Most adults in the United States (US) drink safely or not at all, but excessive drinking is common. In 2007 and 2008 combined, 23% of New Yorkers aged 21 years and older reported consuming 5 or more alcoholic drinks over a 2-hour period within the previous 30 days.1

Alcohol use is associated with high morbidity and mortality rates and is the third leading preventable cause of death in the US.2,3 Excessive alcohol consumption is associated with hypertension, liver and heart disease, and cancers of the breast, mouth, pharynx, larynx, esophagus, liver, colon, and rectum.4,5 Between 2001 and 2005, cancer and cardiovascular disease due to excessive alcohol use accounted for 79,000 deaths annually and 2.3 million years of potential life lost in the US.6 In New York City (NYC), 1 in 10 hospitalizations are alcohol related.7

Drinking also increases risky sexual behavior, contributing to the transmission of HIV and other sexually transmitted infections (STIs).8 Alcohol use is associated with injuries of all types, including suicide, intentional injuries, and unintentional injuries.9 In men more often than in women, alcohol can intensify aggression, leading to increased rates of injury and violence.10,11

Adolescents misuse alcohol more than any other drug.12 Underage drinking increases the risk for injuries, such as from car accidents, and the risk for alcohol dependence in adulthood (see page 4),13 and has negative effects on brain development.14 Alcohol use in pregnancy can cause miscarriage, premature birth, and developmental impairments, including fetal alcohol syndrome.15

Up to 20% of patients in primary care practices may be engaged in excessive drinking.16 Because patients are receptive to alcohol screening and counseling from their primary care physicians (PCPs),17 and up to 40% of trauma visits are alcohol related,18 PCPs and doctors in emergency settings should identify alcohol misuse and conduct brief interventions.19

**Brief Intervention for Excessive Drinking**

- Ask every patient about alcohol consumption using the 3-question AUDIT-C screening tool for adults and the CRAFFT tool for adolescents.
- Provide clear advice to moderate- and high-risk patients to reduce alcohol consumption.
- Provide regular follow-up to support efforts to achieve low-risk drinking levels.

**Potential Health Effects of Excessive Drinking**2,20,21

- **Nervous system:** cognitive decline/dementia, depression, memory loss, blackouts
- **Throat/mouth/neck:** cancer, esophageal varices
- **Chest:** breast cancer
- **Heart:** cardiomyopathy, cardiac arrhythmias, hypertension
- **Stomach/intestines:** gastritis
- **Liver:** cirrhosis
- **Pancreas:** pancreatitis
- **Peripheral neuropathy:** impaired sexual performance, trembling or numbness of hand

AN EVIDENCE-BASED TECHNIQUE

Screening and brief intervention involves simple steps to identify harmful drinking patterns and prompt the patient to reduce alcohol consumption. This approach is effective in decreasing the frequency of binge episodes (usually defined as 5 or more drinks for men or 4 or more drinks for women within a 2-hour period) and the number of drinks consumed per week. An average of more than 2 drinks per day for men or an average of more than 1 drink per day for women within the previous 30 days is considered heavy drinking. Screening and brief intervention has been used successfully in primary care, emergency departments, trauma centers, and psychiatric settings.

Screening and brief intervention can reduce alcohol-related hospital readmissions by as much as 48%.

CONDUCTING SCREENING AND BRIEF INTERVENTIONS

Follow a screen-assess-intervene model when conducting brief interventions.

Screen

The AUDIT is the best tool available to primary care providers for identifying excessive drinking in adults. Ask all adult patients about alcohol using the 3-question Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) (Table 1). Administer the remaining 7 questions on the full AUDIT if the score is 4 or higher for men or 3 or higher for women.

People are often reluctant to disclose their alcohol consumption patterns. For the best results, ask the questions using a nonjudgmental tone.

Assess

For patients at moderate (score of 8 to 15 on the AUDIT) to high risk (16 or higher on the AUDIT) for excessive drinking:

- Consider performing a blood test for elevated gamma-glutamyl transpeptidase (GGTP) or other liver enzymes, and elevated mean corpuscular volume (MCV).

