ALCOHOL WITHDRAWAL SYNDROME

INTRODUCTION

Alcohol is the most commonly abused drug in the United States and when someone who chronically abuses alcohol does not drink, that person is at risk for developing the alcohol withdrawal syndrome. Alcohol withdrawal syndrome is characterized by intense neurological and cardiovascular signs and symptoms. It is a frequent reason for hospital admissions, and it is a very serious medical problem. People who are going through the alcohol withdrawal syndrome can suffer significant morbidities, and although it is unusual, the syndrome can cause death.

Patients who are suffering from the alcohol withdrawal syndrome require a lot of skilled care and attention. This module will discuss alcohol withdrawal syndrome and outline the responsibilities of a Certified Nursing Assistant (CNA) when caring for a patient who has this problem. The module will also briefly discuss alcohol as a drug and the signs and symptoms of acute alcohol intoxication.

OBJECTIVES

After finishing this module the learner will be able to:

1. Identify how alcohol causes intoxication.
2. Identify the blood alcohol level that is considered to be legal intoxication.
3. Identify the primary cause of death from alcohol intoxication.
4. Identify signs and symptoms of acute alcohol intoxication.
5. Identify the correct definition of alcohol withdrawal syndrome.
6. Identify the most important criteria that define alcohol withdrawal syndrome.
7. Identify severe signs and symptoms of alcohol withdrawal syndrome.
8. Identify the assessment tool used to evaluate alcohol withdrawal syndrome.
9. Identify CNA responsibilities when caring for patients in alcohol withdrawal.
10. Identify the medication used most often to treat alcohol withdrawal.
ALCOHOL WITHDRAWAL SYNDROME: THE SCOPE OF THE PROBLEM

Alcohol abuse is a tremendous public health problem. There are no completely inclusive statistics, but there are approximately 8 million Americans who chronically abuse alcohol. Chronic alcohol abuse is the cause of many acute and chronic medical problems. One of the most serious of the medical problems is the alcohol withdrawal syndrome. Again, there are no completely inclusive statistics, but it has been estimated that each year in the United States there are approximately 500,000 people who need treatment for alcohol withdrawal syndrome.

ALCOHOL AS A DRUG: HOW IT WORKS AND WHAT IT DOES

Alcohol is a legal beverage and it is consumed for its taste. But alcohol is also a drug, and it is consumed because it is intoxicating; people drink alcohol, in part, to get high. The exact mechanism by which alcohol is intoxicating is not completely understood. However, most of the evidence suggests that alcohol acts as an intoxicant because it increases the effects of gamma aminobutyric acid (GABA) and decreases the effects of glutamate.

Gamma aminobutyric acid and glutamate are naturally occurring compounds found in the brain and other parts of the nervous system. Gamma aminobutyric and glutamate are neurotransmitters: GABA depresses the level of consciousness while glutamate is an excitatory compound. Because alcohol increases the effect of GABA and decreases the effect of glutamate, it is clear why the principle effect of alcohol intoxication is drowsiness and central nervous system depression.

Learning Break: In this module the term alcohol refers to ethanol. Ethanol is a specific type of alcohol that is produced by fermenting the sugars found in grains and fruits. Ethanol is found in beer, hard liquors, wines, and other alcoholic beverages. It is also used in cologne, hair spray, hand sanitizers, mouthwashes, and perfume. The other alcohols are ethylene glycol, isopropyl alcohol, and methanol, and they are often called the “toxic alcohols.” These alcohols can be intoxicating, just as ethanol can be. However, they are very poisonous and should never be consumed. Even very small amounts of these toxic alcohols can be dangerous.

Alcohol is rapidly absorbed in the stomach and small intestine. Once alcohol enters the blood stream, it then travels to the liver. In the liver, alcohol is metabolized by enzyme systems and eventually converted to water and compounds that are used for energy. There is also a gastric enzyme in the stomach that breaks down some alcohol before it can enter the blood stream. Women have a lower level of this gastric enzyme, so more of the alcohol they ingest is absorbed. If a woman and a man of equal body weight are given the same amount of alcohol, the woman will have a higher blood alcohol level, and she will look and feel more intoxicated. Social drinkers eliminate alcohol at a rate of 15-20 mg/dL an hour. Chronic alcohol abusers/users eliminate alcohol a bit more quickly. (Note: Blood alcohol level measurements will be explained later in the module)
Alcohol Intoxication

The level of alcohol intoxication depends on many factors: the percentage of alcohol in the beverage, how much is ingested and how quickly it is ingested, the person’s body weight and gender, how often and how much the person drinks, and the presence of food in the stomach.

