

# PARENTS EMPOWERED MAGAZINE



CELEBRATING  
RED RIBBON  
MONTH

## SPEND TIME IN YOUR KID'S WORLD

Have fun together. When kids feel close to their parents, they are less likely to drink underage.

Kids need family rules about not drinking underage to stay alcohol-free.

Stay involved with your kids. Know where they are, who they're with and what they are doing.



STATE OF UTAH  
OFFICE OF THE GOVERNOR  
SALT LAKE CITY, UTAH  
84114-2220

GARY R. HERBERT  
GOVERNOR

SPENCER J. COX  
LIEUTENANT GOVERNOR

Dear Parents,

As parents, we all want the best for our children.

We continue to recognize the disturbing fact that underage drinking is a serious problem, even here in Utah. In fact, alcohol is the number one substance abused by our youth. Heavy binge drinking begins as early as sixth grade, and new scientific evidence proves underage drinking can cause permanent damage to a teen's developing brain. As a result, the need for parents to stay involved in their children's lives has never been greater.

In an effort to combat this significant problem, the state continues to support ParentsEmpowered.org, a program designed to educate parents about the dangers of underage drinking. Featured on ParentsEmpowered.org are downloadable resources that teach parents important skills in the following areas:

- Bonding with your children through daily, positive communication and interaction
- Setting clear boundaries and limitations, including rules about no underage drinking
- Monitoring your children's activities by asking direct questions and ensuring that their environment is alcohol-free

ParentsEmpowered.org can help you discover that you have more power over the choices your children make than you may now realize.

Studies confirm that children who have a close and loving relationship with their parents are less likely to use alcohol, drugs or tobacco. Children who feel connected to their families value that relationship and do not want to jeopardize it. In fact, studies show that parental disapproval is the number one reason children choose not to drink alcohol.

We encourage you to visit ParentsEmpowered.org today and get started on the road to keeping the children in our state drug- and alcohol-free.