- Assess for medical problems that may be associated with excessive alcohol use, such as blackouts, depression, hypertension, trauma, gastritis, pancreatitis, liver dysfunction, sexual problems, and sleep disorders.

- Ask about behavioral problems at work or school, with family members at home, and/or in other social settings.

- Ask whether the patient has been involved in any trips, falls, tool-related injuries, household mishaps, or injuries involving motor vehicles or other heavy equipment.

- Try to determine whether alcohol might have been involved in any of these problems or incidents.

- Ask about physical dependence and possible withdrawal symptoms.

Intervene

Give patients at low risk (AUDIT score 0-7) educational messages about alcohol use. Safe drinking levels are no more than 1 drink per day for women and 2 drinks per day for men. Patients should also refrain from drinking at least 2 days per week and should never use alcohol when operating a vehicle or machinery, if there is a contraindicated condition or medication, or if the patient is pregnant or considering pregnancy.

For patients with an AUDIT score between 8 and 15, offer simple advice in addition to education. For example,

"Your responses to the questionnaire indicate that you fall into the moderate-risk category for alcohol use. Your level of drinking presents risks to your health and possibly other aspects of your life. It is important for you to cut down on your drinking or stop entirely for a while. Many people find it possible to make changes in their drinking. Are you willing to try?"

For patients with an AUDIT score between 16 and 19, provide clear, personalized advice to stimulate discussion and encourage patients to reduce harmful drinking patterns.

Link statements to a specific condition, for example,

"Your blood pressure is high and your abdominal pain may be caused by gastritis or an ulcer. Excessive drinking is often associated with these conditions. In my opinion, it could take at least 6 weeks for your stomach to heal without further irritation caused by drinking. What would you like to do?"

WHAT IS ONE DRINK?

Each of the following contains about 0.6 fluid oz (14 g) of pure alcohol and is considered one drink:

- Beer or wine cooler: 12-oz glass, bottle, or can
- Malt liquor: 8.5-oz glass, bottle, or can
- Table wine: 5-oz glass
- Fortified wine (eg, port, sherry): 3.5-oz glass
- Cordial, liqueur, or aperitif: 2.5-oz glass
- Distilled spirits, brandy: 1.5-oz shot

TABLE 1. ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT)—INTERVIEW VERSION WITH AUDIT-C MODIFICATION²⁶,²⁸

Begin the AUDIT by saying, “Now I am going to ask you some questions about your use of alcoholic beverages during this past year.” Code answers in terms of “standard drinks.” Place the correct answer number in the box at the right. Ask all adult patients the first 3 questions, which is the AUDIT-C. If necessary, ask the other 7 questions of the full AUDIT.

1. How often do you have a drink containing alcohol?
   - (0) Never [Skip to Qs 9-10]
   - (1) Monthly or less
   - (2) 2 to 4 times a month
   - (3) 2 to 3 times a week
   - (4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   - (0) 1 or 2
   - (1) 3 or 4
   - (2) 5 or 6
   - (3) 7, 8, or 9
   - (4) 10 or more

3. How often do you have six or more drinks on one occasion?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly
   - (3) Weekly
   - (4) Daily or almost daily

Add the scores for questions 1, 2, and 3. If the subtotal equals 3 or more for women or 4 or more for men, please ask questions 4-10. If men score less than 4 or women score less than 3, STOP here.

4. How often during the last year have you found that you were not able to stop drinking once you had started?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly
   - (3) Weekly
   - (4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly
   - (3) Weekly
   - (4) 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?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly
   - (3) Weekly
   - (4) Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly
   - (3) Weekly
   - (4) Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
   - (0) Never
   - (1) Less than monthly
   - (2) Monthly
   - (3) Weekly
   - (4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?
   - (0) No
   - (2) Yes, but not in the last year
   - (4) Yes, during the last year

10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?
    - (0) No
    - (2) Yes, but not in the last year
    - (4) Yes, during the last year

<table>
<thead>
<tr>
<th>Score</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-7</td>
<td>Alcohol education</td>
</tr>
<tr>
<td>8-15</td>
<td>Simple advice</td>
</tr>
<tr>
<td>16-19</td>
<td>Simple advice plus brief counseling and continued monitoring</td>
</tr>
<tr>
<td>20-40</td>
<td>Referral to specialist for diagnostic evaluation and treatment</td>
</tr>
</tbody>
</table>

See page 2 for additional guidance on interventions.
High-risk patients require more time and engagement than moderate-risk patients. Identify drinking triggers for these patients and set specific goals for reducing alcohol consumption:

- What triggers your urge to drink? If certain people or places make you drink even when you don’t want to, try to avoid them. If certain activities, times of day, or feelings trigger the urge, plan what you’ll do instead of drinking. 