Intoxication begins fairly quickly after an alcoholic beverage is consumed. Most people begin to feel the effects within 15-30 minutes, and the peak blood level is reached approximately one hour after ingestion. Acute alcohol intoxication produces many clinical effects. The signs and symptoms of alcohol intoxication can range from mild drowsiness to coma and death. And if ethanol is mixed with other drugs such as cocaine, sedatives, or sleep medications, there is a big risk of serious harm.

The most common and the most clinically important signs and symptoms of acute alcohol intoxication are:

- **Neurologic:** In small amounts ethanol can be a stimulant. An intoxicated person feels euphoric and her/his inhibitions are lowered. In higher amounts, ethanol is a central nervous system depressant. The more someone drinks, the drowser that person will become, and it is possible to drink alcohol to the point of causing coma. Alcohol also impairs coordination, gait, logical/rationale thinking, memory, speech, and vision. To put it much more simply, someone who is intoxicated cannot walk straight, cannot think straight, and cannot see straight. That person will not be able to act or think logically and will be unable to speak clearly. He/she will stagger, the speech is slurred, the vision is blurred, and complex mental or physical tasks cannot be done.

- **Respiratory:** Alcohol is a respiratory system depressant. Alcohol decreases the respiratory rate and decreases the depth of each breath. People who die from acute alcohol intoxication die because they stop breathing or their respiratory effort is inadequate.

- **Cardiovascular:** Ethanol intoxication causes tachycardia and hypotension.

- **Body temperature:** Ethanol decreases muscle activity, dilates blood vessels, and decreases metabolic rate. All of these can combine to cause hypothermia.

- **Hypoglycemia:** People who are profoundly intoxicated obviously cannot eat. When this happens the body can use stored glucose for energy but eventually the glucose that is stored in the liver and the muscles is depleted. If this happens to someone who is not intoxicated, that person can simply get something to eat or new glucose can be formed from fat stores. However, neither of these is possible for the deeply intoxicated person. That person cannot eat and alcohol interrupts the process of forming glucose from fat stores. Because of these issues, someone who is very intoxicated can become severely hypoglycemic. This is much more likely to happen to intoxicated children because they have comparatively smaller stores of glucose.
- **Gastrointestinal:** Nausea and vomiting are commonly seen.

- **Wernicke’s encephalopathy and Korsakoff’s psychosis:** Wernicke’s encephalopathy and Korsakoff’s psychosis are neurological complications of chronic alcohol abuse. They are both complicated metabolic abnormalities that can cause amnesia, coma, confusion, disorientation, psychotic behavior and many other neurological disorders. Wernicke’s encephalopathy and Korsakoff’s psychosis are very serious: the mortality rate for Wernicke’s encephalopathy is approximately 10-20%, and it is considered a medical emergency. Fortunately, these complications are not common.

  The chronic effects of alcohol abuse can affect essentially every organ system. People who habitually drink to excess have neurological damage, cardiac damage, bleeding problems, liver damage, and decreased life expectancy.

  **Learning Break:** It can be difficult to determine if someone is a chronic abuser of alcohol. There are many ways to diagnose alcohol abuse/dependence. A simple screening test that can be useful for this is the CAGE test. Someone is asked: 1) Have you ever felt you should Cut down on your drinking 2) Do you get Annoyed when people ask you about your drinking? 3) Have you ever felt Guilty about your drinking? 4) Do you often feel the need for an Eye opener - a drink first thing in the morning to steady your nerves? If someone answers yes to two or more of these questions, that person is likely to have an alcohol problem. However, the CAGE test is just a simple screening tool; it is not definitive.