Sincerely,

Gary R. Herbert  
Governor

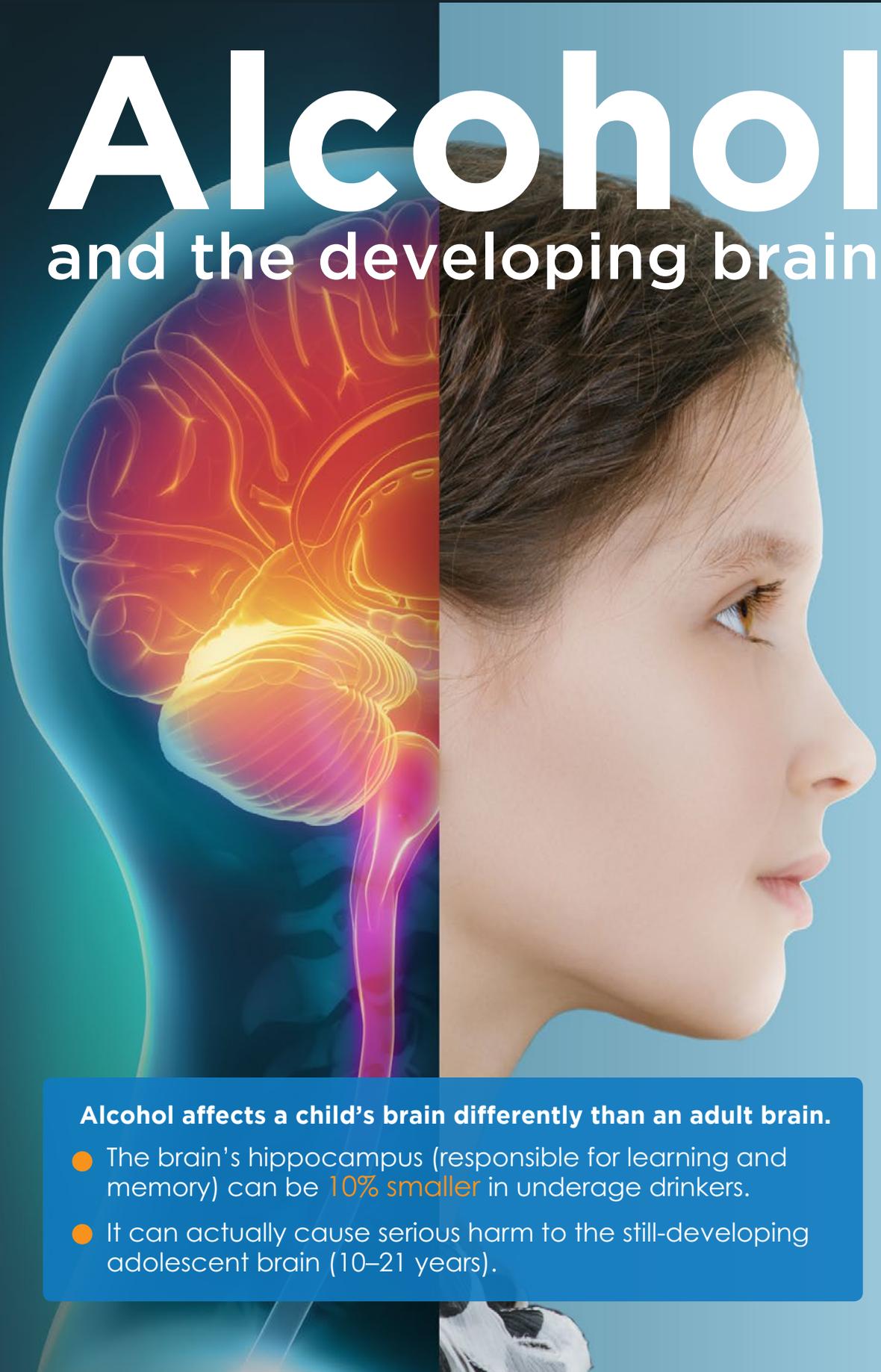
Jeanette Herbert  
First Lady

**PARENTS  
EMPOWERED.org**

**DON'T** program your kid's brain for failure.

- Most parents talk to their kids about drinking two years too late. The American Academy of Pediatrics suggests age nine is a good time to start.
- What parents may not realize is that children say parental disapproval of underage drinking is the key reason they have chosen not to drink.

# Alcohol and the developing brain



## RESEARCH SHOWS

that alcohol affects a developing child's brain differently than an adult brain. "The brain goes through dynamic changes during adolescence, and alcohol can seriously damage long- and short-term growth processes" (American Medical Association Fact Sheet, 2003).

Alcohol may impair memory, learning, decision-making and impulse control; and it greatly increases the risk of addiction. In addition, alcohol can cause young people to develop social problems, have poor judgment, get into trouble, do poorly in school and experience failure in achieving lifelong goals.

To compound this problem, research shows that parents generally underestimate the extent of adolescent drinking and its negative consequences. Thirty-one percent of youths who said they had been drunk in the past year were said by their parents to be non-drinkers. Others may view underage drinking as inevitable, but it isn't. To be alcohol-free, an adolescent needs parents who are trained in BONDING (creating a warm, loving relationship), setting BOUNDARIES (discussing clear, firm rules about no-underage-alcohol use) and MONITORING (knowing where your kids are and making sure they stay in an alcohol- and drug-free social environment at all times).

## Alcohol affects a child's brain differently than an adult brain.

- The brain's hippocampus (responsible for learning and memory) can be **10% smaller** in underage drinkers.
- It can actually cause serious harm to the still-developing adolescent brain (10–21 years).

# Parents

are the #1 reason kids don't drink



**E** DUCATION ALONE is not enough to deter adolescents from drinking as they enter difficult social transitions to adulthood, because there are many pressures and opportunities to drink. Parents who are actively involved can have a powerful influence on their child's decision to remain alcohol-free.

Kids' perceptions of parental disapproval are great deterrents. What parents may not realize is that children say parental disapproval of underage drinking is the key reason they have chosen not to drink.

