

# Outpatient Management of Alcohol Withdrawal Syndrome

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Approximately 2% to 9% of patients seen in a family physician's office have alcohol dependence. These patients are at risk of developing alcohol withdrawal syndrome if they abruptly abstain from alcohol use. Alcohol withdrawal syndrome begins six to 24 hours after the last intake of alcohol, and the signs and symptoms include tremors, agitation, nausea, sweating, vomiting, hallucinations, insomnia, tachycardia, hypertension, delirium, and seizures. Treatment aims to minimize symptoms, prevent complications, and facilitate continued abstinence from alcohol. Patients with mild or moderate alcohol withdrawal syndrome can be treated as outpatients, which minimizes expense and allows for less interruption of work and family life. Patients with severe symptoms or who are at high risk of complications should receive inpatient treatment. In addition to supportive therapy, benzodiazepines, either in a fixed-dose or symptom-triggered schedule, are recommended. Medication should be given at the onset of symptoms and continued until symptoms subside. Other medications, including carbamazepine, oxcarbazepine, valproic acid, and gabapentin, have less abuse potential but do not prevent seizures. Typically, physicians should see these patients daily until symptoms subside. Although effective treatment is an initial step in recovery, long-term success depends on facilitating the patient's entry into ongoing treatment. (*Am Fam Physician*. 2013;88(9):589-595. Copyright © 2013 American Academy of Family Physicians.)

► See related editorial on page 576.

► **Patient information:** A handout on this topic is available at <http://familydoctor.org/familydoctor/en/diseases-conditions/alcohol-abuse/treatment/alcohol-withdrawal-syndrome.html>.

**CME** This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 573.

Author disclosure: No relevant financial affiliations.

The prevalence of adult alcohol abuse and dependence in the United States ranges from 7% to 16%.<sup>1</sup> Data suggest that 2% to 9% of patients seen in a family physician's office have alcohol dependence.<sup>1,2</sup> Patients with alcohol dependence who abruptly abstain from alcohol use are at risk of developing alcohol withdrawal syndrome (AWS). Management of AWS requires identifying the condition, assessing the patient's risk of complications, and treating withdrawal symptoms to increase the likelihood of long-term abstinence.

## Identifying Patients with Alcohol Dependence

Patients with alcohol dependence are identified through assessment of their alcohol use and its impact on their life. The U.S. Preventive Services Task Force recommends screening adult patients for alcohol misuse, and offering appropriate counseling.<sup>3</sup> Screening instruments include the CAGE questionnaire, AUDIT (Alcohol Use Disorders Identification Test), and MAST

(Michigan Alcoholism Screening Test).<sup>4</sup> The CAGE questionnaire is commonly used in primary care, and is 82% sensitive and 79% specific for lifetime alcohol problems.<sup>4</sup> It includes four questions: (1) Have you ever felt you ought to cut down on your drinking? (2) Have people annoyed you by criticizing your drinking? (3) Have you ever felt bad or guilty about your drinking? (4) Have you ever had a drink in the morning (eye-opener) to steady your nerves or get rid of a hangover? Patients with two or more positive responses are likely to be alcohol dependent.<sup>5</sup>

Alcohol dependence should be considered in women who average more than one drink daily or more than seven drinks a week, and in men who average more than two drinks daily or more than 14 drinks a week.<sup>6</sup> Alcohol dependence is suspected in women who have had more than four drinks on a single occasion in the past year, or in men who have had more than five drinks on a single occasion in the past year.<sup>7</sup> To diagnose alcohol dependence, patients with a positive screening assessment should be questioned about

## SORT: KEY RECOMMENDATIONS FOR PRACTICE

<i>Clinical recommendation</i>	<i>Evidence rating</i>	<i>References</i>
All adults should be screened for alcohol misuse, and counseled if appropriate.	B	3
Patients with mild or moderate AWS can be safely treated in the outpatient setting.	C	16
Benzodiazepines are the preferred medication for treating AWS.	A	22
Patients successfully treated for AWS should be referred to a long-term treatment program to maintain abstinence.	C	9

AWS = alcohol withdrawal syndrome.

A = consistent, good-quality patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, go to <http://www.aafp.org/afpsort>.

the extent of their alcohol use and any physical or psychological complications.