  **Blood Alcohol Levels**

  Blood alcohol levels can be used to determine is someone is intoxicated. The “legal limit” of blood alcohol for intoxication is 80 mg/dL; if a blood alcohol concentration is at or above that level, that person would be considered legally intoxicated. To reach a blood alcohol level of 80 mg/dL, this level, a 160 pound man who need to drink a little less than three 12 ounce bottles of beer attain this level.

  However, there is considerable individual variation in tolerance of blood alcohol levels. Someone who chronically abuses alcohol can function - to a degree - with a blood alcohol level that would cause significant impairment in a person who is alcohol naïve or who only drinks occasionally. For most of us, the higher the blood alcohol level the greater the degree of impairment. The following chart provides an approximation of the effects that are seen with a particular blood alcohol level.
Table I: Blood Alcohol Concentrations and the Degree of Impairment

0-50 mg/dL: Decreased inhibitions, impaired judgment.

100 mg/dL: Slurred speech, unsteady gait, inability to perform fine motor movements, confusion, tachycardia, slowed reaction time.

200 mg/dL: Someone who has a blood alcohol level of 200 mg/dL staggers when walking. She/he will not be able to form coherent sentences. Significant drowsiness and memory loss will be seen.

300 mg/dL: Few people can stay awake at this level. Hypotension and respiratory depression may be seen.

400 mg/dL: Most people who have a blood alcohol level of 400 mg/dL or higher are comatose. Hypotension and respiratory depression are common, and the person may be incontinent of urine and stool.

500 mg/dL: Severe hypotension and respiratory depression are in almost inevitable. At this level the patient’s breathing is so compromised that oxygen delivery is inadequate. The patient’s gag reflex is absent and aspiration is a serious risk. Death is possible.

Learning Break: Blood alcohol levels are usually measured using mg/dL. This means milligrams of alcohol per 100 milliliters of blood. There are other ways to measure and report blood alcohol concentrations and these are used occasionally. Example: A blood alcohol level of 80 mg/dL can also be reported as 0.08 g/dL or 0.08%.

The blood alcohol level that is considered to be legal intoxication is 80 mg/dL. A man who weighs 165 pounds will attain a blood alcohol level of 80 mg/dL by drinking approximately 2 ½ cans of beer.

WHAT IS ALCOHOL WITHDRAWAL SYNDROME? WHY DOES IT HAPPEN?

Alcohol withdrawal syndrome can be defined as a characteristic group of signs and symptoms that occur when someone who chronically abuses alcohol suddenly stops drinking. The longer someone has been drinking and the more alcohol that person consumes on a daily basis, the more likely it is that the alcohol withdrawal syndrome will occur. The severity of the alcohol withdrawal syndrome also depends in part on someone’s drinking pattern.

A patient can be said to have the alcohol withdrawal syndrome if the following criteria are met.
Table II: Diagnostic Criteria for the Alcohol Withdrawal Syndrome

- The patient is a chronic abuser of alcohol, the patient drinks a lot, and he/she has suddenly stopped drinking. These are the three most important criteria that define alcohol withdrawal syndrome.

- The patient has two or more of these signs and symptoms, and these signs and symptoms started a few hours or a day or two after alcohol cessation.
  - Agitation
  - Anxiety
  - Confusion
  - Hallucinations
  - Insomnia
  - Nausea
  - Seizures
  - Sweating
  - Tachycardia
  - Tremors
  - Vomiting

- The signs and symptoms are so intense and disabling that the patient cannot function socially or at work.

- The signs and symptoms are not accounted for by a pre-existing or recently developed medical or psychiatric condition.

The signs and symptoms and the clinical features of alcohol withdrawal syndrome will be discussed in detail later in the module. But it is important to remember that the clinical manifestations of alcohol withdrawal syndrome can be quite intense. In severe cases and if the patient has underlying cardiac, medical, or psychiatric illnesses, the alcohol withdrawal syndrome can be dangerous.

Notice that the first criteria for alcohol withdrawal syndrome: the patient is a chronic, heavy drinker, and she/he is drinking a lot and drinking every day. Alcohol withdrawal syndrome does not happen to people who drink occasionally or who are intermittent binge drinkers. The reason for this explains the basic mechanisms that are the cause of alcohol withdrawal syndrome.

