Alcohol and Your Brain

Drinking alcohol affects the way your brain works—changing everything from the way you act to your ability to walk. Some effects can be long-lasting. Learn about how alcohol affects different parts of the brain.¹

**Hippocampus:** Your memory is controlled by the hippocampus. Drinking a lot of alcohol at one time can cause you to black out, or forget a period of time. Long-term alcohol abuse can permanently damage the hippocampus, making it difficult for a person to learn.

**Hypothalamus:** Many body processes, such as heart rate and the feeling of hunger or thirst, are controlled in this small area. Alcohol can slow your heart rate and may make you hungrier and thirstier.

**Central Nervous System:** Alcohol slows down this system, which is made up of the brain, spinal cord, and nerves. That affects how signals flow through your body, making you think, speak, and move more slowly.

**Medulla:** Involuntary processes, such as breathing and maintaining body temperature, are controlled here. Drinking a lot of alcohol at one time can shut down the medulla, leading to a coma.

**Cerebellum:** This part of the brain is important for coordinating many of your daily movements, such as walking and grabbing objects. Alcohol can slow your reflexes. It may cause you to lose your balance or make your hands shake.

**Cerebral Cortex:** This is the main area involved in thinking, decision-making, emotions, and the five senses. Alcohol's effects on this area can impair your ability to think clearly and lower your inhibitions. It may make you act without thinking or make you angry for no reason. Alcohol may affect your senses, such as blurring your vision. Long-term alcohol abuse can permanently damage this region.

**Use the information above to answer the following questions.**

1. Which part of the brain is responsible for the five senses?

2. Which part of the brain is affected when a person experiences a “blackout” in which they can’t remember entire events?

3. How can alcohol lead to a coma?