Research indicates that children are less likely to drink when their parents are involved in their lives and when they and their parents report feeling close to each other. Family conflict and lack of bonding are associated with an increased risk of drinking. Mixed messages and unclear rules and expectations also leave children more vulnerable to underage drinking.



## START TALKING BY AGE 9

- Explain the harms and long-term effects that drinking underage can have on the developing brain.
- Encourage your kids to talk to you about their concerns and any questions they have about drinking.
- Set clear rules and expectations about alcohol early.
- Be clear that you don't want your kids to drink alcohol until the legal age of 21.
- Explain that when your kids have reached age 21, if they should decide to drink, they should do so in moderation.

# Keeping your child's brain healthy

- Research shows more than half of Utah parents don't know that underage drinking increases the risk of alcohol-dependence.



## ALCOHOL HIJACKS THE BRAIN'S PLEASURE-REWARD SYSTEM

**T**HE BRAIN REWARDS positive actions with feelings of pleasure so we want to repeat these actions. We remember "feel-good" brain chemicals (or neurotransmitters), such as dopamine, which connect the pleasure to the thing we enjoyed. Alcohol hijacks our brain's pleasure-reward system by tricking the brain into generating pleasure-reward feelings from a harmful chemical—alcohol—instead of a real experience.

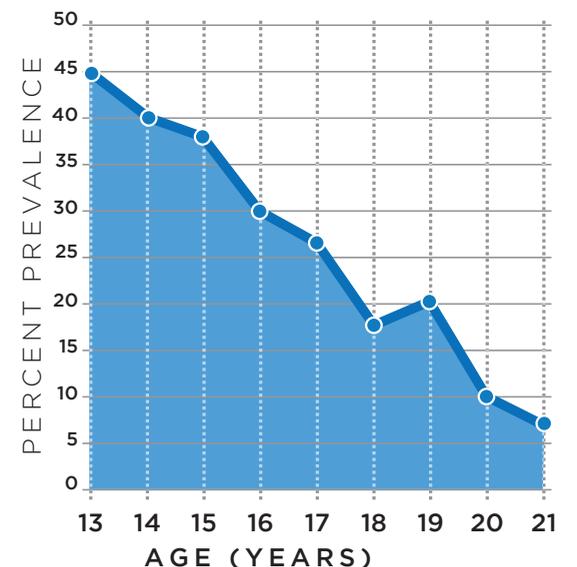
If kids continue drinking, the brain changes and adapts to the presence of alcohol, and soon they need more and more alcohol

to create the same amount of pleasure. If they continue to drink, they will begin to crave it and feel uncomfortable—sometimes even extreme discomfort—without it. They become addicted. Getting their next drink becomes more important than family, grades or even sports.

Because the brain produces an abundance of dopamine, it can go rapidly from liking, to wanting, to needing alcohol, which programs the brain for alcoholism. Alcohol can also harm the brain's ability to sense pleasure from normal, healthy things and experiences—leaving a young person feeling "flat" about things he/she previously enjoyed.

### Alcohol-dependence

BASED ON THE AGE DRINKING STARTS



SOURCE: 2001–2002 National Epidemiologic Survey on Alcohol and Related Conditions

- If your family has a history of alcoholism, your children need to know that they are at a greater risk for problem drinking.

# Key brain res

## and the effects of alcohol

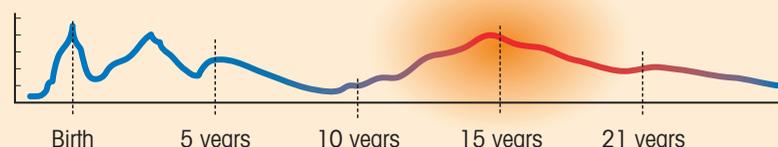
### Brain plasticity

During peaks of plasticity, the adolescent brain is “wiring” two important brain areas: the prefrontal cortex (responsible for planning, decision-making, good judgment and impulse control) and the hippocampus (involved in memory and learning). During this period of development, the brain must make the key neural connections to wire itself to become a responsible, thoughtful adult. Alcohol, which acts as a depressant, slows down brain activity and hinders development.

