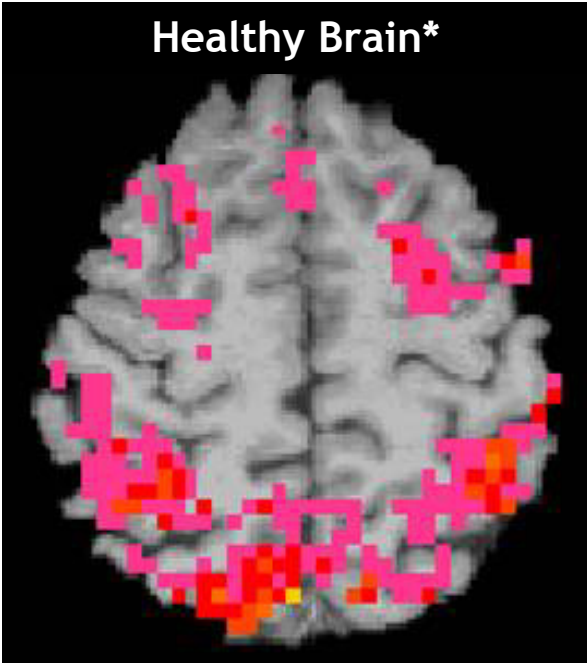


Seeing is Believing!

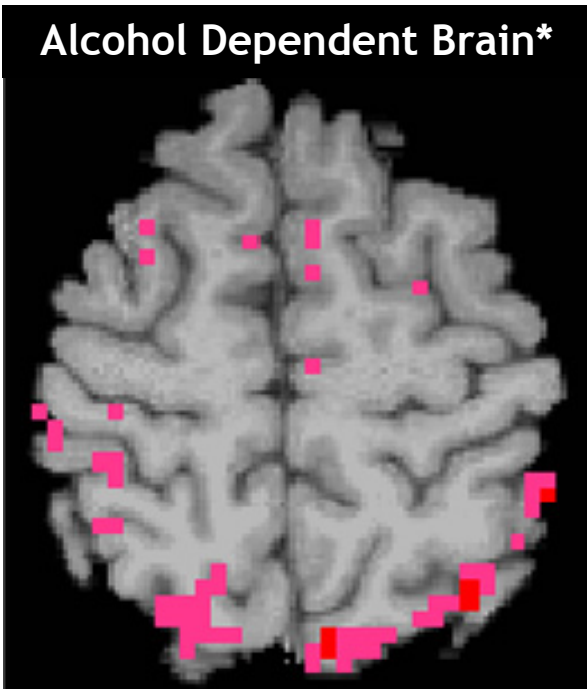
Healthy Brain*



Alcohol impacts the developing brain

- The developing brain is especially vulnerable to alcohol.
 - Unfortunately, adolescents must drink more alcohol than adults to become intoxicated.¹
- The portion of the brain which controls learning develops during adolescence, making it particularly susceptible to alcohol's effects.²
- Alcohol's impact on the developing brain may be life-long and irreparable.¹

Alcohol Dependent Brain*



The difference is clear

- New research on the adolescent brain suggests that early heavy alcohol use has a negative impact on the physical structure of the brain.³
- In alcohol abusing youth, the portion of the brain responsible for learning is noticeable smaller.³
- Alcohol use during adolescence may result in decreased attention, memory, planning and executive functioning.³

* Top down view of a 20 year old healthy and an alcohol dependent female brain during a memory task. Images provided by The American Medical Association.

¹ Yoast, R. Zeigler, D. "Harmful Consequences of Alcohol Use on the Brains of Children, Adolescents, and College Students." American Medical Association, http://www.ama-assn.org/ama1/pub/upload/mm/388/harmful_consequences.pdf, accessed April 2008.

² Zeigler, D., Wang, C., Yoast, R., Dickinson, B., et. al. "The neurocognitive effects of alcohol on adolescents and college students," *Preventive Medicine*, January 2005, 40(1), 23-32.

³ National Academies of Science, Institute of Medicine, *Reducing Underage Drinking: A Collective Responsibility*. Richard J. Bonnie and Ellen O'Connell, editors. Washington, D.C.