Determine whether, in the past 12 months, your patient's drinking has **repeatedly** caused or contributed to

- role failure** (interference with home, work, or school obligations)
- risk** of bodily harm (drinking and driving, operating machinery, swimming)
- run-ins** with the law (arrests or other legal problems)
- relationship** trouble (family or friends)

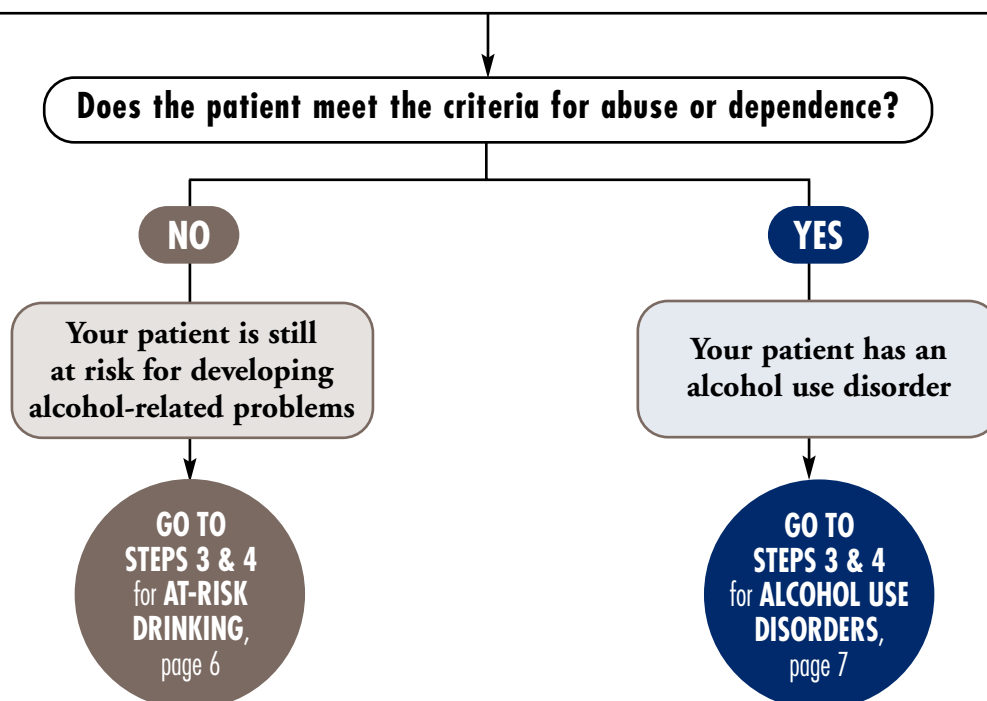
If yes to **one or more** → your patient has **alcohol abuse**.

*In either case, proceed to assess for dependence symptoms.*

Determine whether, in the past 12 months, your patient has

- shown tolerance** (needed to drink a lot more to get the same effect)
- shown signs of withdrawal** (tremors, sweating, nausea, or insomnia when trying to quit or cut down)
- not been able to stick to drinking limits** (repeatedly gone over them)
- not been able to cut down or stop** (repeated failed attempts)
- spent a lot of time drinking** (or anticipating or recovering from drinking)
- spent less time on other matters** (activities that had been important or pleasurable)
- kept drinking despite problems** (recurrent physical or psychological problems)

If yes to **three or more** → your patient has **alcohol dependence**.



## FOR AT-RISK DRINKING (no abuse or dependence)

### STEP 3 Advise and Assist

- **State your conclusion and recommendation clearly:**
  - “You are drinking more than is medically safe.” Relate to patient’s concerns and medical findings, if present. (Consider using the chart on page 17 to show increased risk.)
  - “I strongly recommend that you cut down (or quit).” (See page 25 for advice considerations.)
- **Gauge readiness to change drinking habits:**  
 “Are you willing to consider making changes in your drinking?”

**Is the patient ready to commit to change at this time?**

**NO**

Do not be discouraged—ambivalence is common. Your advice has likely prompted a change in your patient’s thinking, a positive change in itself. With continued reinforcement, your patient may decide to take action. For now,

- **Restate your concern** about his or her health.
- **Encourage reflection:** Ask patients to weigh what they like about drinking versus their reasons for cutting down. What are the major barriers to change?
- **Reaffirm your willingness to help** when he or she is ready.

**YES**

- **Help set a goal:** Cut down to within maximum limits (see Step 1) or abstain for a period of time.
- **Agree on a plan,** including
  - what specific steps the patient will take (e.g., not go to a bar after work, measure all drinks at home, alternate alcoholic and non-alcoholic beverages)
  - how drinking will be tracked (diary, kitchen calendar)
  - how the patient will manage high-risk situations
  - who might be willing to help, such as a spouse or nondrinking friends
- **Provide educational materials** (see page 29).

### STEP 4 At Followup: Continue Support

**REMINDER:** Document alcohol use and review goals at each visit (form provided on page 23).

**Was the patient able to meet and sustain the drinking goal?**

**NO**

- **Acknowledge that change is difficult.**
- **Support any positive change** and address barriers to reaching the goal.
- **Renegotiate the goal and plan;** consider a trial of abstinence.
- **Consider engaging significant others.**
- **Reassess the diagnosis** if the patient is unable to either cut down or abstain. (Go to Step 2.)

**YES**

- **Reinforce and support continued adherence** to recommendations.
- **Renegotiate drinking goals** as indicated (e.g., if the medical condition changes or if an abstaining patient wishes to resume drinking).
- **Encourage to return** if unable to maintain adherence.
- **Rescreen** at least annually.



