

20 Questions about Alcohol and Alcoholism

1. Are alcoholics more at risk to have excessive bleeding or excessive clotting?
2. What is the most common electrolyte abnormality in the alcoholic patient?
3. What percent of persons that drink alcohol are considered problem drinkers?
4. You are called for a 'seizure'. The patient apparently had a generalized seizure, which was witnessed. He is a known drinker. When does a typical alcohol-withdrawal seizure occur?
5. How often is a withdrawal seizure not a withdrawal seizure?
6. 1800 Chicago calls you for one having 'DTs'. The patient is somewhat tachycardic, hypertensive, and tremulous, but cooperative. He tells you he needs lots of Valium to feel better. Is this DTs?
7. What type of hallucinations usually occur (you need not draw on personal experience) with true DTs?
8. An alcoholic has been lying unresponsive in a hallway all night. He tells you that he is stiff and sore (not unexpected), and that he cannot move his arm (unexpected) – on exam, he cannot extend his wrist against gravity. What should you be concerned about?
9. An intoxicated patient is found in a hallway with a large gash to his head. What should you be concerned about?
10. A gentleman is found passed out in the bus shelter with an empty bottle of rubbing alcohol. What are the usual effects and side effects of isopropanol ingestion?
11. An alcoholic patient has been taking 2 extra-strength Tylenol every 4h due to his severe headache from isopropanol, as this is the dose recommended on the package. He now has noticed jaundice and right upper abdominal pain. Do you believe he has been following the directions?
12. What is the most dangerous drug to combine with alcohol (as far as long-term damage)?
13. A patient tells you he thinks he has cirrhosis of the liver. What are a few things you can look for to confirm this on the physical exam (perhaps helpful when dealing with a bad GI bleed, etc. as these patients are more likely to have increased problems with bleeding)?
14. How many alcoholics have liver cirrhosis?
15. You are called for one vomiting. The patient tells you that he is a heavy drinker, but stopped a few days ago because of vomiting and some epigastric pain. He is ill-appearing, tachycardic, pale, and exhibits rapid, relatively deep respirations. What are the two most likely diagnoses, and how should treatment begin?
16. Who is Wernicke, and what does he have to do with giving glucose to an alcoholic with low blood sugars?
17. What infections are alcoholics at increased risk for?
18. What are the five most common causes of altered mental status in alcoholics?
19. Which is more likely to cause cancer, radon or alcohol?
20. You and your partner go to Maxwell's for a drink after your shift (and will take a cab home). You have heard that wine is heart-healthy. Should you order red, or white (assuming, of course, that you didn't order beer, water, or soft drinks, and that you actually like both red and white equally with buffalo wings and fries...)?

20 Answers about Alcohol and Alcoholism

1. Yes. Most alcoholics are at increased risk for bleeding due to platelet malfunction and decreased production of clotting factors because of diet and liver factors. Sometimes,

however, because the liver also produces factors that help to *prevent* clots from being formed, the balance swings the other way, and a percentage of alcoholics (about 20%) are more prone to clot formation, increasing the risk of DVT and PE.

2. Low magnesium. Magnesium is critical to many enzyme functions, and is required for normal cardiac conduction. Lack of magnesium may result in dysrhythmias, muscle wasting, seizures, and may encourage other electrolyte abnormalities (like low calcium and potassium).
3. About 10% of Americans who drink are 'problem' drinkers, and about half of those problem drinkers are considered 'alcoholics' based on their response to screening questions. Aside from smoking, it is the costliest addiction in the U.S., costing over \$223 billion in 2006 according to the CDC. The CDC also estimates excessive alcohol causes 88,000 deaths per year in the U.S.
4. Generally, seizures occur within 6-48 hours of the last drink, they must be brief, and not focal (i.e. generalized type only). Symptoms of withdrawal usually begin within 6-12 hours of decreasing alcohol consumption (tachycardia, hypertension, tremor), and are maximal on days 2-3. Be sure to rule out hypoxia and hypoglycemia as a cause for seizure (or altered mental status, for that matter), and beware of other causes – head bleeds, metabolic disturbances, electrolyte disorders, and other problems. Acute alcohol use can also lower the seizure threshold if there is an underlying reason to have a seizure. Recurrent withdrawal seizures can be prevented with benzodiazepines (e.g. Ativan) and respond well to benzodiazepine treatment if they do recur.
5. About 15% of the time, even those with known alcohol related seizures are found to have another cause – usually low sugar, hypoxia, low sodium, low magnesium (profound), and intracranial lesions. In one study, 3.9% had an unsuspected intracranial bleed. This population is very high risk for these abnormalities, given the great metabolic and renal demands of their diet, and the unpredictable falls and assaults, etc. (plus low platelet counts, etc.)
6. Not yet. Delirium tremens by definition must involve – you guessed it – delirium. Mental status changes may involve hallucinations, severe agitation, confusion, delusion, and often, seizures. The mortality is 1-5%!
7. Most hallucinations are visual (spiders, snakes, etc.) and tactile (bugs crawling on your skin), rarely are they auditory (good general rule – most pure auditory hallucinations are due to psychiatric disease, most pure visual are due to metabolic or other medical problems). Early on, the patient usually recognizes that they are hallucinations, later, they believe them to be real... They may occur late, or be a very early sign of withdrawal.
8. There is a chance that he has a head bleed or stroke, but more probably, if all the problems are in the distal arm, the position he has been lying in was compressing his radial nerve, resulting in the wrist drop. Traumatic nerve injuries are very common in alcoholics. Un-intoxicated individuals change position when they feel uncomfortable. With "beer anesthesia" the sense of feeling uncomfortable is often lost, thus causing a person to lie in the same position too long, especially when they then fall asleep in that same position. Most of these nerve injuries will recover with time. Also, even though everyone will be somewhat stiff and sore after a night on the floor, think about muscle breakdown (rhabdomyolysis). The risk of this is much higher when alcohol is used, and the kidneys can suffer permanent damage if this is not detected and corrected. Look for tenderness in major muscle groups without evidence of trauma.
9. Where to start? First, do a good survey for occult trauma. It's amazing how many chest and abdomen traumas are overlooked due to the distraction of ETOH. Second, pay close attention to the C-spine and head. Most alcoholics are at increased risk of bleeding intracranially with head trauma, and their GCS may be altered for reasons other than the alcohol. Also try to quantify blood loss by the scene and by vital signs, many times alcohol prevents self-

