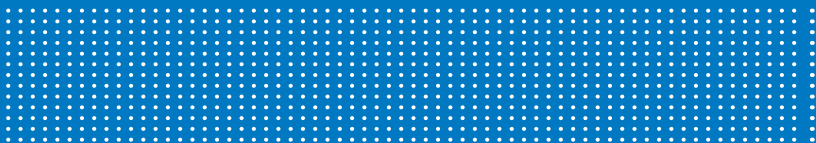


**SCREEN
COMMUNICATE
MOTIVATE**

**LEARN
ALCOHOL
BASICS**

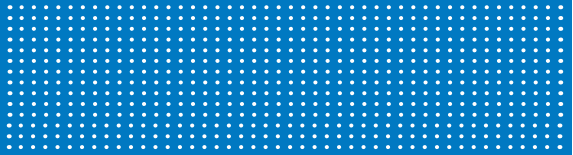
Information for **HEALTH CARE PROFESSIONALS**



Virginia Alcoholic Beverage
Control Authority
Education and Prevention
Publication Series



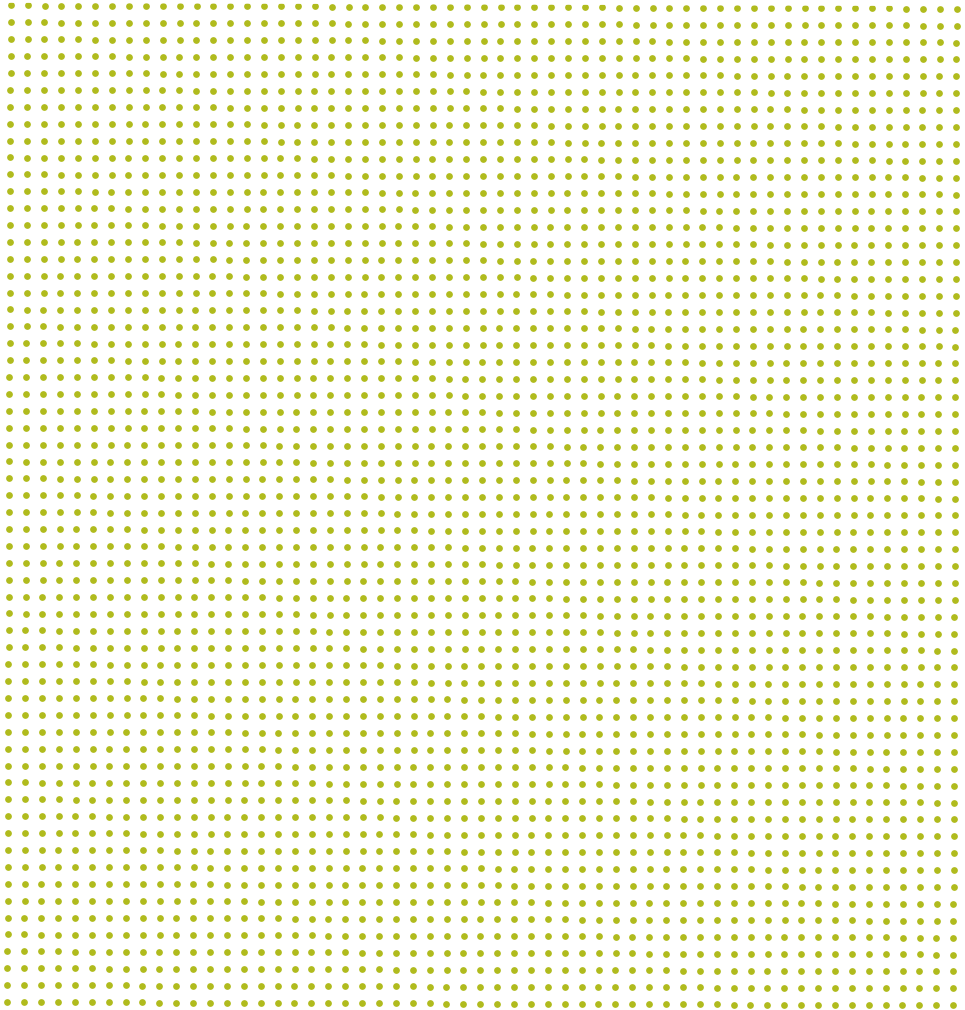
CONTENTS



| | |
|--|----|
| Introduction..... | 2 |
| How does the body process alcohol?..... | 3 |
| How does alcohol affect the body?..... | 6 |
| Binge and heavy drinking..... | 8 |
| Underage drinking..... | 9 |
| Alcohol poisoning..... | 10 |
| Alcohol and pregnancy | 11 |
| Is your patient at risk of an alcohol use disorder?..... | 13 |
| Brief counseling and screening | 14 |
| Responsible drinking tips for your patients..... | 16 |
| Resources | 17 |

INTRODUCTION

According to the Centers for Disease Control and Prevention, only one in six adults say a health care professional has ever talked to them about alcohol use. Alcohol screening and brief intervention for patients who drink excessively can reduce the amount of alcohol they consume on an occasion by 25% and help them set realistic goals. It is recommended for all adults. This publication includes information that will help health care professionals understand the effects of alcohol and provide knowledge and resources to patients..



HOW DOES THE BODY PROCESS ALCOHOL?

Alcohol is created naturally when sugars in grains, vegetables and fruits are fermented. It is primarily metabolized in the liver where cells containing alcohol dehydrogenase (ADH) convert alcohol into acetaldehyde. Acetaldehyde is later converted to carbon dioxide and water before it exits the body.



DID YOU KNOW?

The body typically takes **ONE HOUR TO PROCESS A STANDARD SIZE ALCOHOLIC DRINK.**



STANDARD DRINK SIZES



12 OZ. BEER
5 %ABV



5 OZ. WINE
12% ABV



1.5 OZ LIQUOR
80 PROOF/40% ABV