Alcohol use disorder is diagnosed if any two of the following applies to the patient<sup>8</sup>:

- Alcohol is taken in larger amounts than was intended.
- There is persistent desire or unsuccessful effort to cut down or control alcohol use.
- A great deal of time is spent to obtain alcohol, use alcohol, or recover from its effects.
- There is a craving, or strong desire or urge to use alcohol.
- Alcohol use results in failure to fulfill obligations at work, school, or home.
- Continued alcohol use despite persistent or recurrent social or interpersonal problems caused by alcohol.
- Social, occupational, or recreational activities are altered because of alcohol use.
- Alcohol use occurs in physically hazardous situations.
- Alcohol use continues despite knowledge of persistent or recurrent problems likely to be caused by alcohol.
- Patient develops alcohol tolerance requiring increasing amounts to achieve desired effect.
- Patient has withdrawal symptoms.

### Diagnosis of AWS

When alcohol is consumed in large quantities for a prolonged period (greater than two weeks) and then abruptly discontinued, withdrawal symptoms are likely to occur. Symptoms of AWS begin six to 24 hours after the last alcohol intake.

Alcohol withdrawal affects the central nervous system, autonomic nervous system, and cognitive function.<sup>9</sup> Patients have AWS if two of the following symptoms are present after the reduction or discontinuation of alcohol

use: autonomic hyperactivity (sweating, tachycardia); increased hand tremor; insomnia; nausea or vomiting; transient visual, tactile, auditory hallucinations or illusions; psychomotor agitation; anxiety; or tonic-clonic seizures.<sup>8,10</sup> If AWS is not treated or is undertreated, delirium tremens can occur. This condition is a severe hyperadrenergic state (i.e., hyperthermia, diaphoresis, tachypnea, tachycardia) characterized by disorientation, impaired attention and consciousness, and visual and/or auditory hallucinations.<sup>10</sup>

The severity of AWS can be classified into three stages (Table 1).<sup>11</sup> Stage 1 symptoms are mild and not usually associated with abnormal vital signs. Stage 2 symptoms are more intense and associated with abnormal vital signs (e.g., elevated blood pressure, respiration, and body temperature). Stage 3 includes delirium tremens or seizures. Progression to stage 2 or 3 can occur quickly without treatment.

Validated instruments should be used to assess AWS severity. The CIWA-Ar (Clinical Institute Withdrawal Assessment for Alcohol, Revised; Figure 1<sup>12</sup>) is often recommended. The self-completed, 10-item SAWS (Short Alcohol Withdrawal Scale; Figure 2<sup>13</sup>) has been validated in the outpatient setting.<sup>13,14</sup> Outpatient treatment is appropriate in patients with mild or moderate AWS, if there are no contraindications (Table 2<sup>15</sup>). Patients who have not had alcohol in at least five days may also receive outpatient treatment.

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### Approach to the Treatment of AWS

A nonjudgmental approach to the patient and his or her disease is an important aspect of the AWS treatment. Outpatient treatment of mild or moderate AWS

**Table 1. Stages of Alcohol Withdrawal Syndrome**

<i>Stage</i>	<i>Symptoms</i>
1 (mild)	Anxiety, tremor, insomnia, headache, palpitations, gastrointestinal disturbances
2 (moderate)	Mild symptoms and diaphoresis, increased systolic blood pressure, tachypnea, tachycardia, confusion, mild hyperthermia
3 (delirium tremens)	Moderate symptoms and disorientation, impaired attention, visual and/or auditory hallucinations, seizures

Information from reference 11.

# Clinical Institute Withdrawal Assessment for Alcohol Scale, Revised

Patient: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ (24-hour clock, midnight = 00:00)

Pulse or heart rate, taken for one minute: \_\_\_\_\_ Blood pressure: \_\_\_\_\_

## NAUSEA AND VOMITING

Ask "Do you feel sick to your stomach? Have you vomited?" Observation.

- 0 No nausea and no vomiting
- 1 Mild nausea with no vomiting
- 2
- 3
- 4 Intermittent nausea with dry heaves
- 5
- 6
- 7 Constant nausea, frequent dry heaves and vomiting

## TACTILE DISTURBANCES

Ask "Have you had any itching, pins and needles sensations, burning, or numbness, or do you feel like bugs are crawling on or under your skin?" Observation.

