



### SHOUT OUT to NCANDA-Data Analysis Resource

Drs. Adolf Pfefferbaum and Kilian Pohl are the Principal Investigators of the NCANDA Data Analysis Resource located at the Center for Health Sciences of SRI International. Dr. Pfefferbaum has been leading neuroimaging research in aging and neuropsychiatric disorders for more than 30 years. Dr. Pohl's research has focused on using medical image analysis to improve patient care. These two powerhouses lead NCANDA's Data Analysis Resource, which is responsible for developing data collection procedures for the NCANDA study. Additionally, the Data Analysis Resource performs quality control and analysis of all data collected from 831 participants across the 5 NCANDA sites! Find out more at <http://ncanda.org/data-analysis-component.php>

#### Myths About Alcohol

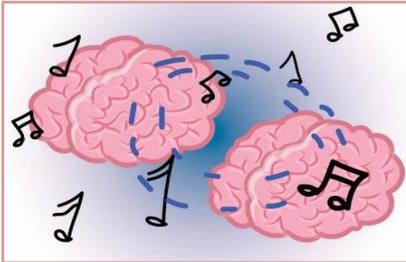
Despite attempts to inform the public about the potential risks of alcohol use, incorrect and dangerous myths regarding alcohol persist. Here are the facts:

**Effects of Alcohol Begin Quickly:** critical decision-making and driving abilities are impaired long before a person shows physical signs of intoxication.

**Caffeine & Getting Sober:** caffeine can make one feel less tired, but it does not increase the rate at which the body breaks down alcohol. Caffeine does not change the effects of alcohol on coordination and decision-making abilities. Only *time* can reduce the effects of alcohol.

**When Drinking Stops, Effects of Alcohol Do Not:** Even after drinking stops, alcohol continues to affect the brain and body. Alcohol from the stomach and intestine enter the blood stream that affects judgment and coordination that can last for hours.

**Alcohol Doesn't Warm Body Temperature:** Alcohol widens tiny blood vessels under the skin that quickly fill with warm blood, causing a feeling of warmth and skin to flush and perspire. But body temperature is actually dropping, because alcohol takes warmth from the body's core to the skin surface, and depresses the brain region that controls temperature regulation. Drinking in very cold weather can be dangerous.  
[//pubs.niaaa.nih.gov/publications](http://pubs.niaaa.nih.gov/publications)



#### Brains and Music

Have you ever wondered how musicians play in time and stay in sync throughout their performances? Turns out, musicians aren't just really good at coordination, their brainwaves actually become synchronized when they play together. The idea behind this is a concept known as "phase locking," which allows musicians to coordinate behavior by forming small networks that can coordinate brain regions. One specific brain region involved is the frontal lobe, which is generally responsible for long-term memory, and decision making. This same phenomenon has also been found in brains of individuals who play team sports or even concertgoers who aren't actively playing music. This means that every time you go to soccer practice or a concert, you're literally in sync with people around you!

[www.sciencedaily.com/releases/2012/11/121129093417.htm](http://www.sciencedaily.com/releases/2012/11/121129093417.htm)

#### Genes and Addiction

In human and animal models, research has identified a number of genes thought to play a role in addiction. For example, alcoholism is thought to be rare in people with two copies of the *ALDH\*2* gene variation.

Scientists also know addiction is a complex process - multiple genes and environmental factors can add up to make a person vulnerable or cancel each other out. The take home message for 'addiction genes':

- No one is born an addict.
- Many genes likely contribute to addiction liability.

[www.learn.genetics.utah.edu/content/addiction/genes/](http://www.learn.genetics.utah.edu/content/addiction/genes/)

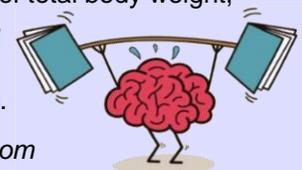


Visit [ncanda.org](http://ncanda.org) to learn about study findings!

#### Brain Facts

The human brain weighs about 3 pounds, over 70% of which is water. Although it makes up only 2% of total body weight, the brain uses 20% of the body's energy and oxygen.

[www.sciencefirst.com](http://www.sciencefirst.com)



#### Optical Illusions

Optical illusions play with color, light, and patterns to trick our brains. Visual information collected by our eyes is processed in our brains, enabling our perceiving something that is different from the actual image we are viewing. The optical illusion to the left is known as "Kanizsa's triangle." Do you see a complete triangle in the middle of the image? Although a complete triangle does not actually exist in the image, we perceive a whole white triangle that is brighter than the background. However, there is no difference in color or luminance between the perceived triangle and white background. This optical illusion works because our brains are trained to fill in the gaps to perceive whole objects even if they do not exist!

[www.verywellmind.com/optical-illusions-4020333](http://www.verywellmind.com/optical-illusions-4020333)