When someone drinks a lot of alcohol every day, that person develops dependence and tolerance to alcohol. Dependence and tolerance cause complicated physical and biochemical changes in GABA and glutamate. Remember, alcohol increases the effect of GABA and decreases the effect of glutamate. GABA causes central nervous system depression (e.g., drowsiness) and glutamate causes central nervous system excitation (e.g., agitation, hyperactivity).

So the central nervous system of a long-term alcohol abuser is depressed because the activity of GABA is increased and the activity of glutamate is decreased. The body
adjusts to this by increasing the activity of the sympathetic branch of the nervous system. This is the part of the nervous system that increases blood pressure, increases heart rate, dilates the pupils, increases sweating, and increases the level of mental alertness. But when a chronic alcohol abuser stops drinking, the inhibitory effect of the changes in GABA and glutamate are withdrawn, but the increased sympathetic stimulation remains. The chronic drinker develops anxiety, agitation, diaphoresis, hypertension, tachycardia, and other classic signs and symptoms of the alcohol withdrawal syndrome.

Table III: The Physiologic Basis of Alcohol Withdrawal Syndrome

| Chronic Alcohol Abuse |  
|-----------------------|---|
| Increased GABA activity and Decreased Glutamate Activity |  
| Central Nervous System Depression and Inhibition |  
| Compensatory Sympathetic Nervous System Stimulation |  
| Drinking Stops |  
| Central Nervous System Depression and Inhibition Removed |  
| Sympathetic Nervous Stimulation Remains |  
| Alcohol Withdrawal Syndrome |  

A simple analogy can provide an explanation. You are driving a car and you are stepping on the brakes but you are also stepping on the accelerator. Suddenly you take your foot off the brakes - but you still have the accelerator pushed all the way down to the floor. Obviously, the car speeds up. Someone who has been chronically abusing alcohol has the brakes on (the increase in GABA activity and the decrease in glutamate activity) and the body is trying to compensate for this by stepping on the accelerator (increasing sympathetic nervous system activity). Alcohol intake is suddenly stopped - the increased GABA and decreased glutamate activity is stopped - but the accelerator, the increased sympathetic stimulation, is still being applied. The result is the alcohol withdrawal syndrome.
SIGNS AND SYMPTOMS OF ALCOHOL WITHDRAWAL SYNDROME

Alcohol withdrawal syndrome is often called delirium tremens, or the “D.T.s” and some people refer to it as “rum fits.” Someone who has the alcohol withdrawal syndrome is imagined to be delirious and shaky (the delirium and the tremens) and completely out of control (the rum fits). The descriptions are accurate - up to a point. But alcohol withdrawal syndrome is a complex clinical condition. It develops over time, and it progresses through stages. There are signs and symptoms that are commonly seen, but each patient presents differently.

The onset of alcohol withdrawal syndrome varies: it can be within a few hours after someone stops drinking, but it may take a day or so for the syndrome to start. The progression of the syndrome typically moves through four stages.

- **Stage 1:** The first stage is characterized by relatively mild signs and symptoms. The patient will complain of anxiety and nausea. The pulse and blood pressure will be slightly elevated. Tremors - especially hand shaking - will be very obvious. This stage usually continues for 24 hours or so, but it may be much shorter.

- **Stage 2:** Stage 2 usually starts within 24 hours after someone has stopped drinking, but it may not start for a week. The patient in this stage has many of the signs and symptoms seen in Stage 1, but they are more severe. Most people are oriented to time, place, and person. However, auditory, tactile and visual hallucinations are common. Diaphoresis, a mild fever, hypertension, severe tremor, and tachycardia are present.

- **Stage 3:** In this stage the patient’s signs and symptoms are an extension of the ones seen in Stage 2, but they are more severe, and tonic-clonic seizures are possible. Stage 3 usually starts 24-48 hours after drinking cessation.

- **Stage 4:** During stage 4 the patient is incapacitated. Confusion, delirium, and disorientation are common and the patient is a danger to himself and others. Dehydration, electrolyte abnormalities, and significant elevations of the blood pressure and heart rate are common. Cardiovascular, metabolic, and respiratory problems can be severe, especially in patients who are elderly or have pre-existing diseases. Stage 4 typically begins within two to five days after someone has stopped drinking.
**Learning Break:** Delirium is defined as a state of extreme confusion along with extreme agitation.