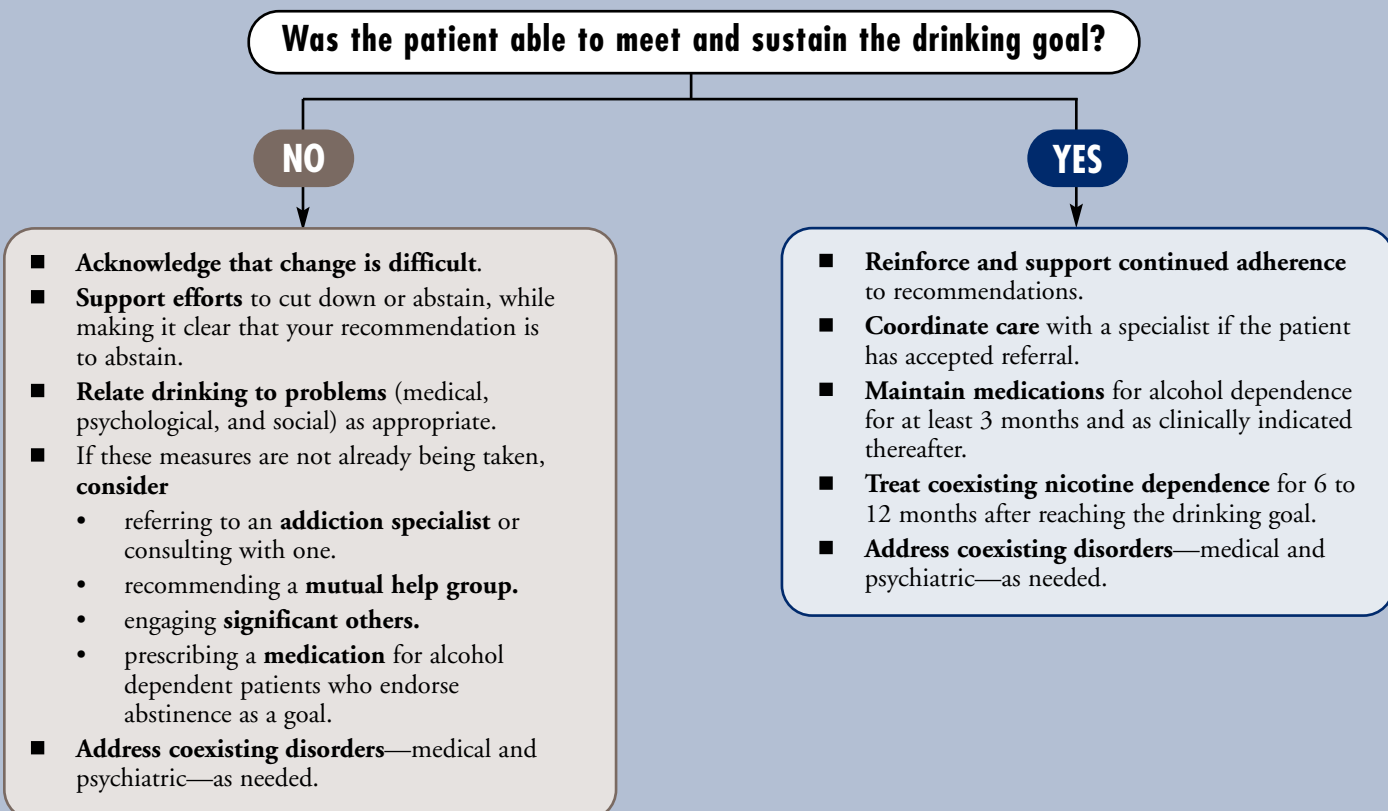
FOR ALCOHOL USE DISORDERS (abuse or dependence)

STEP 3 Advise and Assist

- **State your conclusion and recommendation clearly:**
  - “I believe that you have an alcohol use disorder and I strongly recommend that you quit drinking.”
  - Relate to the patient's concerns and medical findings if present.
- **Negotiate a drinking goal:**
  - Abstaining is the safest course for most patients with alcohol use disorders.
  - Patients who have milder forms of abuse or dependence and are unwilling to abstain may be successful at cutting down. (See Step 3 for At-Risk Drinking.)
- **Consider** referring for additional **evaluation by an addiction specialist**, especially if the patient is dependent. (See page 21 for tips on finding treatment resources.)
- **Consider** recommending a **mutual help group**.
- For patients who have dependence, **consider**
  - the need for **medically managed withdrawal** (detoxification) and treat accordingly (see page 27).
  - prescribing a **medication** for alcohol dependence for patients who endorse abstinence as a goal (see page 18).
- **Arrange followup** appointments.

STEP 4 At Followup: Continue Support

REMINDER: Document alcohol use and review goals at each visit (form provided on page 23).



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## Screening Instrument: The Alcohol Use Disorders Identification Test (AUDIT)

Your practice may choose to have patients fill out a written screening instrument before they see a clinician. In this *Guide*, the AUDIT is provided in both English and Spanish for this purpose. It takes only about 5 minutes to complete, has been tested internationally in primary care settings, and has high levels of validity and reliability.<sup>11</sup> You may photocopy these pages or print them as individual pages from the PDF download version of the *Guide* at [www.niaaa.nih.gov](http://www.niaaa.nih.gov).

### Scoring the AUDIT

A minimum score (for nondrinkers) is 0 and the maximum possible score is 40.

Scores of 8 or more for men (up to age 60) or 4 or more for women, adolescents, and men over the age of 60 are considered positive screens.<sup>12,13,14</sup> For patients who have scores near the cut-points, clinicians may wish to examine individual responses to questions and clarify them during the clinical examination.

**Note:** The AUDIT's sensitivity and specificity for detecting heavy drinking and alcohol use disorders varies across different populations. Lowering the cut-points increases sensitivity (the proportion of "true positive" cases) while increasing the number of false positives. Thus, it may be easiest to use a cut-point of 4 for all patients, recognizing that more false positives may be identified among adult men.

### Continuing with screening and assessment

After the AUDIT is completed, continue with Step 1, page 4.

PATIENT: Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest.

Place an X in one box that best describes your answer to each question.

Questions	0	1	2	3	4	
1. How often do you have a drink containing alcohol?	Never	Monthly or less	2 to 4 times a month	2 to 3 times a week	4 or more times a week	
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	
3. How often do you have five or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
8. How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
9. Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, during the last year	
10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year	
					<b>Total</b>	

**Note:** This questionnaire (the AUDIT) is reprinted with permission from the World Health Organization. To reflect standard drink sizes in the United States, the number of drinks in question 3 was changed from 6 to 5. A free AUDIT manual with guidelines for use in primary care is available online at [www.who.org](http://www.who.org).

PACIENTE: Debido a que el uso del alcohol puede afectar su salud e interferir con ciertos medicamentos y tratamientos, es importante que le hagamos algunas preguntas sobre su uso del alcohol. Sus respuestas serán confidenciales, así que sea honesto por favor.








Marque una X en el cuadro que mejor describa su respuesta a cada pregunta.