- 0 None
- 1 Very mild itching, pins and needles, burning or numbness
- 2 Mild itching, pins and needles, burning or numbness
- 3 Moderate itching, pins and needles, burning or numbness
- 4 Moderately severe hallucinations
- 5 Severe hallucinations
- 6 Extremely severe hallucinations
- 7 Continuous hallucinations

## TREMOR

Arms extended and fingers spread apart. Observation.

- 1 Not visible, but can be felt fingertip to fingertip
- 2
- 3
- 4 Moderate, with patient's arms extended
- 5
- 6
- 7 Severe, even with arms not extended

## AUDITORY DISTURBANCES

Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?" Observation.

- 0 Not present
- 1 Very mild harshness or ability to frighten
- 2 Mild harshness or ability to frighten
- 3 Moderate harshness or ability to frighten
- 4 Moderately severe hallucinations
- 5 Severe hallucinations
- 6 Extremely severe hallucinations
- 7 Continuous hallucinations

## PAROXYSMAL SWEATS

Observation.

- 0 No sweat visible
- 1 Barely perceptible sweating, palms moist
- 2
- 3
- 4 Beads of sweat obvious on forehead
- 5
- 6
- 7 Drenching sweats

## VISUAL DISTURBANCES

Ask "Does the light appear to be too bright? Is its color different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?" Observation.

- 0 Not present
- 1 Very mild sensitivity
- 2 Mild sensitivity
- 3 Moderate sensitivity
- 4 Moderately severe hallucinations
- 5 Severe hallucinations
- 6 Extremely severe hallucinations
- 7 Continuous hallucinations

## ANXIETY

Ask "Do you feel nervous?" Observation.

- 0 No anxiety, at ease
- 1 Mildly anxious
- 2
- 3
- 4 Moderately anxious, or guarded, so anxiety is inferred
- 5
- 6
- 7 Equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

## HEADACHE, FULLNESS IN HEAD

Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or lightheadedness. Otherwise, rate severity.

- 0 Not present
- 1 Very mild
- 2 Mild
- 3 Moderate
- 4 Moderately severe
- 5 Severe
- 6 Very severe
- 7 Extremely severe

## AGITATION

Observation.

- 0 Normal activity
- 1 Somewhat more than normal activity
- 2
- 3
- 4 Moderately fidgety and restless
- 5
- 6
- 7 Paces back and forth during most of the interview, or constantly thrashes about

## ORIENTATION AND CLOUDING OF SENSORIUM

Ask "What day is this? Where are you? Who am I?"

- 0 Oriented and can do serial additions
- 1 Cannot do serial additions or is uncertain about date
- 2 Disoriented with date by no more than two calendar days
- 3 Disoriented with date by more than two calendar days
- 4 Disoriented with place or person

Total CIWA-Ar score: \_\_\_\_\_

Rater's initials: \_\_\_\_\_

Maximum possible score is 67

**Figure 1.** Tool to assess the severity of alcohol withdrawal. Absent or very mild  $\leq 8$  points; mild = 9 to 14 points; moderate = 15 to 20 points; severe  $> 20$  points. Those with a score  $< 10$  do not usually need additional medication.

Adapted from Sullivan JT, Sykora K, Schneiderman J, Naranjo CA, Sellers EM. Assessment of alcohol withdrawal: the revised clinical institute withdrawal assessment for alcohol scale (CIWA-Ar). Br J Addict. 1989;84(11):1357.

## Short Alcohol Withdrawal Scale (SAWS)

Item	None (0 points)	Mild (1 point)	Moderate (2 points)	Severe (3 points)
Anxious				
Feeling confused				
Restless				
Miserable				
Problems with memory				
Tremor (shakes)				
Nausea				
Heart pounding				
Sleep disturbance				
Sweating				

**Figure 2.** Tool to assess the severity of alcohol withdrawal. Patients indicate how they have felt in the previous 24 hours. Mild withdrawal < 12 points; moderate to severe withdrawal ≥ 12 points.