The signs and symptoms and the stages of the alcohol withdrawal syndrome vary from person to person. Not everyone goes through the stages in a step-by-step manner, and some people do not progress to Stage 3 or 4. Depending on how much the patient drinks, how long she/he has been abstinent, and when that person presents to the hospital, the patient may be in Stage 1 or Stage 2 or may be in an advanced stage of alcohol withdrawal on arrival.

Patient assessment of the severity of the alcohol withdrawal syndrome is done using the Clinical Institute Withdrawal Assessment for Alcohol Scale, Revised (CIWA-Ar) assessment scale. This assessment will be performed by a physician or a registered nurse, and the CIWA-Ar assessment tool can be used to track someone’s progress, as well. A CIWA-Ar score of 10 or higher indicates that the patient is having a severe case of alcohol withdrawal syndrome and is at risk for complications.
Table IV: The CIWA-Ar Scale

Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar)

<table>
<thead>
<tr>
<th>Patient:</th>
<th>Date:</th>
<th>Time: (24 hour clock, midnight = 00:00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse or heart rate, taken for one minute:</td>
<td>Blood pressure:</td>
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**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 any itching, pins and needles sensations, any burning, any numbness, or do you feel bugs 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.
- 0 no tremor
- 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 mild 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
It is clear from the review of the signs and symptoms that alcohol withdrawal syndrome is a serious medical problem. Approximately 1-5% of people who have alcohol withdrawal syndrome will die. Most of the fatalities involve very complicated cases: if the patient is relatively healthy and is in Stage 1 or Stage 2 she/he should survive. If the patient has pre-existing medical problems and progresses to Stage 3 or Stage 4, there is a real risk that the patient could die, and death is usually caused by complications. Many years ago, the mortality rate for alcohol withdrawal syndrome was as high as 20%. Early recognition and aggressive treatment have reduced this significantly.

A HANGOVER IS NOT ALCOHOL WITHDRAWAL SYNDROME

If someone drinks to the point of intoxication, it is very common for that person to have what is commonly called a hangover. Someone with a hangover will have abdominal pain, diarrhea, headache, nausea, and vomiting. These signs and symptoms may last for 24 hours.

The alcohol withdrawal syndrome and a hangover are very different. A hangover is caused by dehydration (alcohol acts as a diuretic) and by some of the metabolic by-products of alcohol. The signs and of a hangover and the alcohol withdrawal syndrome are similar but with a hangover they do not last as long, they are not as intense, and serious problems such as delirium, hallucinations, and seizures do not happen. A hangover is very unpleasant, but it is not dangerous. Chronic alcohol abusers can develop a hangover, and they will often keep drinking to prevent a hangover from developing.

TREATMENT OF ALCOHOL WITHDRAWAL SYNDROME

Most patients who develop alcohol withdrawal syndrome do not progress to Stage 3 or Stage 4. But the signs and symptoms of Stage 1 and Stage 2, the agitation, fever, hallucinations, hypertension, etc., are very serious, especially if the patient has pre-existing medical or psychiatric problems.

Fortunately, if alcohol withdrawal syndrome is quickly recognized and diagnosed and if the patient receives the appropriate treatment, the outcome should be good. Alcohol withdrawal syndrome can last for 24 hours or less if the patient never progresses beyond Stage 1. If the syndrome progresses to Stage 3 or Stage 4, the signs and symptoms may last for two weeks, and many of these patients need to be admitted to intensive care.

There is no cure for the alcohol withdrawal syndrome. The patient can only be supported while she/he is going through withdrawal. Symptomatic and supportive care is the preferred treatment. However, it is possible to prevent a mild case of alcohol withdrawal syndrome from progressing to Stage 3 or Stage 4. And it is also possible to avoid the complications that are usually the cause of death. Treatment of alcohol withdrawal syndrome should focus on these three goals: identification, supportive care, and managing complications.
Identification

How can you know if someone is having the alcohol withdrawal syndrome? There is a saying in medicine: “If you don’t know what something is and you’ve never heard of it, you can’t diagnose it or identify it.” Awareness of the extent of alcohol abuse in the US and awareness of the alcohol withdrawal syndrome is very important and is the first step.

