

# Alcohol And Adolescent Development

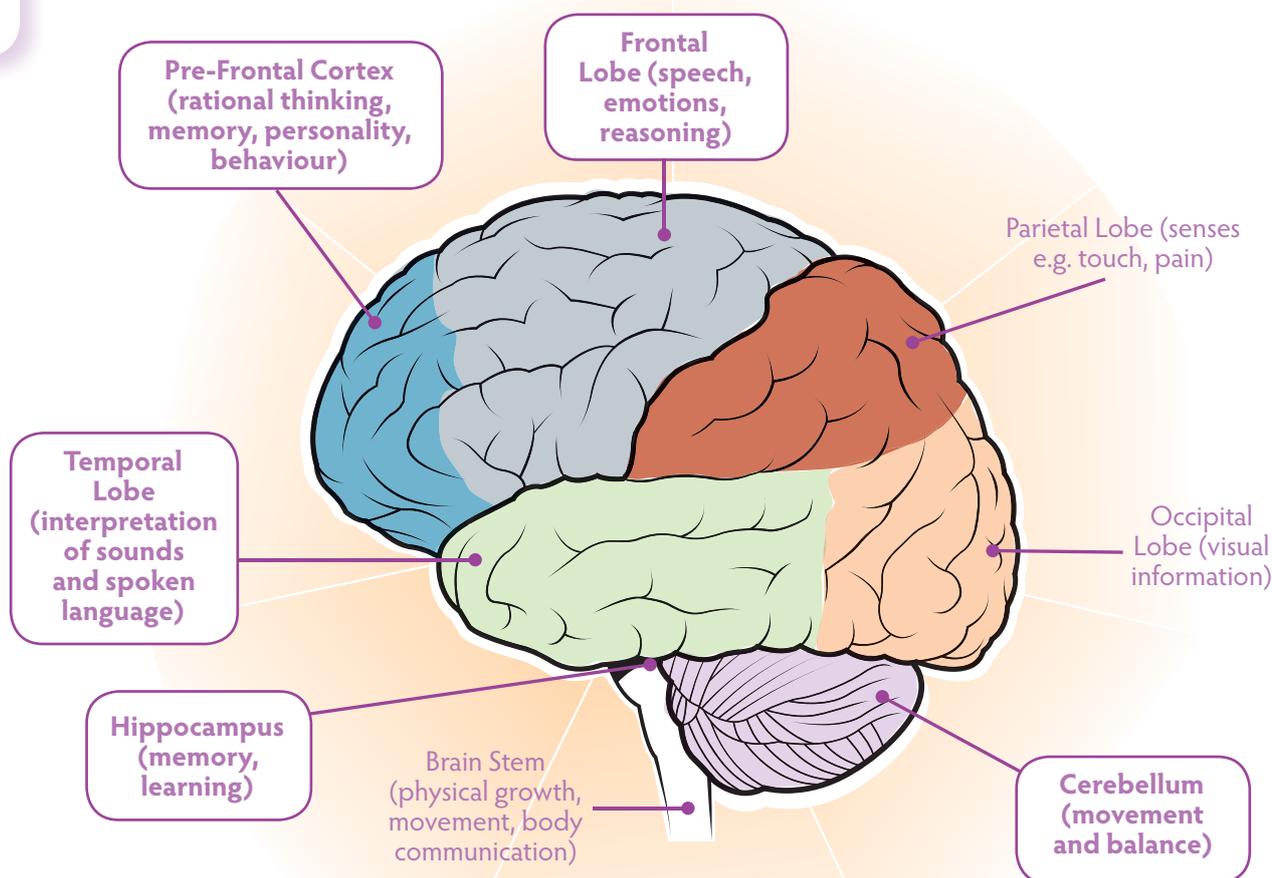
This fact sheet explains how alcohol can affect brain development during the teenage years...