<b>Preguntas</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
1. ¿Con qué frecuencia consume alguna bebida alcohólica?	Nunca	Una o menos veces al mes	De 2 a 4 veces al mes	De 2 a 3 más veces a la semana	4 o más veces a la semana	
2. ¿Cuántas consumiciones de bebidas alcohólicas suele realizar en un día de consumo normal?	1 o 2	3 o 4	5 o 6	De 7 a 9	10 o más	
3. ¿Con qué frecuencia toma 5 o más bebidas alcohólicas en un solo día?	Nunca	Menos de una vez al mes	Mensualmente	Semanalmente	A diario o casi a diario	
4. ¿Con qué frecuencia en el curso del último año ha sido incapaz de parar de beber una vez había empezado?	Nunca	Menos de una vez al mes	Mensualmente	Semanalmente	A diario o casi a diario	
5. ¿Con qué frecuencia en el curso del último año no pudo hacer lo que se esperaba de usted porque había bebido?	Nunca	Menos de una vez al mes	Mensualmente	Semanalmente	A diario o casi a diario	
6. ¿Con qué frecuencia en el curso del último año ha necesitado beber en ayunas para recuperarse después de haber bebido mucho el día anterior?	Nunca	Menos de una vez al mes	Mensualmente	Semanalmente	A diario o casi a diario	
7. ¿Con qué frecuencia en el curso del último año ha tenido remordimientos o sentimientos de culpa después de haber bebido?	Nunca	Menos de una vez al mes	Mensualmente	Semanalmente	A diario o casi a diario	
8. ¿Con qué frecuencia en el curso del último año no ha podido recordar lo que sucedió la noche anterior porque había estado bebiendo?	Nunca	Menos de una vez al mes	Mensualmente	Semanalmente	A diario o casi a diario	
9. ¿Usted o alguna otra persona ha resultado herido porque usted había bebido?	No		Sí, pero no en el curso del último año		Sí, el último año	
10. ¿Algún familiar, amigo, médico o profesional sanitario ha mostrado preocupación por un consumo de bebidas alcohólicas o le ha sugerido que deje de beber?	No		Sí, pero no en el curso del último año		Sí, el último año	
					<b>Total</b>	

*Note: This questionnaire (the AUDIT) is reprinted with permission from the World Health Organization and the Generalitat Valenciana Conselleria De Benestar Social. To reflect standard drink sizes in the United States, the number of drinks in question 3 was changed from 6 to 5. A free AUDIT manual with guidelines for use in primary care is available online at [www.who.org](http://www.who.org).*

## What Is a Standard Drink?

A standard drink is any drink that contains about 14 grams of pure alcohol (about 0.6 fluid ounces or 1.2 tablespoons). Below are standard drink equivalents. These are approximate, as different brands and types of beverages vary in their actual alcohol content.

<p><b>12 oz. of beer or cooler</b></p> 	<p><b>8–9 oz. of malt liquor</b> 8.5 oz. shown in a 12-oz. glass that, if full, would hold about 1.5 standard drinks of malt liquor</p> 	<p><b>5 oz. of table wine</b></p> 	<p><b>3–4 oz. of fortified wine</b> (such as sherry or port) 3.5 oz. shown</p> 	<p><b>2–3 oz. of cordial, liqueur, or aperitif</b> 2.5 oz. shown</p> 	<p><b>1.5 oz. of brandy</b> (a single jigger)</p> 	<p><b>1.5 oz. of spirits</b> (a single jigger of 80-proof gin, vodka, whiskey, etc.) Shown straight and in a highball glass with ice to show level before adding mixer*</p> 
<p>12 oz.</p>	<p>8.5 oz.</p>	<p>5 oz.</p>	<p>3.5 oz.</p>	<p>2.5 oz.</p>	<p>1.5 oz.</p>	<p>1.5 oz.</p>

Many people do not know what counts as a standard drink, and thus are unaware of how many standard drinks are held in the containers in which these drinks are often sold. Some examples:

- For **beer**, the approximate number of standard drinks in
  - 12 oz. = 1
  - 16 oz. = 1.3
  - 22 oz. = 2
  - 40 oz. = 3.3
- For **malt liquor**, the approximate number of standard drinks in
  - 12 oz. = 1.5
  - 16 oz. = 2
  - 22 oz. = 2.5
  - 40 oz. = 4.5
- For **table wine**, the approximate number of standard drinks in
  - a standard 750 mL (25 oz.) bottle = 5
- For **80-proof spirits**, or “hard liquor,” the approximate number of standard drinks in
  - a mixed drink = 1 or more\*
  - a pint (16 oz.) = 11
  - a fifth (25 oz.) = 17
  - 1.75 L (59 oz.) = 39

*\*Note:* It can be difficult to estimate the number of standard drinks served in a single mixed drink made with hard liquor. Depending on factors such as the type of spirits and the recipe, one mixed drink can contain from one to three or more standard drinks.

## Alcohol Abuse:

### Sample Questions for Assessment Based on Diagnostic Criteria\*

A diagnosis of alcohol **abuse** requires that the patient meet **one** or more of the following criteria, occurring at any time in the same 12-month period, and **not** meet the criteria for alcohol dependence.

All questions are prefaced by “In the past 12 months...”

■ **Failure to fulfill major role obligations at work, school, or home because of recurrent drinking:**

Have you had a period when your drinking—or being sick from drinking—often interfered with taking care of your home or family? Caused job troubles? School problems?

■ **Recurrent drinking in hazardous situations:**

- Have you more than once driven a car or other vehicle while you were drinking? Or after having had too much to drink?
- Have you gotten into situations while drinking or after drinking that increased your chances of getting hurt—like swimming, using machinery, or walking in a dangerous area or around heavy traffic?

■ **Recurrent legal problems related to alcohol:**

Have you gotten arrested, been held at a police station, or had any other legal problems because of your drinking?

■ **Continued use despite recurrent interpersonal or social problems:**

- Have you continued to drink even though you knew it was causing you trouble with your family or friends?
- Have you gotten into physical fights while drinking or right after drinking?

\*Adapted with permission from the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision. Copyright 2000 American Psychiatric Association.

## Alcohol Dependence: Sample Questions for Assessment Based on Diagnostic Criteria\*

A diagnosis of alcohol **dependence** requires that the patient meet **three** or more of the following criteria, occurring at any time in the same 12-month period.

All questions are prefaced by “In the past 12 months...”

### ■ **Tolerance:**

Have you found that you have to drink much more than you once did to get the effect you want? Or that your usual number of drinks has much less effect on you than it once did?

### ■ **Withdrawal syndrome or drinking to relieve withdrawal:**

- When the effects of alcohol are wearing off, have you had trouble sleeping? Found yourself shaking? Nervous? Nauseous? Restless? Sweating or with your heart beating fast? Have you sensed things that aren't really there? Had seizures?
- Have you taken a drink or used any drug or medicine (other than over-the-counter pain relievers) to keep from having bad aftereffects of drinking? Or to get over them?

### ■ **Impaired control:**

Have you more than once wanted to stop or cut down on your drinking? Or tried more than once to stop or cut down but found you couldn't?

### ■ **Drinking more or longer than intended:**

Have you had times when you ended up drinking more than you meant to? Or kept on drinking for longer than you intended?

### ■ **Neglect of activities:**

In order to drink, have you given up or cut down on activities that were important or interesting to you or gave you pleasure?

### ■ **Time spent related to drinking or recovering:**

Have you had a period when you spent a lot of time drinking? Or being sick or getting over the bad aftereffects of drinking?

### ■ **Continued use despite recurrent psychological or physical problems:**

Have you continued to drink even though you knew it was making you feel depressed or anxious? Or causing a health problem or making one worse? Or after having had a blackout?