But even if you know how common alcohol abuse is and you know about alcohol withdrawal syndrome, identifying alcohol withdrawal syndrome is not always easy. There are several important reasons why this is so.

Perhaps the most important reason is denial. Many people who abuse alcohol do not tell healthcare professionals about their drinking habits. Even the patient’s family and friends may be unaware that the patient abuses alcohol. The extent of someone’s alcohol abuse may only become apparent when that person cannot drink - for example, when they are admitted to the hospital. If that happens, the chronic alcohol abuser begins to become anxious and agitated, starts to sweat and become feverish - the typical signs and symptoms of alcohol withdrawal syndrome. But because the patient’s drinking habit is a secret, this clinical picture is mistaken for a medical issue.

The situation is made worse because the diagnostic criteria for alcohol withdrawal syndrome are non-specific. There are many medical conditions that cause fever, sweating, tachycardia, and the other commonly seen signs and symptoms of alcohol withdrawal syndrome. In order to know that the patient is going through the alcohol withdrawal syndrome, you need to know that she/he drinks. There is no test that can prove someone abuses alcohol; the abuse has to be admitted to or observed. So making a quick diagnosis of alcohol abuse syndrome really depends on the patient telling someone about his/her drinking problem.

However, most people who are chronic, heavy drinkers will not be forthcoming about their drinking habits. Denial of alcohol abuse is the rule; you can’t expect that someone who is a chronic, heavy drinker will tell you that she/he drinks, and drinks a lot. It is possible that someone may be honest about heavy drinking, but it is unlikely. It is also important to know that many people who do abuse alcohol may admit to drinking, but only to a point. Someone who is having the signs and symptoms of the alcohol withdrawal syndrome might tell you that he/she “has two or three drinks a day.” But the truth is often that that person is drinking much, much more.

Learning Break: A study conducted by the Substance Abuse and Mental Health Administration examined data about alcohol abuse. The conclusion from this study was that only 1.7% of all people who were chronic abusers of alcohol thought they had a problem and needed treatment. Denial of alcohol abuse is the rule, not the exception.

So it can be very difficult to identify someone who chronically abuses alcohol. Many healthcare professionals, as part of the patient interview, will specifically ask the patient about his/her pattern of alcohol use and ask about the use of illicit drugs. Asking these questions should be standard procedure, and almost everyone who is admitted to a healthcare facility should be asked about their drinking habits and their use/non-use of illicit drugs. But remember that denial is common and alcohol abuse is widespread. If
someone develops the signs and symptoms of alcohol withdrawal syndrome, alcohol withdrawal syndrome should be always considered as a possibility.

Supportive Care: Patient Safety

Supportive care is the most important treatment for alcohol withdrawal syndrome. With good supportive care, patients should survive, and the complications that cause morbidity and mortality can be avoided. Alcohol withdrawal syndrome can’t be cured, but it can be successfully treated with good supportive care.

The most important aspect of supportive care that CNAs are responsible for is patient safety: patient safety is the primary responsibility in these situations. Most patients who are going through the alcohol withdrawal syndrome will not reach the point of confusion and delirium of Stage 3 or 4. But some will, and people who are in Stage 1 or Stage 2 will be agitated, anxious, and possibly hallucinating. Patients who are going through the alcohol withdrawal syndrome can cause harm to themselves or others, and they need to be closely monitored to ensure their safety.

How do you maintain safety in these patient care situations? First, you must realize what the risks are and what the patients need. These patients are at risk for: 1) changes in vital signs; 2) disorientation, and; 3) falls and seizures.

Taking and monitoring vital signs is always part of a CNA’s responsibility. For the patient who is suffering from alcohol withdrawal syndrome, elevated blood pressure, fever, and tachycardia are typical vital sign changes. You should be especially vigilant in monitoring temperature. Agitation, increased metabolic rate, and restlessness are very common and increase body temperature. This adds a big level of stress and can also cause dehydration, so the patient’s temperature should be checked frequently.