## Did you know?

- › Drinking in adolescence can be harmful to young people's physical development, particularly brain development. Adolescence is a critical period in a young person's development towards adulthood. What they learn during their teenage years, and how they learn it, can set the young person's path for later life. Alcohol consumption during this time can bring about learning difficulties, memory problems and other problems later in life.



## Areas of the brain and functions affected by alcohol



During adolescence the brain undergoes a lot of changes. As it is still developing, it is more sensitive to alcohol (sections affected are highlighted in boxes).

Areas of the brain that may be particularly vulnerable to alcohol's effects are the frontal and temporal lobes, pre-frontal cortex, cerebellum and hippocampus. The hippocampus, which lies deep within the cerebral hemispheres, plays an important role in learning and memory formation. Heavy drinking during adolescence can lead to reduced hippocampal volume and memory and learning difficulties.



## Key facts

The changes that occur to the brain during the teenage years make young people more vulnerable to drug dependence. People who first use alcohol before age 15 are five times more likely to abuse alcohol than those who first use alcohol at age 21 or older. This increased use leads to a greater chance of alcohol-related problems in later life, including becoming dependent on alcohol (addiction).

- › Different parts of the brain develop at different rates as we grow, and depending on whether we are male or female. One example is the pre-frontal cortex, which houses the part of the brain that controls rational thinking. This part of the brain does not begin to mature until age 19 and only fully matures by around age 21 in women and age 28 in men. So damage to the pre-frontal cortex during its development can have life-long consequences for the young person's memory, personality and behaviour.
- › Drinking alcohol during the teenage years can cause permanent brain damage. Damage to the brain could be responsible for memory problems, inability to learn, problems with verbal skills, alcohol dependence and depression.
- › Alcohol can affect a teenager's social development if they start drinking at an early age. They may spend their time drinking instead of participating in sports or other recreational activities. They may turn to alcohol as a form of coping with problems and be more open to using other substances. The learning difficulties caused by teenage drinking can result in poor school performance and an increased risk of social problems, depression, suicidal thoughts and violence.
- › Research shows that a hangover can be just as damaging to the brain as heavy drinking by reducing a person's ability to learn new information and recall memories.

## Special considerations and tips

- › For health reasons, recent research suggests that young people under 18 years of age should avoid alcohol, or keep drinking to a minimum.
- › There are both short-term and long-term risks associated with teenage drinking. Make sure you understand these, and keep yourself informed.
- › Talk to your teenager about alcohol. Explain the risks and the harms associated with drinking at a young age. Be firm, confident, clear and consistent, and make sure your teenager understands the boundaries and limits you have set for him or her in relation to alcohol.
- › Keep the lines of communication open, so your teenager can feel comfortable talking to you about the things that concern him or her.
- › Remember, you are not alone. Other parents of teenagers are most likely facing the same issues. Share your concerns as well as what has worked for you when dealing with teenagers and alcohol. Seek professional help if you need it.

## Further information/Where to get help

- › For further information on the short-term and long-term effects of alcohol on teenagers, go to [www.druginfo.adf.org.au](http://www.druginfo.adf.org.au)
- › To find out about the Australian Alcohol Guidelines for low-risk drinking, see **Fact Sheet 3: Standard drinks and low-risk drinking**
- › For tips on communicating with your teenager about alcohol, see **Fact sheet 7: Teenage drinking: Parents' communication style can make a difference**
- › For Professor Jason White's presentation- Adolescents, Alcohol and Brain Development, see the Drug Strategy website [www.decs.sa.gov.au/drugstrategy/](http://www.decs.sa.gov.au/drugstrategy/) > Resources > Alcohol Education > Adolescents and Alcohol Conference
- › For additional copies of this fact sheet see [http://www.olgc.sa.gov.au/default.asp?page=general.Youth\\_Issues.htm&menu=general](http://www.olgc.sa.gov.au/default.asp?page=general.Youth_Issues.htm&menu=general) or <http://www.decs.sa.gov.au/drugstrategy> >resources or parent support

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