\*Adapted with permission from the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision. Copyright 2000 American Psychiatric Association.



This section contains guidance and materials to help practitioners conduct brief interventions. Included are the following:

- Approach to Brief Intervention
- U.S. Adult Drinking Patterns
- Prescribing Medications for Alcohol Dependence
- Referral Resources
- Patient Progress Notes (for photocopying)

## **Approach to Brief Intervention**

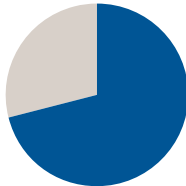
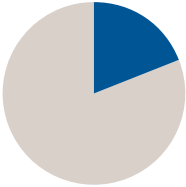
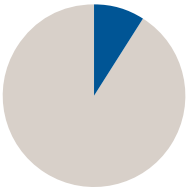
Keep in mind that changing health-related behaviors is often a difficult process, with progress interrupted by relapse to less healthy behaviors. Providing reinforcement, support, and thoughtful reflection during an office visit can often make the difference between long-term success and failure.

### **General approach to brief intervention—things to remember:**

- Use a health education approach
  - Be matter-of-fact and nonconfrontational
  - Provide patient education materials (see page 29)
- Offer choices on how to make changes
- Emphasize your patient's responsibility for changing drinking behavior
- Convey confidence in your patient's ability to change drinking behavior

## U.S. Adult Drinking Patterns

Nearly 3 in 10 U.S. adults engage in at-risk drinking patterns<sup>3</sup> and thus would benefit from advice to cut down or a referral for further evaluation. During a brief intervention, you can use this chart to show that (1) most people abstain or drink within the recommended limits and (2) the prevalence of alcohol use disorders rises with heavier drinking. Though a wise first step, cutting to within the limits is not risk free, since motor vehicle crashes and other problems can occur at lower drinking levels.

WHAT IS YOUR DRINKING PATTERN?	HOW COMMON IS THIS PATTERN?	HOW COMMON ARE ALCOHOL DISORDERS IN DRINKERS WITH THIS PATTERN?
<p><b>Based on the following limits—number of drinks:</b></p> <p>On any <b>DAY</b>—Never more than 4 (men) or 3 (women) – and – In a typical <b>WEEK</b>—No more than 14 (men) or 7 (women)</p>	<p>Percentage of U.S. adults aged 18 or older*</p>	<p>Combined prevalence of alcohol abuse and dependence**</p>
<p><b>Never exceed the daily or weekly limits</b></p> <p>(2 out of 3 people in this group abstain or drink fewer than 12 drinks a year)</p>	 <p>72%</p>	<p>less than <b>1 in 100</b></p>
<p><b>Exceed only the daily limit</b></p> <p>(More than 8 out of 10 in this group exceed the daily limit <i>less than once a week</i>)</p>	 <p>16%</p>	<p><b>1 in 5</b></p>
<p><b>Exceed both daily and weekly limits</b></p> <p>(8 out of 10 in this group exceed the daily limit <i>once a week or more</i>)</p>	 <p>10%</p>	<p>almost <b>1 in 2</b></p>

\* Not included in the chart, for simplicity, are the 2 percent of U.S. adults who exceed *only* the weekly limits. The combined prevalence of alcohol use disorders in this group is 8 percent.

\*\* See pages 14 and 15 for the diagnostic criteria for alcohol disorders.

## Prescribing Medications for Alcohol Dependence

Three approved medications—disulfiram, naltrexone, and acamprosate—are currently available to treat alcohol dependence. They have been shown to be helpful to patients in reducing drinking, reducing relapse to heavy drinking, achieving and maintaining abstinence, or a combination of these effects.

### When should I consider prescribing medication for an alcohol use disorder?

All approved drugs have been shown to be effective adjuncts to the treatment of alcohol dependence. Thus, consider adding medication whenever you are treating someone with active alcohol dependence or someone who has stopped drinking in the past few months but is experiencing problems such as craving or slips.

### Will medications allow my patients who are alcohol dependent to drink socially?

If someone has developed dependence, the safest course is abstinence, and that would be the usual clinical recommendation. Still, it is best to determine individualized goals with each patient. Some patients may not be willing to endorse abstinence as a goal, especially at first. If an alcohol-dependent patient agrees to reduce drinking substantially, it is best to engage them in that goal while continuing to note that abstinence remains the optimal outcome.

Regarding medications, disulfiram, of course, would be contraindicated in patients who wish to continue to drink, because a disulfiram-alcohol reaction would occur with any alcohol intake at all. In a recent study, naltrexone had a modest effect in reducing the risk of heavy drinking in drinkers with mild to moderate alcohol dependence who had a choice of cutting down or abstaining.<sup>15</sup> At this point, less is known about using acamprosate for this purpose.

### Which of the medications should I prescribe?

Which medication to use will be determined by clinical judgment and patient preference. Each works through a different mechanism of action. Some patients may respond better to one type of medication rather than another.

- **Disulfiram** (Antabuse®) produces an unpleasant flushing reaction whenever the patient drinks alcohol. Thus, it produces a disincentive to drinking alcohol and provides some external controls on drinking behavior. Disulfiram has been shown to be most effective when given in a monitored fashion, such as in a clinic or by a spouse.<sup>16</sup> If a spouse or other family member is the monitor, instruct the patient and the monitor that the patient should be taking the medication and asking the monitor to simply observe. Instruct the monitor to call you if the patient does not adhere to this schedule for 2 days. Some patients will respond to self-administered disulfiram, especially if they are highly motivated to abstain.

- **Naltrexone** (ReVia®) blocks opiate receptors that are involved in the rewarding effects of drinking alcohol and the craving for alcohol after establishing abstinence. Naltrexone's efficacy in reducing relapse to heavy drinking has been demonstrated in multiple studies, a finding now confirmed by meta-analyses.<sup>17,18</sup> Although predictors of treatment response have not been clearly demonstrated, research suggests that patients with a family history of alcohol dependence may have a higher rate of response.<sup>19</sup> Several studies also demonstrated a positive interaction between naltrexone and cognitive-behavioral therapy for alcohol dependence.<sup>20</sup>
- **Acamprosate** (Campral®) has been used to treat alcohol dependence in Europe for more than a decade and was approved in the United States for this indication in 2004. Although its mode of action has not been clearly established, it may work by reducing symptoms of protracted abstinence such as insomnia, anxiety, and restlessness. Acamprosate's efficacy in increasing the proportion of dependent drinkers who maintain abstinence for several weeks to months has been demonstrated in multiple studies, a finding confirmed by a meta-analysis of 17 clinical trials.<sup>21</sup> In most positive studies, patients were fully withdrawn from alcohol for at least several days to weeks prior to initiating use.<sup>22</sup>

See the chart on the next page for a summary of the properties of each medication and prescribing information.