Adapted with permission from Elholm B, Larsen K, Hornnes N, Zierau F, Becker U. A psychometric validation of the Short Alcohol Withdrawal Scale (SAWS). *Alcohol Alcohol*. 2010;45(4):362.

is generally safe, effective, and less expensive than inpatient treatment,<sup>16</sup> and may allow for less interruption of work and family life. However, patients with serious psychiatric problems (e.g., suicidal ideation, psychosis) or medical conditions should be treated in an inpatient setting.<sup>15</sup> Although routine laboratory tests are unnecessary for patients with mild AWS, significant laboratory abnormalities (e.g., complete blood count, liver function, glucose, or electrolyte testing) would preclude outpatient treatment. Patients with positive results on a urine drug screen, which signifies concurrent drug abuse, should be treated as inpatients. Outpatient treatment requires that the patient be able to take oral medications; is committed to frequent follow-up visits; and has a relative, friend, or other caregiver who can stay with the patient and administer medication.<sup>9</sup> It is important that caregivers be comfortable with this responsibility.<sup>17</sup> Family support can be critical to the success of outpatient treatment. However, family dysfunction or home triggers for alcohol consumption make success unlikely.

### Treatment Goals

Treatment goals for patients with AWS are to reduce withdrawal symptoms; prevent seizures, delirium tremens, and death; and prepare the patient for long-term abstinence from alcohol use. Adequate and prompt treatment diminishes the severity of future withdrawal episodes and the risk of the patient resuming alcohol use.<sup>18</sup>

Alcohol withdrawal seizures can occur 24 to 72 hours after the last alcohol intake, are typically tonic-clonic, and last less than five minutes. Up to one-third of patients with AWS who have a related seizure will progress to delirium tremens.<sup>19</sup>

Delirium tremens is associated with an increased risk of death.<sup>19</sup> Risk factors for delirium tremens include sustained heavy drinking, age older than 30 years, increased days since last alcohol intake, and a prior episode of delirium tremens.<sup>20</sup> Hallucinations, which are common with this condition and primarily visual, are distressing, but not dangerous.<sup>19</sup> Patients with delirium tremens should be treated in an inpatient setting.

Because AWS symptoms increase with external stimulation, patients should be treated in a quiet environment. Patients with mild AWS may only require supportive care.<sup>21</sup> Psychological treatment does not reduce the risk of seizures or delirium tremens.

Most patients with AWS are prescribed medication, particularly if there is any question about duration of abstinence.

### Medications

Because patients with AWS are often nutritionally depleted, thiamine (100 mg daily) and folic acid (1 mg daily) should be used routinely. Thiamine supplementation lowers the risk of Wernicke encephalopathy, which

**Table 2. Contraindications to Outpatient Treatment of Alcohol Withdrawal Syndrome**

Abnormal laboratory results
Absence of a support network
Acute illness
High risk of delirium tremens
History of a withdrawal seizure
Long-term intake of large amounts of alcohol
Poorly controlled chronic medical conditions (e.g., diabetes mellitus, chronic obstructive pulmonary disease, congestive heart failure)
Serious psychiatric conditions (e.g., suicidal ideation, psychosis)
Severe alcohol withdrawal symptoms
Urine drug screen positive for other substances

Adapted from Myrick H, Anton RF. *Treatment of alcohol withdrawal*. *Alcohol Health Res World*. 1998;22(1):40.

**Table 3. Oral Medications Used to Treat Alcohol Withdrawal Syndrome**

Medication	Typical single dose	Common adverse effects	Contraindications
<b>Benzodiazepines</b>			
Chlordiazepoxide (Librium)	25 to 50 mg	Sedation, fatigue, respiratory depression, retrograde amnesia, ataxia, dependence and abuse	Hypersensitivity to drug/class ingredient, severe hepatic impairment, avoid abrupt withdrawal
Diazepam (Valium)	10 mg		
Lorazepam (Ativan)	2 mg		
Oxazepam	15 to 30 mg		
<b>Anticonvulsants</b>			
Carbamazepine (Tegretol)	600 to 800 mg	Dizziness, ataxia, diplopia, nausea, vomiting	Hypersensitivity to drug/class ingredient, hypersensitivity to tricyclic antidepressants, monoamine oxidase inhibitor use within the previous 14 days, hepatic porphyria
Gabapentin (Neurontin)	300 to 600 mg		
Oxcarbazepine (Trileptal)	450 to 900 mg		
Valproic acid (Depakene)	1,000 to 1,200 mg		
<b>Beta blocker</b>			
Atenolol (Tenormin)	Pulse 50 to 79 beats per minute: 50 mg Pulse $\geq$ 80 beats per minute: 100 mg	Bradycardia, hypotension, fatigue, dizziness, cold extremities, depression	Hypersensitivity to drug/class ingredient, second- or third-degree atrioventricular block, uncompensated heart failure, cardiogenic shock, sick sinus syndrome without implantable cardioverter-defibrillator, untreated pheochromocytoma
<b>Alpha-adrenergic agonist</b>			
Clonidine (Catapres)	0.2 mg	Hypotension, dry mouth, dizziness, constipation, sedation	Hypersensitivity to drug/class ingredient

NOTE: These medications should not be abruptly discontinued.

is characterized by oculomotor dysfunction, abnormal mentation, and ataxia.

