# National Certified Addiction Counselor, Level I (NCAC I) Practice Exam (Sample)

## Study Guide


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# Questions

**1. What can excessive doses of nicotine result in?**

**A. Increased heart rate**

**B. Respiratory paralysis**

**C. Enhanced muscle control**

**D. Weight reduction**

**2. Which of the following barbiturates is known for its fast-acting properties?**

**A. Phenobarbital**

**B. Nembutal**

**C. Valium**

**D. Darvon**

**3. What is a pharmacotherapy approved for treating nicotine addiction?**

**A. Varenicline (Chantix)**

**B. Ibuprofen**

**C. Fluoxetine**

**D. Sertraline**

**4. How much more ethanol does a fetus receive compared to the mother when the mother consumes alcohol?**

**A. 3 times the amount**

**B. 5 times the amount**

**C. 7 times the amount**

**D. 10 times the amount**

**5. In which decade did the use of barbiturates peak?**

**A. 1960s**

**B. 1970s**

**C. 1980s**

**D. 1990s**

**6. Which symptom is NOT typically associated with Cocaine overdose?**

**A. Dilated pupils**

**B. Paralysis**

**C. Weight gain**

**D. Convulsions**

**7. What is the primary psychoactive component of marijuana?**

**A. Delta-8-Tetrahydrocannabinol**

**B. Cannabidiol**

**C. Delta-9-Tetrahydrocannabinol**

**D. Cannabinol**

**8. Which schedule represents substances that may lead to limited dependence and have accepted medical uses?**

**A. Schedule III**

**B. Schedule IV**

**C. Schedule V**

**D. Schedule I**

**9. What type of alcohol is commonly found in beer, wine, and liquor?**

**A. Isopropyl alcohol**

**B. Methyl alcohol**

**C. Ethyl alcohol**

**D. Butyl alcohol**

**10. When does the withdrawal peak for short-acting barbiturates typically occur?**

**A. First or second day**

**B. Second or third day**

**C. Fourth or fifth day**

**D. First week**

# Answers

1. B
2. B
3. A
4. C
5. B
6. C
7. C
8. B
9. C
10. B

# Explanations

## 1. What can excessive doses of nicotine result in?

**A. Increased heart rate**

**B. Respiratory paralysis**

**C. Enhanced muscle control**

**D. Weight reduction**

**Excessive doses of nicotine can lead to respiratory paralysis, which is a serious condition that occurs when the respiratory muscles become unable to function properly. Nicotine, as a powerful stimulant, affects the central nervous system and can disrupt normal neuromuscular function. At high doses, it can result in the overstimulation of receptors that control muscle contraction, ultimately leading to paralysis of the muscles involved in breathing. This effect illustrates the potential dangers of nicotine when consumed in excessive amounts, emphasizing the importance of understanding dosage and the body's response to stimulants. Other options, while they may relate to nicotine's effects in different contexts, do not capture the critical consequence of excessive dosage as accurately as respiratory paralysis does. For instance, increased heart rate can occur with lower doses of nicotine, and while weight reduction might be a peripheral effect due to appetite suppression, it does not represent a direct consequence of toxicity. Enhanced muscle control is not a recognized effect of nicotine, especially at high levels. Thus, the statement regarding respiratory paralysis effectively underscores the severe implications of high nicotine exposure.**

## 2. Which of the following barbiturates is known for its fast-acting properties?

**A. Phenobarbital**

**B. Nembutal**

**C. Valium**

**D. Darvon**

**Nembutal, known generically as pentobarbital, is recognized for its fast-acting properties among barbiturates. Its swift onset of action makes it effective for uses such as short-term treatment of insomnia and as a sedative before surgery or medical procedures. The rapid effects are attributable to its ability to cross the blood-brain barrier quickly, leading to prompt central nervous system depression. Phenobarbital, in contrast, has a slower onset and longer duration of action, primarily used as an anticonvulsant. Valium (diazepam) is a benzodiazepine, not a barbiturate, and it has fast-acting effects but operates differently from barbiturates. Darvon, which contains propoxyphene, is an analgesic with much less potency and a slow-acting profile compared to barbiturates. This contextual understanding clarifies why Nembutal stands out in this particular question.**