## Medications for Treating Alcohol Dependence

The chart below highlights some of the properties of each medication. It does not provide complete information and is not meant to be a substitute for the package inserts or other drug reference sources used by clinicians. For patient information about these and other drugs, the National Library of Medicine provides Medline Plus (<http://medlineplus.gov>).

Whether or not a medication should be prescribed and in what amount is a matter between individuals and their health care providers. The prescribing information provided here is not a substitute for a provider's judgment in an individual circumstance, and the NIH accepts no liability or responsibility for use of the information with regard to particular patients.

	<b>Disulfiram</b> (Antabuse®)	<b>Naltrexone</b> (ReVia®)	<b>Acamprosate</b> (Campral®)
<b>Action</b>	Inhibits intermediate metabolism of alcohol, causing a build-up of acetaldehyde and a reaction of flushing, sweating, nausea, and tachycardia if a patient drinks alcohol	Blocks opioid receptors, resulting in reduced craving and reduced reward in response to drinking	Affects glutamate and GABA neurotransmitter systems, but its alcohol-related action is unclear
<b>Contraindications</b>	Concomitant use of alcohol or alcohol-containing preparations or metronidazole; coronary artery disease; severe myocardial disease	Currently using opioids or in acute opioid withdrawal; anticipated need for opioid analgesics; acute hepatitis or liver failure	Severe renal impairment (CrCl ≤ 30 mL/min)
<b>Precautions</b>	High impulsivity—likely to drink while using it; psychoses (current or history); diabetes mellitus; epilepsy; hepatic dysfunction; hypothyroidism; renal impairment; rubber contact dermatitis	Other hepatic disease; renal impairment; history of suicide attempts. If opioid analgesia is required, larger doses may be required, and respiratory depression may be deeper and more prolonged.	Moderate renal impairment (dose adjustment for CrCl between 30–50 mL/min); depression or suicidality
<b>Serious adverse reactions</b>	Hepatitis; optic neuritis; peripheral neuropathy; psychotic reactions. Pregnancy Category C.	Will precipitate severe withdrawal if patient is dependent on opioids; hepatotoxicity (uncommon at usual doses). Pregnancy Category C.	Anxiety; depression. Rare events include the following: suicide attempt, acute kidney failure, heart failure, mesenteric arterial occlusion, cardiomyopathy, deep thrombophlebitis, and shock. Pregnancy Category C.
<b>Common side effects</b>	Metallic after-taste; dermatitis	Nausea; abdominal pain; constipation; dizziness; headache; anxiety; fatigue	Diarrhea; flatulence; nausea; abdominal pain; headache; back pain; infection; flu syndrome; chills; somnolence; decreased libido; amnesia; confusion
<b>Examples of drug interactions</b>	Amitriptyline; anticoagulants such as warfarin; diazepam; isoniazid; metronidazole; phenytoin; theophylline; warfarin; any nonprescription drug containing alcohol	Opioid analgesics (blocks action); yohimbine (use with naltrexone increases negative drug effects)	No clinically relevant interactions known
<b>Usual adult dosage</b>	<i>Oral dose:</i> 250 mg daily (range 125 mg to 500 mg)  <i>Before prescribing:</i> (1) warn that patient should not take disulfiram for at least 12 hours after drinking and that a disulfiram-alcohol reaction can occur up to 2 weeks after the last dose; and (2) warn about alcohol in the diet (e.g., sauces and vinegars) and in medications and toiletries  <i>Followup:</i> Monitor liver function tests periodically	<i>Oral dose:</i> 50 mg daily  <i>Before prescribing:</i> Evaluate for possible current opioid use; consider a urine toxicology screen for opioids, including synthetic opioids. Obtain liver function tests.  <i>Followup:</i> Monitor liver function tests periodically	<i>Oral dose:</i> 666 mg (two 333-mg tablets) three times daily <i>or</i> , for patients with moderate renal impairment (CrCl 30–50 mL/min), reduce to 333 mg (one tablet) three times daily  <i>Before prescribing:</i> Establish abstinence

The information in this chart was drawn primarily from references 18 and 23 (see page 30).

## Referral Resources

When making referrals, involve your patient in the decisions and schedule a referral appointment while he or she is in your office.

### Finding evaluation and treatment options

- For patients with insurance, contact a behavioral health case manager at the insurance company for a referral.
- For patients who are underinsured or uninsured, contact your local health department about addiction services.
- For patients who are employed, ask whether they have access to an Employee Assistance Program with addiction counseling.
- To locate treatment options in your area:
  - Call local hospitals to see which ones offer addiction services.
  - Call the National Drug and Alcohol Treatment Referral Routing Service (1-800-662-HELP) or visit the Substance Abuse Facility Treatment Locator Web site at <http://findtreatment.samhsa.gov>.

### Finding support groups

- Alcoholics Anonymous (AA) offers free, widely available groups of volunteers in recovery from alcohol dependence. Volunteers are often willing to work with professionals who refer patients. For contact information for your region, visit [www.aa.org](http://www.aa.org).
- Other self-help organizations that offer secular approaches, groups for women only, or support for family members can be found on the National Clearinghouse for Alcohol and Drug Information Web site ([www.health.org](http://www.health.org)) under “Resources.”

### Local resources

Use the space below for contact information for resources in your area (treatment centers, support groups such as AA, local government services, the closest Veterans Affairs medical center, shelters, churches).

# Alcohol screening form—baseline

AUDIT score (if done):  (positive =  $\geq 8$  for men;  $\geq 4$  for women)  
 Screening question:  
**Heavy drinking days** in the past year  
 ( $\geq 5$  drinks for men/ $\geq 4$  for women)  days (positive =  $\geq 1$ )  
 Continue if screen is positive:  
**Average weekly drinking**  drinks per week

## DSM-IV (revised) symptom criteria:

Abuse—Repeated or persistent problems in any of these areas because of drinking?

- |   |  |
|---|--|
| <input type="checkbox"/> no <input type="checkbox"/> yes <b>role failure</b>        | <input type="checkbox"/> no <input type="checkbox"/> yes <b>run-ins with the law</b> |
| <input type="checkbox"/> no <input type="checkbox"/> yes <b>risk of bodily harm</b> | <input type="checkbox"/> no <input type="checkbox"/> yes <b>relationship trouble</b> |
- Is **one or more** positive?  no  yes → **Alcohol abuse**

Dependence—Any of the following symptoms in the past year?