preservation behaviors (stopping bleeding, for example), from occurring. Finally, keep in mind that you can NEVER clear C-spines clinically in the field in the presence of altered mental status, whether from alcohol or any other cause, so take the proper precautions.

10. Isopropanol usually results in a more rapid 'high' than ethanol, and is somewhat more potent. However, it usually results in severe headache during recovery, and results in production of more ketones (the morning-after-I-feel-awful stuff, or at least a contributor), and frequently results in hemorrhagic gastritis, so it's not likely to be a common substitute unless desperation is setting in. (i.e. Sundays in MN)
11. Unfortunately, he probably has. Even at 'therapeutic' doses, acetaminophen has resulted in numerous deaths and transplants in the alcoholic population, as a small percent of these patients cannot tolerate this additional demand on their liver. Thus, it is not wise to recommend extra-strength Tylenol to alcoholics or those with known liver disease (as a side note, some cases of liver failure and death have occurred in healthy children who received the maximum 15mg/kg dose of acetaminophen recommended at the minimum interval over a 1-3 day period! Though these are exceedingly rare cases, they should make us think about using lower or less frequent doses when possible.)
12. Cocaine. Cocaine and ethanol combine to produce cocaethylene, which is a very potent cardiotoxin, and seems to result in an acceleration of cardiac damage far beyond either drug alone. Patients have been in refractory heart failure (requiring transplant) at ages and usage patterns unheard of with prior street drugs, it is not uncommon to see patients in their 30s on the transplant list.
13. Erythema of the palms, jaundice, ascites, peripheral edema, spider angiomas (small, bright, spider-like vessels seen on the skin surface), clubbed fingers, wasted muscles, and – males only – decreased body hair, breast enlargement, and, for the very thorough pre-hospital examiner – testicular atrophy.
14. About 8-20% of alcoholics get cirrhosis, which is irreversible damage to the liver, resulting in high risk of heart failure, infection, kidney damage, clotting dysfunction, buildup of ammonia and other by-products that can cause altered mental status, etc. At least 15 years of heavy drinking is usually required to get to the point of cirrhosis.
15. Alcoholic ketoacidosis and pancreatitis are most likely. Either requires generous IV fluid replacement and both can result in significant alterations in glucose metabolism. Both can result in significant metabolic acidosis, hence the attempt to compensate with deep breathing to get rid of additional CO₂ (i.e. Kussmaul respirations). Alcoholic ketoacidosis probably occurs because the diet is too deficient in carbohydrates, and at some point, fatty acids are broken down for fuel. The resulting ketones produce vomiting, worsening the picture. (Anytime an alcoholic has to stop drinking because of pain, etc., it's usually something serious!) Pancreatitis can result in huge fluid shifts, hypotension, metabolic acidosis, and profoundly altered electrolytes. Alcohol is a rare cause until the person has been drinking heavily for at least 5-10 years.
16. Dr. Wernicke (1848-1905) was a German physician who named Wernicke's encephalopathy as well as Wernicke's aphasia (a stroke affecting the speech center of the brain). Wernicke's encephalopathy is classically confusion, problems moving the eyes (especially laterally), and ataxia (incoordination), although 90% of cases do not present with the classic triad. This problem occurs due to chronic thiamine deficiency due to poor diet and poor absorption. Since thiamine is a cofactor in many parts of sugar metabolism, when both are very low, there may be little problem, but when glucose is given, the thiamine present is insufficient, and acutely the patient gets worse. If an alcoholic patient with a low glucose gets worse shortly after

receiving the 'cure' of sugar, be sure to let the receiving doc know, the patient needs IV thiamine rapidly to correct the abnormality and prevent further damage.

17. All of them. Basically, alcoholics have poor immune recognition and attack response to invading bacteria. They are at very high risk for aspiration pneumonia, bacteremia, sepsis, bacterial peritonitis (when bacteria infect the abdominal ascites fluid present in most cirrhotic patients), and the usual things like pneumonia.
18. Hypoglycemia, head trauma, electrolyte abnormalities, sepsis/infection, toxic (alcohol, ingested drugs or toxic alcohols).
19. Alcohol is the second-leading identified cause of cancer, (behind tobacco), especially of the head, neck, esophagus, and liver. Tobacco and alcohol account for 80% of the cancers of the esophagus! Some observational studies suggest heavy alcohol use causes pancreatic cancer but it is not a direct cause. However, alcohol can cause chronic pancreatitis and liver cirrhosis, which are known to increase the risk of pancreatic cancer.
20. Red, definitely. Several studies have shown the benefit to 1-2 glasses of red wine on a daily basis, though red grape juice probably confers the same benefit, without the alcohol. The red grape apparently contains anti-oxidants that help reduce the amount of damage done to the heart arteries over time. Never fear, however, if you've already ordered beer, moderate alcohol consumption regardless of origin seems to benefit the heart.