Neural plasticity refers to the ability of circuitry in the brain to physically change and grow new dendrites as a result of new learning and experiences.

### Peaks of brain plasticity

Drinking alcohol during times of peak plasticity can harm brain wiring.



# A

ALCOHOL AFFECTS an adolescent brain differently than a mature adult brain. The brain goes through rapid development and “wiring” changes during the ages of 12 through the early 20s. Adolescent alcohol use can harm brain wiring, which is essential to become a mature, thoughtful, responsible adult.

“Impaired white matter can negatively affect thinking and memory skills.”

Dr. Susan Tapert

### Alcohol can harm three key brain areas:

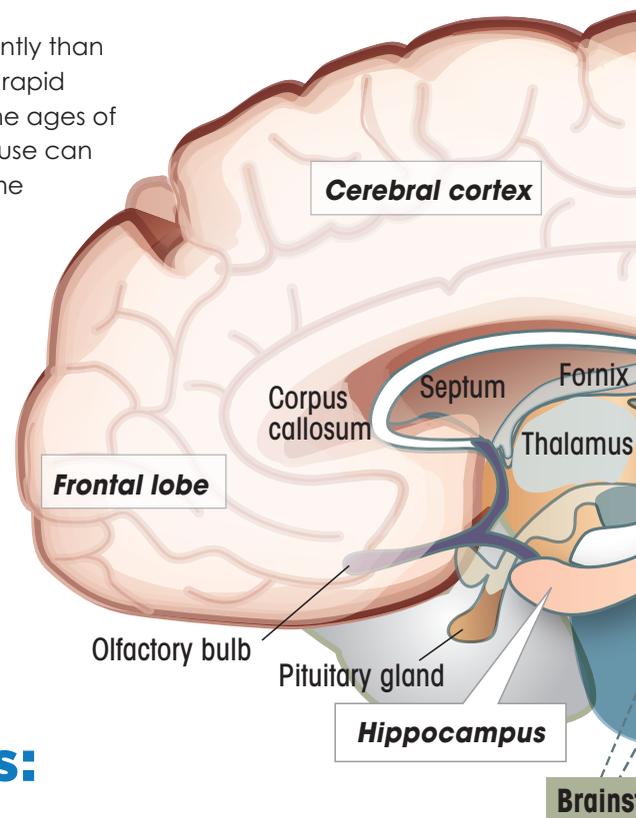
# 1

“The **prefrontal area** (responsible for planning, good judgment, decision-making and impulse control) undergoes the most change during adolescence. Researchers found that adolescent drinking could cause severe changes in this area ... which plays an important role in forming adult personality and behavior. Harm from alcohol at this time can be long-term and irreversible.”

# 2

“The **hippocampus** (involved in learning and memory) suffers the worst alcohol-related brain harm in adolescents. Those who had been drinking more and for longer had significantly smaller hippocampi (10 percent). In addition, short-term or moderate drinking impairs learning and memory far more in youths than adults. Frequent drinkers may never be able to catch up in adulthood, since alcohol inhibits systems crucial for storing new information.”