- What do you think about just not bringing alcohol into your house? If it’s not within easy reach, you’re less likely to drink.

- Can we set a specific date to reduce your alcohol use?

- Could you cut back, beginning this week?

Provide regular follow-up for both moderate- and high-risk patients to support efforts to reduce or cease harmful drinking patterns. Follow-up visits can increase the effectiveness of brief interventions. Ask:

- Were you able to cut back on your alcohol use?

- Tell me about what’s worked and what hasn’t worked.

- Visits with or phone calls from other professionals may further reinforce brief interventions.

Refer high-risk patients who score 20 or higher on the AUDIT for treatment. (See Resources for treatment referral information and educational materials on conducting brief interventions.) The specialist may prescribe acamprosate (Campral®), disulfiram (Antabuse®), injectable extended-release naltrexone (Vivitrol®), or oral naltrexone (Depade®, Revia®).

**SPECIAL POPULATIONS**

Certain populations should drink minimally or not at all.

**Adolescents**

In 2007-08, approximately 14% of New Yorkers aged 12 to 20 years reported binge drinking—5 or more alcoholic drinks within a couple of hours—at least once in the past month. Studies suggest that chronic heavy drinking by adolescents into young adulthood can harm brain development, brain functioning, and neuropsychological performance. Teens who start drinking at age 14 years or younger are 4 times more likely to develop alcohol dependence in their lifetime than those who delay alcohol use until age 20 or older (Figure). Strongly advise that adolescent patients not drink alcohol. Routinely screen youth for alcohol and drug use using the CRAFFT (Table 2), which is validated for adolescents.

Use brief interventions and make referrals if necessary (Resources). When conducting brief interventions, make statements relevant to adolescents:

- Drinking can increase your risk of getting a sexually transmitted infection, including HIV, or getting seriously injured or killed. How would you feel about stopping for a while and then checking back with me to talk about how it’s going?

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**TABLE 2. CRAFFT SCREENING TOOL FOR ADOLESCENTS**

<table>
<thead>
<tr>
<th>C</th>
<th>Have you ever ridden in a CAR driven by someone (including yourself) who was “high” or had been using alcohol or drugs?</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?</td>
</tr>
<tr>
<td>A</td>
<td>Do you ever use alcohol/drugs while you are by yourself or ALONE?</td>
</tr>
<tr>
<td>F</td>
<td>Do your FAMILY or FRIENDS ever tell you that you should cut down on your drinking or drug use?</td>
</tr>
<tr>
<td>F</td>
<td>Do you ever FORGET things you did while using alcohol or drugs?</td>
</tr>
<tr>
<td>T</td>
<td>Have you gotten into TROUBLE while you were using alcohol or drugs?</td>
</tr>
</tbody>
</table>

A score of 2 or higher suggests a problem, abuse, or dependence.
**Pregnant Women**

Pregnant women should abstain from alcohol during pregnancy to avoid alcohol-related harm to the fetus. Reproductive problems associated with alcohol use in pregnant women include increased risk of miscarriage, impaired fetal growth and development, and future infertility.\(^{15,35}\)

**Older Adults**

Individuals older than 65 years should consume no more than 1 drink per day, and frail patients should not drink at all.\(^{16,36}\) Lower drinking limits for older adults are recommended because their livers metabolize alcohol less efficiently. Older adults have a higher possibility of alcohol-medication interactions because they are more likely to be taking prescription drugs.\(^{36}\)

**Other Groups**

People taking certain medications should use alcohol with caution or not at all. Alcohol can interact with prescription, over-the-counter, and herbal medications.\(^{37}\) Discuss potential alcohol-medication interactions with patients. People with a family history of alcohol dependence should use alcohol with caution because they are at increased risk for alcohol use disorders.\(^{17,36}\) Patients with hepatitis C or other liver disease should not drink alcohol.\(^{38}\) Patients who have other medical conditions that are affected by alcohol, such as diabetes, hypertension, gastrointestinal disorders, or depression, should drink minimally or not at all.\(^{19}\)

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**REIMBURSEMENT**

Many private insurers, Medicaid, and Medicare reimburse for screening and brief intervention in primary care, emergency department, inpatient, and other outpatient settings (Box).

