

Adolescent NeuroDevelopment Study

University of California San Diego ♦ SRI International ♦ Duke University
Oregon Health & Science University ♦ University of Pittsburgh

2015 Newsletter

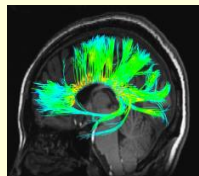
SHOUT OUT to NCANDA-Pittsburgh



Duncan Clark, MD, PhD is the Principal Investigator of the National Consortium on Alcohol and NeuroDevelopment in Adolescence (NCANDA): Pittsburgh site located at the University of Pittsburgh Medical Center. Dr. Clark is a Harvard Medical School graduate, psychiatrist, and Associate Professor at the University of Pittsburgh. He has published over 250 academic papers on topics ranging from neuroimaging to text-message based substance use interventions. The Pittsburgh site enrolled a total of 125 adolescents! Find out more at ncanda.org/pittsburgh.php.

The Results are In!

NCANDA Principal Investigators submitted data from the "baseline" (first time point) group of 834 adolescents ages 12-21 for the Research Society on Alcoholism 2015 Meeting in San Antonio, TX. If accepted, the presentations will focus on describing the sample based on age, gender, and substance use factors as well as early findings on cognitive, motor, sleep, and neuro-physiological differences. Preliminary results support the hypothesis that the maturing adolescent brain is more susceptible to the negative effects of hazardous drinking.



Workout Your Brain?

Dr. John J. Ratey, MD, argues exercise is more important for the brain than the body, especially when it comes to the classroom. Students in the top 5% of fitness rankings scored higher on standardized academic tests. Exercise helps with concentration and the ability to switch between tasks without making mistakes, and it acts as "Miracle-Gro" for the brain by releasing chemicals that make new brain cells and new connections between brain cells to help us learn. <http://www.johnratey.com/2014articles.php>

Reminder

Please update us if your phone number, email, or address change! Find out more about the study at ncanda.org!



Did You Know?

Hibernating animals aren't just taking a long nap for winter. While sleep is primarily characterized by changes in brain activity, hibernation comes with some extreme physiological changes. Those changes are controlled by hormones and can include a drop in heart rate to as little as 2.5% of the normal rate, a body temperature reduction by as much as 63°F, and some reptiles stop breathing completely.

Hibernation. UXL Encyclopedia of Science, 2002.

Caffeine & The Body

Caffeine changes the way the brain and body work by acting as a stimulant to central nervous system, which includes the brain, spinal cord, and other nerves in the body. Caffeine consumed in a drink reaches peak level in the bloodstream within 1 hour and stays there 4-6 hours. The main effect of caffeine is to feel more awake or alert, but, it can cause problems including uneven heart rhythm, increased blood pressure, headaches, dehydration, and dependence. While food, beverage, and nutrient labels are not regulated to include the amount of caffeine, the FDA recommends to be informed and learn how much caffeine is in these items. For example, a dark chocolate candy bar or coffee flavored yogurt can have similar amounts of caffeine as tea or soda.



<http://www.fda.gov/downloads/Drugs/ResourcesForYou/Consumers/BuyingUsingMedicineSafely/UnderstandingOver-the-CounterMedicines/UCM205286.pdf>

Get Your Rest!

Recent research supported by NCANDA suggests that common changes in sleep and circadian rhythms during adolescence, often attributed to staying up late and early school start times, may contribute to accelerated substance use and related problems. This is yet another reason why everyone should make an extra effort to get the recommended 8-9 hours of sleep every night!

Hasler B, Clark DB (2013). Circadian misalignment, reward-related brain function, and adolescent alcohol involvement. *Alcoholism: Clinical and Experimental Research* 37:558-565.

The human brain has 100 billion neurons, each neuron connected to 10 thousand other neurons. Sitting on your shoulders is the most complicated object in the known universe. - Dr. Michio Kaku