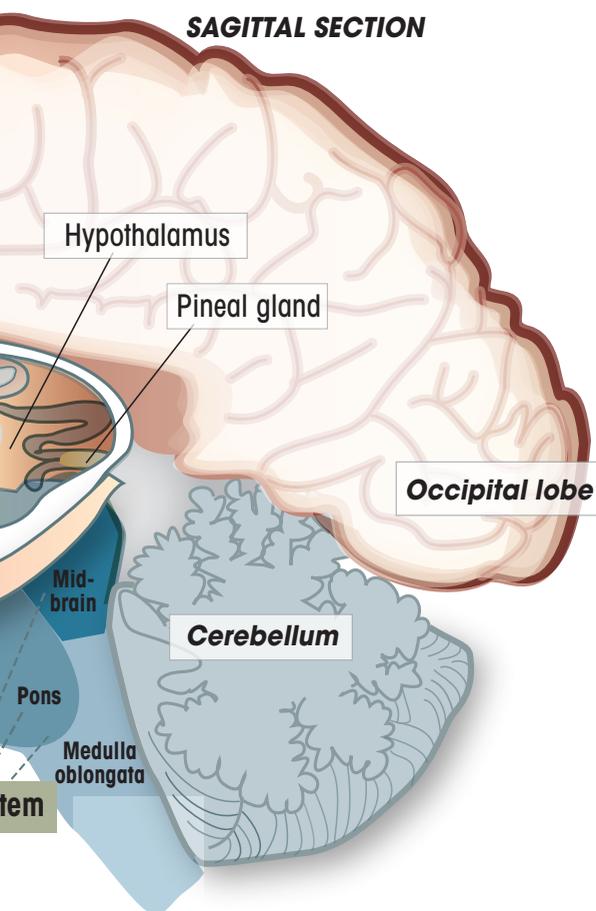
American Medical Association Fact Sheet, 2003



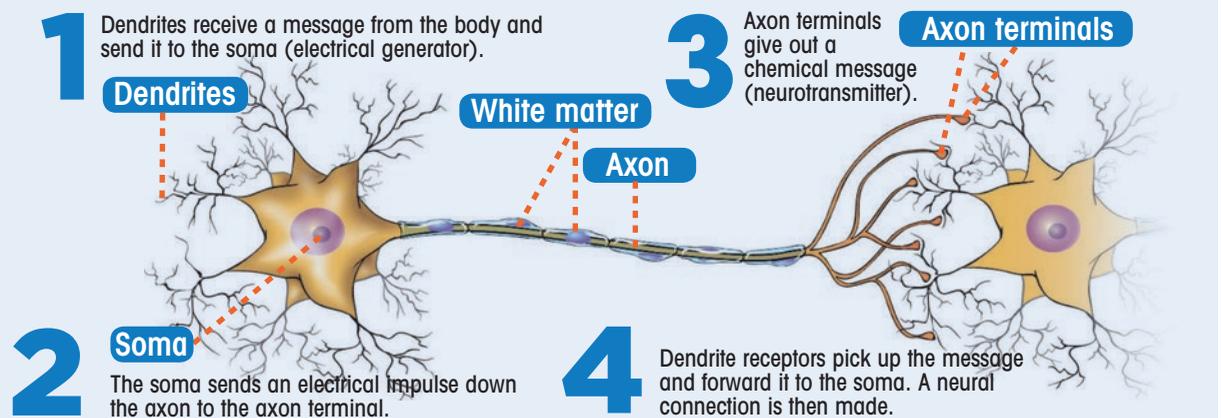
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## BRAIN FUNCTION

The brain is the major organ of the central nervous system and the control center for all the body's voluntary and involuntary activities. It is responsible for everything we think, feel, see, say and do. The brainstem controls vital body functions, such as breathing and digestion. The cerebellum maintains posture, coordination of body movement and provides long-term storage for memories of how to do things that involve our body — like riding a bike. The cerebrum, which consists of the right and left cerebral hemispheres, is the site of most conscious and intelligent activities.



## How neurons communicate



**O**UR BRAIN is more complex than the world's most powerful computer. It is responsible for everything we think, see, hear, feel, smell or do. It even creates and directs all of our emotions. The brain is divided into different areas that direct different parts of our body. Like a complex computer, all the different parts of the brain work at the same time—like parallel processing.

It does this through more than 100 billion brain cells called neurons. A neuron looks sort of like a tree, with "branches" called dendrites, a "trunk" called an axon, and "roots" called axon terminals. The tip of each "root" contains tiny sacks of powerful chemicals called neurotransmitters. At the top of the "trunk" is a tiny electrical generator called a soma.

The brain neurons communicate by sending electrical and chemical messages from the "roots" of one neuron to the "branches" of another. If a thought or action is repeated often, the "roots" of one neuron send more chemical, and the receiving neuron makes more "branches" to receive it. The neural connection is strengthened until it begins to look like a bushy tree instead of a spindly tree. It becomes a dominant neural pathway.