- |  |  |
|--|--|
| <input type="checkbox"/> no <input type="checkbox"/> yes <b>tolerance</b>  | <input type="checkbox"/> no <input type="checkbox"/> yes <b>spent a lot of time on drinking-related activities</b>       |
| <input type="checkbox"/> no <input type="checkbox"/> yes <b>withdrawal</b>   | <input type="checkbox"/> no <input type="checkbox"/> yes <b>spent less time on other matters</b>                         |
| <input type="checkbox"/> no <input type="checkbox"/> yes <b>not been able to stick to drinking limits</b>              | <input type="checkbox"/> no <input type="checkbox"/> yes <b>kept drinking despite psychological or physical problems</b> |
| <input type="checkbox"/> no <input type="checkbox"/> yes <b>not been able to cut down or stop in spite of attempts</b> |  |
- Are **three or more** positive?  no  yes → **Alcohol dependence**

**Additional history:** \_\_\_\_\_

**Physical examination and laboratory:** \_\_\_\_\_

## Assessment:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Negative alcohol screen | <input type="checkbox"/> Alcohol abuse      | <input type="checkbox"/> Alcohol withdrawal |
| <input type="checkbox"/> At-risk drinking        | <input type="checkbox"/> Alcohol dependence |   |

## Plan:

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Repeat screening as needed         | <input type="checkbox"/> Patient education about drinking limits                          |  |
| <input type="checkbox"/> Recommended drinking within limits | → Did the patient agree? <input type="checkbox"/> yes <input type="checkbox"/> no         |  |
| <input type="checkbox"/> Recommended abstinence             | → Did the patient agree? <input type="checkbox"/> yes <input type="checkbox"/> no         |  |
| <input type="checkbox"/> Naltrexone 50 mg daily             | <input type="checkbox"/> Acamprosate 666 mg 3 times daily                                 | <input type="checkbox"/> Disulfiram 250 mg daily |
| <input type="checkbox"/> Thiamine 100 mg IM/PO              | <input type="checkbox"/> Acamprosate 333 mg 3 times daily (for moderate renal impairment) |  |
| <input type="checkbox"/> Other medication/dosage: _____     |   |  |
| <input type="checkbox"/> Referral (specify): _____          |   |  |

## Followup:

Additional plan (withdrawal treatment, coexisting conditions): \_\_\_\_\_

## Alcohol followup progress note

**Heavy drinking days** in the past **month**  
( $\geq 5$  drinks for men/ $\geq 4$  for women)

days (positive =  $\geq 1$ )

**Average weekly drinking** in the past **month**

drinks per week

**Working diagnosis:**  At-risk drinking  Alcohol abuse  Alcohol dependence

**Goal:**  Drinking within limits  Abstinence

**Current medications:**  Naltrexone  Acamprosate  Disulfiram

Other (specify): \_\_\_\_\_

**Interval history and progress:**

\_\_\_\_\_  
\_\_\_\_\_

**Physical examination and laboratory:**

\_\_\_\_\_  
\_\_\_\_\_

**Assessment:**  At-risk drinking  Goals fully met  
 Alcohol abuse  Goals partially met  
 Alcohol dependence  Goals not met

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Plan:**

- Repeat screening as needed  Patient education about drinking limits
- Recommended drinking within limits  $\longrightarrow$  Did the patient agree?  yes  no
- Recommended abstinence  $\longrightarrow$  Did the patient agree?  yes  no
- Naltrexone 50 mg daily  Acamprosate 666 mg 3 times daily  Disulfiram 250 mg daily
- Thiamine 100 mg IM/PO  Acamprosate 333 mg 3 times daily (for moderate renal impairment)
- Other medication/dosage: \_\_\_\_\_
- Referral (specify): \_\_\_\_\_

**Followup:**

Additional plan (withdrawal treatment, coexisting conditions): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## Frequently Asked Questions

### About alcohol screening and brief interventions

#### ■ How effective is screening for heavy drinking?

Studies have demonstrated that screening is sensitive and that patients are willing to give honest information about their drinking to health practitioners when appropriate methods are used.<sup>13</sup> Several methods have been shown to work, including quantity-frequency interview questions and questionnaires such as the CAGE, the AUDIT, the shorter AUDIT-C, the TWEAK (for pregnant women), and others.<sup>24,25</sup> In this *Guide*, the single screening question about heavy drinking days was chosen for its simplicity and because almost all people with alcohol use disorders report drinking 5 or more drinks in a day (for men) or 4 or more (for women) at least occasionally. This *Guide* also recommends the AUDIT (provided on page 11) as a self-administered screening tool because of its high levels of validity and reliability.<sup>13</sup>

#### ■ How effective are brief interventions?

Randomized, controlled clinical trials in a variety of populations and settings have shown that brief interventions can decrease alcohol use significantly among people who drink above the recommended limits but are not dependent. Studies have found reductions of up to 30 percent in consumption and binge drinking over 12 months, as well as significant decreases in blood pressure readings, levels of gamma-glutamyl transferase (GGT), psychosocial problems, hospital days, and hospital readmissions for alcohol-related trauma.<sup>6</sup> Followup periods typically range from 6 to 24 months, although one recent study reported sustained reductions in alcohol use over 48 months.<sup>6</sup> A cost-benefit analysis in this study showed that each dollar invested in brief physician intervention could reap more than fourfold savings in future health care costs. Other research shows that for alcohol-dependent patients with an alcohol-related medical illness, repeated brief interventions at approximately monthly intervals for 1 to 2 years can lead to significant reductions in or cessation of drinking.<sup>7,8</sup>

#### ■ What can I do to encourage my patients to give honest and accurate answers to the screening questions?

It is often best to ask about alcohol consumption at the same time as other health behaviors, such as smoking, diet, and exercise. Using an empathic, nonconfrontational approach can help put patients at ease. Some clinicians have found that prefacing the alcohol questions with a nonthreatening opener such as “Do you enjoy a drink now and then?” can encourage reserved patients to talk. Patients may feel that a written or computerized self-report version of the AUDIT is less confrontational as well. To improve the accuracy of estimated drinking quantities, you could ask patients to look at the “What Is a Standard Drink?” chart on page 13. Many people do not know what counts as a single standard drink, especially for beverages with a higher alcohol content such as malt liquors, fortified wines, and spirits.

#### ■ How can a clinic- or office-based screening system be implemented?

The best studied method, which is both easy and efficient, is to ask patients to fill out the 10-item AUDIT before seeing the doctor. This form (provided on page 11) can be added to others that patients fill out. The full AUDIT or the 3-item AUDIT-C can also be incorporated into a larger health history form. The AUDIT-C consists of the first three consumption-related items of the AUDIT; a score of 6 or more for men and 4 or more for women<sup>26</sup> indicates a positive screen. Alternatively, the single-item screen in Step 1 of this *Guide* could be incorporated into a health history form. Screening can also be done in person by a nurse during patient check-in. (See also “Set Up Your Practice to Simplify the Process” on page 3.)