Benzodiazepines and anticonvulsants reduce psychomotor agitation and prevent progression of withdrawal symptoms,<sup>22</sup> and should be administered early. There is no evidence that any one medication is superior in treating AWS, but long-acting benzodiazepines are preferred.<sup>22</sup> Table 3 summarizes oral medications used to treat AWS.

#### BENZODIAZEPINES

Benzodiazepines reduce symptoms and can prevent withdrawal seizures. They are available in long-acting (e.g., chlordiazepoxide [Librium], diazepam [Valium]) and intermediate-acting (e.g., lorazepam [Ativan], oxazepam) formulations. Long-acting benzodiazepines may more effectively prevent delirium because of the prolonged sedative and anxiolytic effects of their active metabolites.<sup>23</sup> Some contend that long-acting benzodiazepines provide a smoother withdrawal experience with fewer fluctuations in symptoms; however, intermediate-acting formulations have been used successfully.<sup>22</sup> In patients with hepatic dysfunction, intermediate-acting agents may be safer because they have no active metabolites.

Patients with addictive disorders prefer diazepam, alprazolam (Xanax), or lorazepam, but these medications have a greater risk of abuse.<sup>24</sup> Chlordiazepoxide and oxazepam have less abuse potential, but no data support their superiority in treating AWS.<sup>25</sup> Because benzodiazepines can cause respiratory depression and death when

combined with alcohol, physicians should emphasize the importance of abstaining from alcohol during treatment.<sup>26</sup>

Benzodiazepines can be administered using a fixed-dose or symptom-triggered schedule (Table 4). A front-loading, or loading-dose, schedule is not recommended. No randomized trials have compared the varying benzodiazepine regimens. The fixed-dose schedule uses a specific dosage at specific intervals, regardless of the patient's symptoms. Additional doses are given as needed to control symptoms, and the dosage is reduced if overmedication occurs.<sup>27</sup> With a symptom-triggered schedule, medication is administered only when the patient has significant symptoms (SAWS score of 12 or more; CIWA-Ar score greater than 9). Although symptom-triggered schedules reduce medication use and shorten duration of treatment for inpatients,<sup>28</sup> a trial including outpatients taking long-acting benzodiazepines found no difference between the fixed-dose and symptom-triggered schedules in total dose, patient satisfaction, or time to relapse.<sup>14</sup> A symptom-triggered schedule requires the patient and caregiver to reliably rate symptoms and may not be appropriate in all cases.

#### ANTICONVULSANTS

Carbamazepine (Tegretol) and valproic acid (Depakene) may be effective for AWS.<sup>29,30</sup> However, data are limited, and carbamazepine is associated with dizziness, ataxia, diplopia, nausea, and vomiting.<sup>31</sup> A study showed that carbamazepine is more effective than lorazepam in

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preventing early relapse (at 12 days of follow-up).<sup>32</sup> Limited evidence supports the use of valproic acid over a benzodiazepine.<sup>33</sup> Oxcarbazepine (Trileptal) was as effective as carbamazepine in treating AWS in one study,<sup>34</sup> but was no better than placebo at decreasing withdrawal symptoms in a randomized controlled trial.<sup>35</sup> Gabapentin (Neurontin) has been shown to be as effective as lorazepam in treating AWS and reducing alcohol use during withdrawal.<sup>36</sup> Anticonvulsants have less abuse potential than benzodiazepines, but they do not prevent seizures or delirium tremens.