Forty percent of our neurons are "wired" at birth. They perform automatic functions such as breathing, heart and lung functions, digestion, etc. The other 60 percent are waiting to be stimulated by our learning and experiences to make connections or "wiring." When we learn new things, new "neural connections" are made in our brain. This is referred to as "wiring" our brain. It is like loading new software into a computer so it can do more things. The more neural connections we make, the smarter and more capable we become. Alcohol suppresses brain development.

**3** The brain is made up of gray matter (neurons) and white matter. **Because alcohol suppresses brain activity, it prevents the brain from properly developing its essential "white matter"**—the fatty-waxy coating that insulates the part of neurons that send electrical signals.

*"... it has become clear that, during adolescence ... the brain is highly plastic and shaped by experience. ... Alcohol appears to interfere with the changes in circuitry that occur during learning."* —Dr. Aaron White, Duke University

# Three steps to a bright future

**L**IKE NEARLY anything worthwhile, keeping your children alcohol-free takes effort, commitment and consistency. Fortunately, the process can be both fun and rewarding. Develop and use the following skills and you're well on your way.

## 1 Bonding

STAY CLOSE TO YOUR KIDS

*Bonding is essential to preventing underage drinking. Children are less likely to drink when their parents are involved in their lives, and when children and parents feel close to each other.*

### SPEND TIME TOGETHER

Try to spend at least 15 minutes a day of one-on-one time. The more time you spend together, the closer your relationship will be.

### DO FUN ACTIVITIES TOGETHER

Do fun things together on a regular basis. Play catch. Go camping. Do craft projects. Don't skip vacations. Have a weekly "game night." Invite your kids to help plan your weekly activities.

### EAT DINNER TOGETHER

Research shows teens who regularly eat as a family five to seven times per week are 33% less likely to use alcohol.

### LISTEN AND BE SUPPORTIVE

Take time daily to talk with your kids about their interests and activities. Ask about their lives, hopes, fears and concerns. Encourage them to do well in school.

### CREATE A POSITIVE HOME ENVIRONMENT

Be kind and respectful of each other. Remind your kids often that you love them. Maintain at least a 4:1 ratio of positive comments to negative ones. Acknowledge all the positive things your kids do. When you spend time in their world, they'll listen when you speak from yours.

## 2 Boundaries

SET CLEAR RULES AND EXPECTATIONS

*Talk to your children about alcohol and set clear rules against underage drinking. Children respond better when they have clear boundaries and expectations about alcohol. Never assume your children know what your rules, expectations and attitudes about alcohol are. Write down your rules and discuss them with your children so they understand the reasons behind them.*

### TEACH THE RISKS OF UNDERAGE DRINKING

At an early age, begin talking with your children about not drinking alcohol. Explain the real risks of underage drinking. Ask questions. Make sure they understand.

### DISCUSS WHAT TO DO IF ALCOHOL IS PRESENT

It's essential that children have an alcohol-free social environment. Practice saying "no" with your kids. Let them know they can text or call if there's alcohol and you'll pick them up.

### HELP KIDS CHOOSE FRIENDS WISELY

Studies show significant increased risk for underage drinking is influenced by whether your children's friends drink. Encourage your children to choose friends who support your no-alcohol rules. Discuss your no-alcohol policy with your kids' friends.

### CONSISTENTLY ENFORCE THE RULES

Give appropriate consequences every time and reward your kids for staying alcohol-free.

CONSEQUENCES

# 3 Monitoring

WHO, WHAT, WHEN, AND WHERE



Know where your kids are, who they're with, and what they are doing. Stay involved. Studies show parental involvement drops by half between the 6th and 12th grades. It's important to remain engaged throughout their teen years.

## KNOW YOUR CHILDREN'S ACTIVITIES

Kids need fun. Help provide safe, enjoyable, no-alcohol fun for your kids and their friends. When you aren't able to be there, make sure your kids have planned activities and appropriate adult supervision.