#### ■ Are there any specific considerations for implementing screening in mental health settings?

Studies have demonstrated a strong relationship between alcohol use disorders and other mental disorders.<sup>27</sup> Heavy drinking can cause psychiatric

symptoms such as depression, anxiety, insomnia, cognitive dysfunction, and interpersonal conflict. For patients who have an independent psychiatric disorder, heavy drinking may compromise the treatment response. Thus, it is important that all mental health clinicians conduct routine screening for heavy drinking.

Less is known about the performance of screening methods or brief interventions in mental health settings than in primary care settings. Still, the single-question screener in this *Guide* is likely to work reasonably well, since almost all persons with alcohol use disorders report drinking above the recommended daily limits at least occasionally.

Mental health clinicians may need to conduct a more thorough assessment to determine whether an alcohol use disorder is present and how it might be interacting with other mental or substance use disorders. The recommended limits for drinking may need to be lowered depending on coexisting problems and prescribed medications.

Similarly, a more extended behavioral intervention may be needed to address coexisting alcohol use disorders, either delivered as part of mental health treatment or through referral to an addiction specialist.

### About drinking levels and advice

■ **When should I recommend abstaining versus cutting down?**

Certain conditions warrant advice to abstain as opposed to cutting down. These include when drinkers:

- are or may become pregnant,
- are taking a contraindicated medication (see box, below),
- have a medical or psychiatric disorder caused or exacerbated by drinking, or
- have an alcohol use disorder.

If patients with alcohol use disorders are unwilling to commit to abstinence, they may be willing to cut down on their drinking. This should be encouraged while noting that abstinence, the safest strategy, has a greater chance of long-term success.

For heavy drinkers who do not have an alcohol use disorder, use professional judgment to determine whether cutting down or abstaining is more appropriate, based on factors such as these:

- a family history of alcohol problems
- advanced age
- injuries related to drinking
- symptoms such as sleep disorders or sexual dysfunction

It may be useful to discuss different options, such as cutting down to recommended limits or abstaining completely for perhaps 2 months, then reconsidering future drinking. If cutting down is the initial strategy but the patient is unable to stay within limits, recommend abstinence.

■ **How do I factor the potential benefits of moderate drinking into my advice to patients who drink rarely or not at all?**

Moderate consumption of alcohol (defined by U.S. Dietary Guidelines as up to two drinks a day for men and one for women) has been associated with a reduced risk of coronary heart disease.<sup>28</sup> Achieving

## R Interactions Between Alcohol and Medications

Alcohol can interact negatively with medications either by interfering with the metabolism of the medication (generally in the liver) or by enhancing the effects of the medication (particularly in the central nervous system). Many classes of prescription medicines can interact with alcohol, including antibiotics, antidepressants, antihistamines, barbiturates, benzodiazepines, histamine H2 receptor agonists, muscle relaxants, non-opioid pain medications and anti-inflammatory agents, opioids, and warfarin. In addition, many over-the-counter medications and herbal preparations can cause negative side effects when taken with alcohol.

a balance between the risks and benefits of alcohol consumption remains difficult, however, because each person has a different susceptibility to diseases potentially caused or prevented by alcohol. Your advice to a young person with a family history of alcoholism, for example, would differ from the advice you would give to a middle-aged patient with a family history of premature heart disease. Most experts do not recommend advising nondrinking patients to begin drinking to reduce their cardiovascular risk. However, if a patient is considering this, discuss safe drinking limits and ways to avoid alcohol-induced harm.

■ **Why are the recommended drinking limits lower for some patients?**

The limits are lower for women because they have proportionally less body water than men do and thus achieve higher blood alcohol concentrations after drinking the same amount of alcohol. Older adults also have less lean body mass and greater sensitivity to alcohol's effects. In addition, there are many clinical situations where abstinence or lower limits are indicated, due to a greater risk of harm associated with drinking. Examples include women who are or may become pregnant, patients taking medications that may interact with alcohol, young people with a family history of alcohol dependence, and patients with physical or psychiatric conditions that are caused or exacerbated by use of alcohol.

■ **Some of my patients who drink heavily believe that this is normal. What percentage of people drink at, above, or below moderate levels?**

About 7 in 10 adults abstain, drink rarely, or drink within the daily and weekly limits noted in Step 1.<sup>3</sup> The rest exceed the daily limits, the weekly limits, or both. The “Drinking Patterns” chart on page 17 shows the percentage of drinkers in each category, as well as the prevalence of alcohol use disorders in each group. Because heavy drinkers often believe that most people drink as much and as often as they do, providing normative data about U.S. drinking patterns and related risks can provide a helpful reality check. In particular, those who believe that it is fine to drink moderately during the week and heavily on the weekends need to know that they have a higher chance not only of immediate alcohol-related injuries, but also of

developing alcohol use disorders and other alcohol-related medical and psychiatric disorders.

■ **Some of my patients who are pregnant do not see any harm in having an occasional drink. What is the latest advice?**

Some pregnant women may not be aware of the risks involved with drinking, while others may drink before they realize they are pregnant. A recent survey estimates that 1 in 10 pregnant women in the United States drinks alcohol.<sup>29</sup> In addition, among sexually active women who are not using birth control, more than half drink and 12.4 percent report binge drinking, placing them at particularly high risk for an alcohol-exposed pregnancy.<sup>29</sup>

Each year in the United States, an estimated 2,000 to 8,000 infants are born with fetal alcohol syndrome and many thousands more are born with some degree of alcohol-related effects.<sup>30</sup> These problems range from mild learning and behavioral problems to growth deficiencies to severe mental and physical impairment. Together, these adverse effects comprise Fetal Alcohol Spectrum Disorders.

Because it is not known what, if any, amount of alcohol is safe during pregnancy, the Surgeon General recently reissued an advisory that urges women who are or may become pregnant to abstain from drinking alcohol.<sup>2</sup> The advisory also recommends that pregnant women who have already consumed alcohol stop to minimize further risks, and that health professionals inquire routinely about alcohol consumption by women of childbearing age.

**About diagnosing and helping patients with alcohol use disorders**

■ **What if a patient reports some symptoms of an alcohol use disorder but not enough to qualify for a diagnosis?**

Alcohol use disorders are similar to other medical disorders such as hypertension, diabetes, or depression in having “gray zones” of diagnosis. For example, a patient might report a single arrest for driving while intoxicated and no other symptoms. Since a diagnosis of alcohol abuse requires repetitive problems, that diagnosis could not be

made. Similarly, a patient might report one or two symptoms of alcohol dependence, but three are needed to qualify for a diagnosis.

Any symptoms of abuse or dependence are a cause for concern and should be addressed, as an alcohol use disorder may be present or developing. These patients may be more successful with abstaining as opposed to cutting down to recommended limits. Closer followup is indicated, as well as reconsidering the diagnosis as more information becomes available.