**SUMMARY**

Alcohol use is associated with high morbidity and mortality rates caused by disease, suicide, and intentional and unintentional injuries. Patients are receptive to alcohol screening and counseling. Ask all patients about alcohol using a validated screening tool to determine the patient’s risk level. Use brief interventions to prompt the patient to take action to abstain from or reduce drinking. Refer moderate- to high-risk patients to specialists and mental health providers as needed. Advise adolescents, older adults, people on certain medications, and those with a family history of alcohol dependence to drink little or not at all. Advise pregnant women not to drink at all.

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RESOURCES

Treatment Referrals
American Society of Addiction Medicine (ASAM):
(301) 656-3920 or www.asam.org

LIFENET (24 hours, 7 days a week):
• English: 800-LIFENET (800) 543-3638
• Spanish: 877-AYUDESE (877) 298-3373
• Chinese: (Asian LifeNet) (877) 990-8585
• Other languages: (800) 543-3638 (ask for an interpreter)
• TTY (hearing-impaired): (212) 982-5284
• Or call 311 and ask for LIFENET

New York State Office of Alcoholism and Substance Abuse Services (OASAS):
(800) 522-5353 or www.oasas.state.ny.us

12-Step/Self-Help Groups
Alcoholics Anonymous (AA):
(212) 870-3400 or www.alcoholics-anonymous.org
Narcotics Anonymous (NA):
(212) 929-6262 or http://newyorkna.org

Support for Families and Friends
The Greater NY Al-Anon Family Intergroup, Inc.:
4 W. 43rd St., Ste. 617
New York, NY 10036
(212) 941-0094 or www.nycalanon.org
E-mail: nycalanon@verizon.net

Intergrupal Hispano de Al-Anon y Al-Teen (Spanish):
(800) 939-2770

Online Treatment Locator
Substance Abuse and Mental Health Services Administration (SAMHSA) National Drug and Alcohol Treatment Referral Routing Service:
(800) 662-HELP (4357) or www.findtreatment.samhsa.gov

Patient Education
National Institute on Alcohol Abuse and Alcoholism. English-Language Pamphlets/Brochures/Posters:
www.niaaa.nih.gov/Publications/PamphletsBrochuresPosters/English/default.htm

New York City Department of Health and Mental Hygiene.
NYC Vital Signs. Health Consequences of Alcohol Use in New York City:

Health Bulletin. Excessive Drinking Is Dangerous:

US Department of Health and Human Services, National Institutes of Health.
Rethinking Drinking: Alcohol and Your Health:

Guidelines for Alcohol Treatment
World Health Organization.
Brief Intervention for Hazardous and Harmful Drinking: A Manual for Primary Care:

American Medical Association.
Screening and Brief Interventions for Alcohol Problems:

US Department of Health and Human Services, Center for Substance Abuse Treatment.
A Guide to Substance Abuse Services for Primary Care Clinicians. Treatment Improvement Protocol (TIP) Series 24. 1997:

Brief Interventions and Brief Therapies for Substance Abuse Among Older Adults. Treatment Improvement Protocol (TIP) Series 26. 1999:

Brief Interventions and Brief Therapies for Substance Abuse. Treatment Improvement Protocol (TIP) Series 34. 1998:

National Institute on Alcohol Abuse and Alcoholism.

US Preventive Services Task Force. Screening and Behavioral Counseling Interventions in Primary Care to Reduce Alcohol Misuse: Recommendation Statement:
http://www.uspreventiveservicestaskforce.org/uspstf/uspsdrin.htm
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