

Alcohol Withdrawal Syndrome

Alcohol withdrawal syndrome is a potentially life-threatening condition that can occur in people who have been drinking heavily for weeks, months, or years and then either stop or significantly reduce their alcohol consumption.

Alcohol withdrawal symptoms can begin as early as two hours after the last drink, persist for weeks, and range from mild anxiety and shakiness to severe complications, such as seizures and delirium tremens (also called DTs). The death rate from DTs -- which are characterized by confusion, rapid heartbeat, and fever -- is estimated to range from 1% to 5%.

Because alcohol withdrawal symptoms can rapidly worsen, it's important to seek medical attention even if symptoms are seemingly mild. Appropriate alcohol withdrawal treatments can reduce the risk of developing withdrawal seizures or DTs.

It's especially important to see a doctor if you've experienced previous alcohol withdrawal episodes or if you have other health conditions such as infections, heart disease, lung disease, or a history of seizures.

Severe alcohol withdrawal symptoms are a medical emergency. If seizures, fever, severe confusion, hallucinations, or irregular heartbeats occur, either take the patient to an emergency room or call 911.

Causes of Alcohol Withdrawal Syndrome

Heavy, prolonged drinking -- especially excessive daily drinking -- disrupts the brain's neurotransmitters, the brain chemicals that transmit messages.

For example, alcohol initially enhances the effect of GABA, the neurotransmitter which produces feelings of relaxation and calm. But chronic alcohol consumption eventually suppresses GABA activity so that more and more alcohol is required to produce the desired effects, a phenomenon known as tolerance.

Chronic alcohol consumption also suppresses the activity of glutamate, the neurotransmitter which produces feelings of excitability. To maintain equilibrium, the glutamate system responds by functioning at a far higher level than it does in moderate drinkers and nondrinkers.

When heavy drinkers suddenly stop or significantly reduce their alcohol consumption, the neurotransmitters previously suppressed by alcohol are no longer suppressed. They rebound, resulting in a phenomenon known as brain hyperexcitability. So, the effects associated with alcohol withdrawal -- anxiety, irritability, agitation, tremors, seizures, and DTs -- are the opposite of those associated with alcohol consumption.

Symptoms of Alcohol Withdrawal Syndrome

In general, the severity of alcohol withdrawal symptoms increases in tandem with the amount and duration of prior alcohol consumption.

Minor alcohol withdrawal symptoms often appear six to 12 hours after alcohol cessation, sometimes while patients still have a measurable blood alcohol level. These symptoms include:

- Shaky hands
- Sweating
- Mild anxiety
- Nausea and/or vomiting
- Headache
- Insomnia

Between 12 and 24 hours after alcohol cessation, some patients may experience visual, auditory, or tactile hallucinations which usually end within 48 hours. Although this condition is called alcoholic hallucinosis, it's not the same as the hallucinations associated with DTs. Most patients are aware that the unusual sensations aren't real.

Withdrawal seizures usually first strike between 24 and 48 hours after alcohol cessation. The risk of seizures is especially high in patients who previously have undergone multiple detoxifications.

DTs usually develop between 48 and 72 hours after alcohol cessation, although they can appear as early as two hours after cessation. Risk factors for DTs include a history of withdrawal seizures or DTs, acute medical illness, abnormal liver function, and older age.

Symptoms of DTs, which usually peak at five days, include:

- Disorientation, confusion, and severe anxiety
- Hallucinations (primarily visual) which cannot be distinguished from reality
- Profuse sweating
- Seizures
- High blood pressure
- Racing and irregular heartbeat
- Severe tremors
- Low-grade fever

Assessment of Alcohol Withdrawal Syndrome

If alcohol withdrawal syndrome is suspected, your doctor will take a complete medical history and ask how much you drink, how long you've been drinking, and how much time has elapsed since your last drink. He or she also will want to know if you have a history of alcohol withdrawal, if you abuse any other substances, and if you have any medical or psychiatric conditions.

During a physical exam, your doctor will identify alcohol withdrawal symptoms and any potential complicating medical conditions such as irregular heartbeats, congestive heart failure, coronary artery disease, gastrointestinal bleeding, infections, liver disease, nervous system impairment, and pancreatitis. He or she also may order blood tests to measure complete blood count, alcohol and electrolyte levels, liver function, and a urine screen to identify drug use.

The results of the medical history and physical exam will help your doctor decide if you have alcohol withdrawal syndrome and, if so, its severity.

Treatment of Alcohol Withdrawal Syndrome

If you have mild to moderate withdrawal symptoms, your doctor may prefer to treat you in an outpatient setting, especially if you have supportive family and friends. Outpatient detoxification is safe, effective, and less costly than inpatient detoxification at a hospital or other facility.

However, you may require inpatient treatment if you don't have a reliable social network, are pregnant, or have a history of any of the following:

- Severe withdrawal symptoms
- Withdrawal seizures or DTs
- Multiple previous detoxifications
- Certain medical or psychiatric illnesses

The goals of treatment are threefold: reducing immediate withdrawal symptoms, preventing complications, and beginning long-term therapy to promote alcohol abstinence.

Prescription drugs of choice include benzodiazepines, such as diazepam (Valium), chlordiazepoxide (Librium), lorazepam (Ativan), and oxazepam (Serax). Such medications can help control the shakiness, anxiety, and confusion associated with alcohol withdrawal and reduce the risk of withdrawal seizures and DTs. In patients with mild to moderate symptoms, the anticonvulsant drug carbamazepine (Tegretol) may be an effective alternative to benzodiazepines, because it is not sedating and has low potential for abuse.

To help manage withdrawal complications, your doctor may consider adding other drugs to a benzodiazepine regimen. These may include:

- An antipsychotic drug, which can help relieve agitation and hallucinations
- A beta-blocker, which may help curb a fast heart rate and elevated blood pressure related to withdrawal and reduce the strain of alcohol withdrawal in people with coronary artery disease
- Clonidine (Catapres), another blood pressure drug
- Phenytoin (Dilantin), an anticonvulsant which doesn't treat withdrawal seizures but may be useful in people with an underlying seizure disorder

Preventing Future Alcohol Withdrawal Episodes

Because successful treatment of alcohol withdrawal syndrome doesn't address the underlying disease of addiction, it should be followed by treatment for alcohol abuse or alcohol dependence.

Relatively brief outpatient interventions can be effective for alcohol abuse, but more intensive therapy may be required for alcohol dependence. If you have alcohol dependence, your doctor may prescribe other medications to help you stop drinking. He or she also may recommend joining a 12-step group -- such as Alcoholics Anonymous and Narcotics Anonymous -- or staying at a comprehensive treatment facility that offers a combination of a 12-step model, cognitive-behavioral therapy, and family therapy.

Source:

National Institute on Alcohol Abuse and Alcoholism.

FamilyDoctor.org: "Alcohol Withdrawal Syndrome."

Bayard, M. American Family Physician, March 15, 2004. National Institute on Alcohol Abuse and Alcoholism.

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