### OTHER MEDICATIONS

Although baclofen has been shown to effectively reduce AWS symptoms and may reduce the risk of relapse, overall data are mixed.<sup>37</sup> As adjunctive therapy, beta blockers and the alpha-adrenergic agonist clonidine (Catapres) reduce adrenergic symptoms, but do not prevent seizures.<sup>22</sup> Phenothiazines and barbiturates are not recommended for outpatient treatment of AWS.<sup>22</sup> Phenytoin

**Table 5. Resources for Assistance in Long-Term Abstinence from Alcohol Use**

Al-Anon Family Groups	<a href="http://www.al-anon-alateen.org">http://www.al-anon-alateen.org</a>
Alcoholics Anonymous	<a href="http://www.alcoholics-anonymous.org">http://www.alcoholics-anonymous.org</a>
American Council on Alcoholism	<a href="http://www.aca-usa.com">http://www.aca-usa.com</a>
National Council on Alcoholism and Drug Dependence	<a href="http://www.ncadd.org">http://www.ncadd.org</a>
National Institute on Alcohol Abuse and Alcoholism	<a href="http://www.niaaa.nih.gov">http://www.niaaa.nih.gov</a>
	<a href="http://rethinkingdrinking.niaaa.nih.gov">http://rethinkingdrinking.niaaa.nih.gov</a>
Substance Abuse and Mental Health Services Administration	<a href="http://www.samhsa.gov">http://www.samhsa.gov</a>

(Dilantin) is not effective in the treatment or prevention of seizures.<sup>9</sup>

### Monitoring

The type and frequency of monitoring should be guided by symptom severity, and the characteristics of the patient and his or her environment. Most patients are evaluated daily until their symptoms decrease and the medication dosage is reduced. Blood pressure and pulse should be measured at each follow-up visit. If available, an alcohol breath analysis could be performed at random intervals. The severity of AWS symptoms should be reassessed using the same instrument from the initial assessment. When the CIWA-Ar score is less than 10, or the SAWS is less than 12, medication dosages can be reduced and eventually discontinued.

Symptoms should resolve within seven days of abstinence from alcohol use. When symptoms are minimal, no medication is needed, and there has been no alcohol intake for at least three days, patients may be referred to a long-term outpatient treatment program. Patients who do not respond adequately to benzodiazepine therapy, who miss an appointment, or who resume drinking should be referred to an addiction specialist or inpatient treatment program.

### Long-Term Abstinence

Successful treatment of AWS is the initial step toward long-term abstinence. Abstinence is unlikely if the patient does not enroll in a long-term treatment program.<sup>9</sup> Programs could include group meetings,

**Table 4. Fixed and Symptom-Triggered Dosing for Oral Alcohol Withdrawal Medications**

Medication	Fixed schedule	Symptom-triggered schedule*
<b>Day 1</b>		
Diazepam (Valium)	10 mg every 6 hours	10 mg every 4 hours
Chlordiazepoxide (Librium)	25 to 50 mg every 6 hours	25 to 50 mg every 4 hours
Lorazepam (Ativan)	2 mg every 8 hours	2 mg every 6 hours
<b>Day 2</b>		
Diazepam	10 mg every 8 hours	10 mg every 6 hours
Chlordiazepoxide	25 to 50 mg every 8 hours	25 to 50 mg every 6 hours
Lorazepam	2 mg every 8 hours	2 mg every 6 hours
<b>Day 3</b>		
Diazepam	10 mg every 12 hours	10 mg every 6 hours
Chlordiazepoxide	25 to 50 mg every 12 hours	25 to 50 mg every 6 hours
Lorazepam	1 mg every 8 hours	1 mg every 8 hours
<b>Day 4</b>		
Diazepam	10 mg at bedtime	10 mg every 12 hours
Chlordiazepoxide	25 to 50 mg at bedtime	25 to 50 mg every 12 hours
Lorazepam	1 mg every 12 hours	1 mg every 12 hours
<b>Day 5</b>		
Diazepam	10 mg at bedtime	10 mg every 12 hours
Chlordiazepoxide	25 to 50 mg at bedtime	25 to 50 mg every 6 hours
Lorazepam	1 mg at bedtime	1 mg every 12 hours

\*—For patients with a SAWS (Short Alcohol Withdrawal Scale) score  $\geq 12$ , or CIWA-Ar (Clinical Institute Withdrawal Assessment for Alcohol, Revised) score  $> 9$ .

individual counseling, and long-term medications to reduce the risk of relapse. *Table 5* lists resources for assistance with long-term abstinence from alcohol use.

**Data Sources:** We searched PubMed, Cochrane Database of Systematic Reviews, Essential Evidence Plus, and the U.S. Preventive Services Task Force. We used the key words alcohol withdrawal, delirium tremens, and withdrawal seizures. Search date: June 6, 2011, and July 31, 2013.

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