■ **Should I recommend any particular behavioral therapy for patients with alcohol use disorders?**

Several types of behavioral therapy are used to treat alcohol use disorders. These may be based on cognitive-behavioral techniques, enhancing motivation, the 12 steps of Alcoholics Anonymous (e.g., the Minnesota Model), or a combination of these and other psychosocial approaches. All seem to be equally effective, suggesting that seeking help in itself is more important than which particular approach is used.<sup>31</sup>

In addition to more formal treatment approaches, mutual help groups such as Alcoholics Anonymous (AA) appear to be very beneficial for people who stick with them. AA is widely available, free, and requires no commitment other than a desire to stop drinking. If you have never attended a meeting, consider doing so as an observer and supporter. To learn more, visit [www.aa.org](http://www.aa.org). Other self-help organizations that offer secular approaches, groups for women only, or support for family members can be found on the National Clearinghouse for Alcohol and Drug Information Web site ([www.health.org](http://www.health.org)) under “Resources.”

■ **How should alcohol withdrawal be managed?**

Alcohol withdrawal results when a person who is alcohol dependent suddenly stops drinking. Symptoms usually start within a few hours, and consist of tremor, sweating, elevated pulse and blood pressure, nausea, insomnia, and anxiety. Generalized seizures may also occur. A second syndrome, alcohol withdrawal delirium, sometimes follows. Beginning after 1 to 3 days and lasting 2 to 10 days, it consists of an altered sensorium, disorientation, poor short-term memory, altered sleep-wake cycle, and hallucinations. Management

typically consists of administering thiamine and benzodiazepines, sometimes together with anticonvulsants, beta adrenergic blockers, or antipsychotics as indicated. Mild withdrawal can be managed successfully in the outpatient setting, but more complicated or severe cases require hospitalization. (Consult references 32 and 33 on page 30 for additional information.)

■ **Are laboratory tests available to screen for or monitor alcohol problems?**

For screening purposes in primary care settings, interviews and questionnaires have greater sensitivity and specificity than blood tests for biochemical markers, which identify only about 10 to 30 percent of heavy drinkers.<sup>34,35</sup> Nevertheless, biochemical markers may be useful when heavy drinking is suspected but the patient denies it. The most sensitive and widely available test for this purpose is the serum gamma-glutamyl transferase (GGT) assay. However, GGT is not very specific, so reasons for GGT elevation other than excessive alcohol use need to be eliminated. GGT and other transaminases may also be helpful for monitoring progress and identifying relapse if elevated at baseline, and serial values can provide valuable feedback to patients after an intervention. Other blood tests include the mean corpuscular volume (MCV) of red blood cells, which is often elevated in alcohol-dependent persons, and the carbohydrate-deficient transferrin (CDT) assay. The CDT assay is about as sensitive as GGT and has the advantage that it is not affected by liver disease.<sup>36</sup> It is not, however, widely available in the United States.

■ **If I refer a patient for alcohol treatment, what are the chances for recovery?**

A review of seven large studies of alcoholism treatment found that about one-third of patients either were abstinent or drank moderately without negative consequences or dependence in the year following treatment.<sup>37</sup> Although the other two-thirds had some periods of heavy drinking, on average they reduced consumption and alcohol-related problems by more than half. These reductions appear to last at least 3 years.<sup>31</sup> This substantial improvement in patients who do not attain complete abstinence or problem-free reduced drinking is often overlooked. These patients may



require further treatment, and their chances of benefiting the next time do not appear to be influenced significantly by having had prior treatments.<sup>37</sup> As is true for other medical disorders, some patients have more severe forms of alcohol dependence that may require long-term management.

■ **What can I do to help patients who struggle to remain abstinent or who relapse?**

Changing drinking behavior is a challenge, especially for those who are alcohol dependent. The first 12 months of abstinence are especially difficult, and relapse is most common during this time. If patients do relapse, recognize that they have a chronic disorder that requires continuing care, just like patients who have asthma, hypertension, or diabetes. Recurrence of symptoms is common and similar across each of these disorders,<sup>38</sup> perhaps because they require the patient to change health behaviors to maintain gains.

For patients who struggle to abstain or who relapse:

- Treat depression or anxiety disorders if they are present more than 2 to 4 weeks after abstinence is established.
- Assess and address other possible triggers for struggle or relapse, including stressful events, interpersonal conflict, insomnia, chronic pain, craving, or high-temptation situations such as a wedding or convention.
- If the patient is not taking medication for alcohol dependence, consider prescribing one (see page 18).
- If the patient is not attending a mutual-help group or is not receiving behavioral therapy, consider recommending these support measures.
- Encourage those who have relapsed by noting that relapse is common and by pointing out the value of the recovery that was achieved.
- Provide followup care and advise patients to contact you if they are concerned about relapse.

The substantial improvement in patients who do not attain complete abstinence or problem-free reduced drinking is often overlooked.

## Materials from NIAAA

These materials can be ordered from the NIAAA Publications Distribution Center, P.O. Box 10686, Rockville, MD 20849-0686; phone: (301) 443-3860. They are also available in full text on NIAAA's Web site ([www.niaaa.nih.gov](http://www.niaaa.nih.gov)). NIAAA continually develops and updates materials for practitioners and patients; please check the Web site for new offerings.

### For patients

*Alcohol: A Women's Health Issue*—Describes the effects of alcohol on women's health at different stages in their lives. English version: NIH Publication No. 05-4956; Spanish version: NIH Publication No. 05-4956-S. Also available: a 12-minute video, with the same title, that describes the health consequences of heavy drinking in women.

*Alcohol: What You Don't Know Can Harm You*—Provides information on drinking and driving, alcohol-medication interactions, interpersonal problems, alcohol-related birth defects, long-term health problems, and current research issues. English version: NIH Publication No. 02-4323; Spanish version: NIH Publication No. 02-4323-S.

*Alcoholism: Getting the Facts*—Describes alcoholism and alcohol abuse and offers useful information on when and where to seek help. English version: NIH Publication No. 05-4153; Spanish version: NIH Publication No. 05-4153-S.

*Drinking and Your Pregnancy*—Briefly conveys the lifelong medical and behavioral problems associated with fetal alcohol syndrome and advises women not to drink during pregnancy. English version: NIH Publication No. 01-4101; Spanish version: NIH Publication No. 01-4102.

*Frequently Asked Questions About Alcoholism and Alcohol Abuse*—English version: NIH Publication No. 01-4735; Spanish version: NIH Publication No. 02-4735-S.

### For health practitioners

*A Pocket Guide for Alcohol Screening and Brief Intervention*—a condensed, portable version of this publication.

*Alcohol Alerts*—These 4-page bulletins provide timely information on alcohol research and treatment.

*Alcohol Research & Health*—Each issue of this quarterly peer-reviewed journal contains review articles on a central topic related to alcohol research.

## Notes

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