## 3. What is a pharmacotherapy approved for treating nicotine addiction?

**A. Varenicline (Chantix)**

**B. Ibuprofen**

**C. Fluoxetine**

**D. Sertraline**

**Varenicline (Chantix) is a pharmacotherapy that has been specifically approved for the treatment of nicotine addiction. It works by targeting nicotine receptors in the brain, reducing withdrawal symptoms and cravings associated with smoking cessation. By stimulating these receptors, Varenicline mitigates some of the pleasurable effects of nicotine, making it easier for individuals to quit smoking. This unique mechanism of action sets it apart from other medications, as it not only helps relieve cravings but also prevents the rewarding effects of nicotine when smoking is resumed. The other treatments listed are not indicated for nicotine addiction. Ibuprofen is a nonsteroidal anti-inflammatory drug used primarily for pain relief and inflammation, while Fluoxetine and Sertraline are antidepressants that belong to the selective serotonin reuptake inhibitor (SSRI) class. Although there may be overlap in treating mental health issues, these medications do not address nicotine withdrawal symptoms or cravings directly, hence they are not considered effective pharmacotherapies for nicotine addiction.**

## 4. How much more ethanol does a fetus receive compared to the mother when the mother consumes alcohol?

**A. 3 times the amount**

**B. 5 times the amount**

**C. 7 times the amount**

**D. 10 times the amount**

**When a mother consumes alcohol, the distribution of ethanol in the body varies significantly between her and the developing fetus. Ethanol, being a small molecule, crosses the placental barrier readily. Research indicates that a fetus can actually experience higher concentrations of ethanol due to several physiological factors. One key factor is that the fetus has a lower body water content compared to the mother, which results in a higher concentration of alcohol in the fetal bloodstream. Additionally, fetal metabolism of ethanol is less efficient than that of the mother; therefore, the fetus cannot break down or eliminate ethanol as effectively. These factors combined can lead to circumstances where the fetus may be exposed to ethanol levels several times that of the mother. The assertion that a fetus can receive up to seven times the concentration of ethanol compared to the mother aligns with evidence in the field of prenatal alcohol exposure studies. This significant difference underscores the risks associated with alcohol consumption during pregnancy, demonstrating how much more vulnerable a fetus is to the effects of ethanol. Consequently, it is critical for expecting mothers to be aware of the potential dangers of alcohol consumption, as the implications can be severe for the developing child.**

## 5. In which decade did the use of barbiturates peak?

**A. 1960s**

**B. 1970s**

**C. 1980s**

**D. 1990s**

**The use of barbiturates peaked in the 1970s due to a combination of factors that contributed to their widespread prescription and use during that time. In the 1960s and early 1970s, barbiturates were commonly prescribed as sedatives and anxiolytics, leading to a significant increase in consumption. Physicians frequently recommended them for conditions such as anxiety, insomnia, and as pre-anesthetic agents. During the 1970s, however, growing awareness of the potential for dependence and overdose associated with barbiturate use began to emerge. This decade saw a shift in medical practice as the risks became better understood, and alternative medications, such as benzodiazepines, started to become more popular due to their safer profile and lower risk for fatal overdose. As a result, while the peak of barbiturate use occurred in the 1970s, it subsequently declined as healthcare providers looked for safer treatment options and as public education campaigns about the dangers of these drugs became more prevalent. The context of this peak is crucial to understanding patterns of substance use, addiction, and the evolution of treatment approaches in the field of addiction counseling.**

## 6. Which symptom is NOT typically associated with Cocaine overdose?

**A. Dilated pupils**

**B. Paralysis**

**C. Weight gain**

**D. Convulsions**

**Cocaine overdose is characterized by a range of symptoms that arise due to the drug's potent stimulant effects on the central nervous system. Among the symptoms commonly associated with cocaine overdose are dilated pupils, which result from its action on the autonomic nervous system, and convulsions, which can occur due to increased neuronal excitability. Paralysis can also be a symptom, typically resulting from severe cardiovascular or neurological complications. Weight gain is distinctly NOT associated with cocaine overdose. In fact, cocaine is known to suppress appetite, and users often experience weight loss rather than weight gain. This is due to the drug's stimulant properties that reduce the desire to eat. Therefore, when considering the classic symptoms of a cocaine overdose, weight gain stands out as the abnormal response that does not align with the expected physiological reactions.**