## OBSERVE YOUR CHILD'S EMOTIONAL WELL-BEING

It's essential that children have an alcohol-free social environment. Practice saying "no" with your kids. Let them know they can text

## KNOW YOUR CHILDREN'S FRIENDS AND THEIR PARENTS

Get to know their friends and the parents of those friends. Discuss with the parents your desire to keep your kids alcohol-free and enlist their cooperation.

## ENSURE AN ALCOHOL-FREE ENVIRONMENT

Make sure alcohol isn't available to your kids at home or from friends, siblings, etc. If they go to a friend's house, call to make sure parents will be home and there will be no alcohol.

## KEEP IN TOUCH

Studies show kids are more at risk for alcohol use between the hours of 3 and 6 p.m., while many parents are still at work. Call them, send a text, drop by unannounced, or have a neighbor check in.



## The 5 Ws

Be an involved parent. Asking the 5 Ws puts the steps of bonding, boundaries and monitoring into action. Ask these five questions to know what's going on with your kids and help them stay alcohol-free:

1. Where are you going?
2. What will you be doing?
3. Who are you with?
4. When will you be home?
5. Will there be alcohol?

# Peers' influence

## on alcohol use

Kids who are assertive and have good refusal skills are less likely to drink underage. Decide on good ways to say “no” and practice them often in role-play situations. Here are some ideas.

**“Nah, I’m good. Don’t wanna disappoint my parents.”**

**“No thanks. I need all the brain cells I’ve got.”**

**“Actually, I’ve only got one brain. Why would I want to trash it?”**

**“If there’s alcohol present, call me and I’ll pick you up.”**



## Alcohol interferes with the brain

The adolescent brain is still developing. Alcohol can impair the parts of the brain that control the following:

### Motor coordination

This includes the ability to talk, drive and process information.

### Impulse control

Drinking lowers inhibitions and increases the chances that a person will do something he or she will regret when he or she is sober.

### Memory

Impaired recollection and even blackouts can occur when too much alcohol has been consumed.

### Judgment and decision-making capacity

Drinking may lead young people to engage in risky behavior. Never get in a car with a driver who has recently been drinking. Doing so can result in injury or even death.

## The law



- Possessing, purchasing or drinking alcohol before age 21 is illegal.
- The minimum legal drinking age saves thousands of lives.
- In Utah, It is illegal for anyone to furnish or supply alcohol to a minor—punishable by up to a \$2,500 fine and 12 months in jail.

# Risks associated with underage drinking

**A**LCOHOL USE among children is strongly correlated with violence, poor academic performance and other harmful behaviors. Education alone will not keep your kids from using alcohol because there are constant pressures and opportunities to drink. Further, the areas of the brain that encourage impulsivity and risk-taking develop early in age, while the areas that improve self-control don't develop until the very late teens or early twenties. You must stay actively involved as a parent in bonding with your child, setting boundaries and monitoring to help your remain alcohol-free.

## School failure

Kids who use alcohol have higher rates of academic problems and poor performance than non-drinkers. Among eighth-graders, higher truancy rates are associated with greater rates of alcohol use.

## Violence

Children who start drinking before age 15 are 12 times more likely to be injured while under the influence of alcohol and 10 times more likely to be in a fight after drinking, compared with those who wait to drink until they are 21.

## Promiscuity

Alcohol use by adolescents is a strong predictor of unprotected sexual activity and unwanted sexual advances.

## Illicit drug use

More than 67 percent of young people who start drinking before the age of 15 will try an illicit drug. Children who drink are 7.5 times more likely to use an illicit drug, 22 times more likely to use marijuana and 50 times more likely to use cocaine than children who never drink.

## ALCOHOL HARMS THE YOUNG BRAIN.



- Underage drinking is strongly linked with poor academic performance.
- Underage drinkers are over 30% more likely to be depressed or attempt suicide.
- More than one-third of adolescent traffic deaths are alcohol related.
- Alcohol can change how children's brains develop, leading to addiction and difficulties with learning and problem solving.