Disorientation is a very difficult problem to manage. The patient who is going through alcohol withdrawal can be agitated, anxious, confused, and hallucinating. Patients who are disoriented will not take medications, they can pull out IV catheters, they may wander, and they might become physically aggressive. When someone is not oriented to time, place, or person there is significant danger. There is no single approach to managing the disoriented patient. Physical restraints are used as a last resort, and physical restraints can only be applied if their use has been ordered by a physician or approved by a supervisor. The CNA may need to be in constant attendance with a patient who is disoriented. Distraction and re-orientation to time, place, and the current surroundings are most helpful to calm the disoriented patient. Distraction can be in the form of simple activities, conversation, or watching television. Re-orientation to time, place, and surroundings - telling the patient, it’s Friday, you are in the hospital, I am a CNA and I am here to take care of you - may need to be repeated many times during a shift.

Fall prevention is a familiar skill for CNAs and this will not be covered here. The CNA does not have any primary responsibility for preventing/treating seizures, but you should be aware that seizures can occur.
Supportive Care: Managing Complications

The primary complications associated with the alcohol withdrawal syndrome are: 1) abnormal vital signs; 2) dehydration, and; 3) mental status changes and seizures.

In the initial stages of alcohol withdrawal syndrome, the patient may have a fever, and the pulse and blood pressure will definitely be elevated. These vital sign changes will also be seen in Stage 3 and Stage 4. However, patients who are in Stage 3 or Stage 4 may develop hypotension. Dehydration and the stress can lower blood pressure, and this change can be sudden. In either case, abnormal vital signs can be dangerous for patients who have pre-existing medical conditions such as heart disease, so temperature, pulse, and blood pressure must be frequently checked. Fever would be treated with fluids, IV or PO, and acetaminophen or ibuprofen. (Note: Acetaminophen can be damaging to the liver. Chronic alcohol abuse causes liver damage, so these patients should be given the lowest dose of acetaminophen that will be effective) Elevations of pulse and blood pressure are usually treated with benzodiazepines such as Ativan® or Valium®.

Dehydration was previously mentioned, but it should be emphasized that this can be a very serious problem. Many patients going through alcohol withdrawal syndrome are already dehydrated. The agitation, fever, increased metabolic rate, restlessness, sweating, and vomiting increase this level of dehydration and add a big degree of stress. Patients are at risk for electrolyte abnormalities and hypotension. Careful monitoring of the patient’s fluid status and lots of fluids, IV or PO, are the preferred treatments. Seizures are not common, but they do occur. Seizures are treated with benzodiazepines.

The mental status changes commonly seen in patients who are going through alcohol withdrawal syndrome have been mentioned. Some of these such as agitation and anxiety are relatively benign, and others such as confusion, delirium, and hallucinations are potentially harmful. But in either case, these mental status changes are very disturbing and uncomfortable for the patient. They can also lead to dangerous and disruptive behavior. The most commonly used therapy for patients who are going through alcohol withdrawal syndrome and have altered mental status is benzodiazepines. These drugs are easy to administer, they are relatively safe, and there is an antidote that can be used if the dose is found to be too high and the patient is having side effects. The benzodiazepines are also the first-line treatment for seizures.
SUMMARY

Alcohol withdrawal syndrome happens when people who chronically abuse alcohol suddenly stop drinking. Chronic alcohol abuse causes changes in the activity of the neurotransmitters GABA and glutamate. These changes cause central nervous system depression. In response, the body increases the activity of sympathetic nervous system, the part of the nervous system that increases blood pressure and heart rate and cause agitation and excitement. When the influence of alcohol is removed, the sympathetic stimulation remains and this causes the signs and symptoms of the alcohol withdrawal syndrome: agitation, confusion, hallucinations, fever, and elevated heart rate and blood pressure.

The alcohol withdrawal syndrome can last for days or more than a week. There is no cure. The patients are treated with supportive care such as IV fluids and benzodiazepines. Most patients will be very uncomfortable, but permanent harm and death are not common. However, the alcohol withdrawal syndrome is associated with some serious complications such as hallucinations, hypotension, and seizures, and these patients require careful monitoring.