## 7. What is the primary psychoactive component of marijuana?

**A. Delta-8-Tetrahydrocannabinol**

**B. Cannabidiol**

**C. Delta-9-Tetrahydrocannabinol**

**D. Cannabinol**

**The primary psychoactive component of marijuana is Delta-9-Tetrahydrocannabinol, commonly referred to as THC. This compound is responsible for the characteristic effects of marijuana use, such as euphoria, altered perception, and increased appetite. THC achieves its psychoactive impact by interacting with the endocannabinoid system in the brain, particularly binding to CB1 receptors, which are densely located in areas associated with pleasure, memory, and coordination. While Delta-8-Tetrahydrocannabinol is another cannabinoid that can produce psychoactive effects, it is present in much smaller amounts in the cannabis plant and is less potent than Delta-9-THC. Cannabidiol (CBD) is a non-psychoactive component that has gained popularity for its potential therapeutic effects, such as reducing anxiety and inflammation, but it does not produce the "high" associated with marijuana use. Cannabinol is another cannabinoid that arises from the degradation of THC, and while it can have some psychoactive properties, it is significantly less potent than Delta-9-THC. Therefore, Delta-9-Tetrahydrocannabinol is recognized as the primary agent responsible for the plant's psychoactive effects.**

## 8. Which schedule represents substances that may lead to limited dependence and have accepted medical uses?

**A. Schedule III**

**B. Schedule IV**

**C. Schedule V**

**D. Schedule I**

**The classification of controlled substances is based on their potential for abuse, accepted medical use, and the level of dependency they may cause. Substances categorized under Schedule IV are those that have a legitimate medical use and a low potential for abuse relative to substances in higher schedules. While there is still some risk of dependency, it is significantly limited compared to higher schedules. Schedule IV includes medications like certain anti-anxiety agents and muscle relaxants, which can be prescribed for legitimate medical needs. These drugs can have risks associated with misuse or addiction, but they are also deemed safe enough for medical application when used as directed. In contrast, the other schedules present substances with varying levels of potential for dependence and medical acceptance. Schedule III substances may lead to moderate dependence and have accepted medical uses, but they are generally considered to have a higher potential for abuse than Schedule IV. Schedule V medications have even lower abuse potential than Schedule IV but are not as commonly recognized in practice. Lastly, Schedule I substances are characterized by a high potential for abuse and no accepted medical use. Thus, Schedule IV is accurately represented as containing substances that may support limited dependence while having accepted medical uses.**

## 9. What type of alcohol is commonly found in beer, wine, and liquor?

**A. Isopropyl alcohol**

**B. Methyl alcohol**

**C. Ethyl alcohol**

**D. Butyl alcohol**

**Ethyl alcohol, also known as ethanol, is the type of alcohol that is commonly found in beer, wine, and liquor. It is the only form of alcohol that is safe for human consumption in moderate amounts, which is why it is the primary ingredient in alcoholic beverages. Ethyl alcohol is produced through the fermentation process, where yeast converts sugars into alcohol and carbon dioxide. In contrast, isopropyl alcohol (commonly used as a disinfectant), methyl alcohol (also known as methanol, which is toxic and can cause blindness or death when ingested), and butyl alcohol (used in industrial applications) are not suitable for consumption. Each of these alternatives poses significant health risks and is not intended for use in beverages. Thus, ethyl alcohol is the correct answer, as it is the substance that constitutes the alcohol found in drinks and is associated with the effects of intoxication.**

## 10. When does the withdrawal peak for short-acting barbiturates typically occur?

**A. First or second day**

**B. Second or third day**

**C. Fourth or fifth day**

**D. First week**

**The withdrawal peak for short-acting barbiturates typically occurs on the second or third day after the last dose. This timing is important because barbiturates have a relatively short half-life, leading to a rapid onset of withdrawal symptoms once the drug is discontinued. During the second or third day, individuals who have been dependent on short-acting barbiturates are likely to experience the most intense withdrawal symptoms, including anxiety, tremors, and in some cases, seizures. Understanding this peak period is essential for healthcare professionals to effectively manage withdrawal and provide appropriate support and treatment for individuals attempting to discontinue use. Knowledge of the timeline for withdrawal symptoms can aid in the planning of interventions and support systems that appropriately address the needs of individuals during this vulnerable period.**