### CREDITS

*This educational section from the Deseret News' Newspapers in Education program was designed by Amy O'Donnell with assistance from R&R Partners. The project was under the direction of Cindy Richards, Newspapers in Education director, with special thanks to the Utah Department of Alcoholic Beverage Control, Utah Division of Substance Abuse & Mental Health, Utah State Office of Education/ Safe & Healthy Students Programs, Utah Chapter of MADD and Utah Highway Safety Office. Special credit to Jill Rhead, LDS Hospital, for the use of her medical illustrations on pages 6 and 7. Stock photos by Shutterstock.com.*

## ALCOHOL POISONING CAN CAUSE DEATH

Most kids have not yet developed the "cut-off" switch that makes them go to sleep or pass out from too much drinking. They can consume dangerous amounts of alcohol before they realize it's too late. This can result in alcohol poisoning, which can cause difficulty breathing, unconsciousness and death. Binge drinking can and does kill—killing as many young people as all other drugs combined. If a young person ever passes out from drinking, 911 should be called for immediate medical attention.

# A bright future starts with a healthy brain

Now that you've read this booklet, try answering these questions.

## True or False?

Mark with a T or F next to the number.

- \_\_\_\_\_ 1. Alcohol affects an adolescent's brain differently than an adult's.
- \_\_\_\_\_ 2. The brain is fully developed by age 12.
- \_\_\_\_\_ 3. Alcohol use can impair impulse control, memory, judgment and decision-making skills.
- \_\_\_\_\_ 4. Alcohol poisoning can cause difficulty breathing, unconsciousness and death.
- \_\_\_\_\_ 5. Alcohol kills as many young people as all other drugs combined.
- \_\_\_\_\_ 6. Having friends that drink alcohol increases the risk that you will drink too.
- \_\_\_\_\_ 7. If a person is unconscious or "passes out," you should immediately call 911.
- \_\_\_\_\_ 8. Harm to the brain by underage drinking can be long term and irreversible.
- \_\_\_\_\_ 9. People that start drinking by age 13 have a 7 percent chance of becoming alcohol-dependent.
- \_\_\_\_\_ 10. The brain's hippocampus is responsible for learning and memory.
- \_\_\_\_\_ 11. Studies show that the hippocampus can be 10 percent smaller in underage drinkers.
- \_\_\_\_\_ 12. Alcohol slows down brain activity and hinders development.
- \_\_\_\_\_ 13. The brain goes through rapid development and "wiring" changes during the ages of 12 through the early 20s.
- \_\_\_\_\_ 14. Alcohol can harm the brain's ability to sense pleasure from normal, healthy things and experiences.
- \_\_\_\_\_ 15. Parents should allow their children to have privacy in their texting and internet activity.



### 1 BONUS MULTIPLE CHOICE

Which of the following are ways parents can show they care about their children?

- a. Explaining the risks of underage drinking
- b. Setting clear rules
- c. Knowing their children's friends
- d. Monitoring their children's activities
- e. All of the above

### 2 BONUS MULTIPLE CHOICE

Alcohol causes the most long-term harm to what two areas of the brain if a person drinks before 21?

- a. Prefrontal area and cerebellum
- b. Prefrontal area and hippocampus
- c. Cerebellum and cerebrum
- d. Brainstem and hippocampus
- e. All of the above

### 3 BONUS MULTIPLE CHOICE

The prefrontal cortex is responsible for:

- a. Planning
- b. Decision-making
- c. Good judgment
- d. Impulse control
- e. All of the above



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**PARENTS EMPOWERED**.org

True or False: 1. True, page 3; 2. False, page 3; 3. True, page 6; 4. True, page 10; 5. True, page 10; 6. True, page 9; 7. True, page 10; 8. True, page 6; 9. False, page 4; 10. True, page 6; 11. True, page 6; 12. True, page 6; 13. True, page 6; 14. True, page 4; 15. False, page 5. BONUS multiple choice: 1. E, All of the above, page 8; 2. B, Prefrontal area and hippocampus, page 6; 3. E, All of the above, page 6