Standard size drinks contain approximately the same amount of alcohol and help estimate blood alcohol concentration (BAC). They are defined as 12 ounces of beer at 5% ABV, 5 ounces of wine at 12% ABV and 1.5 ounces of liquor at 80 proof or 40% ABV. Remember, some wines and beers contain a higher percentage of alcohol than others and not all mixed beverages are made with the same amount of liquor. For example, a Long Island Iced Tea includes multiple shots of alcohol that could equal up to three drinks in one glass.

There are several factors that impact the way a person reacts to alcohol and influence a person's blood alcohol concentration (BAC).

BAC is the amount of alcohol that is present in the bloodstream. For example, having a BAC of .10 percent means there is about one drop of alcohol for every 1,000 drops of blood present in the body. At certain BAC levels, alcohol has been shown to alter a person's visual functions and perceptions, affecting the ability to react, concentrate or pay attention, process information and operate a vehicle. The measurement of BAC is important for determining the role alcohol plays in car crashes, physical injuries, fires, crimes, family violence, suicides and other forms of injury.



DID YOU KNOW?



One study found that people who drank alcohol after a meal that included fat, protein, and carbohydrates **ABSORBED ALCOHOL ABOUT THREE TIMES SLOWER** than when they consumed alcohol on an empty stomach.

WHAT AFFECTS THE BAC LEVEL?

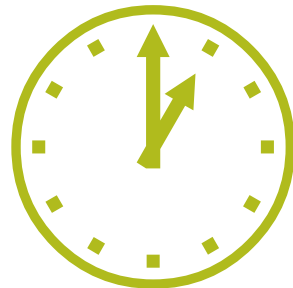


STRENGTH AND TYPE OF DRINK

Not all drinks are created equal. The alcohol content found in different types of beer, wine or mixed beverages can vary greatly. Encourage people to check the label of a canned or bottled beverage for the alcohol by volume (ABV) percentage or proof. Drinks can also have different effects based on their composition. For example, mixing a drink with a carbonated soda will quicken the effects of the alcohol due to the carbonation bubbles.

RATE OF CONSUMPTION

Taking shots or chugging drinks will increase the amount of alcohol that enters the bloodstream through the stomach. The liver metabolizes alcohol at an average rate of one standard size drink per hour. If a person drinks faster than this, the liver cannot break down all of the alcohol at the same rate and it will continue to circulate in the bloodstream.



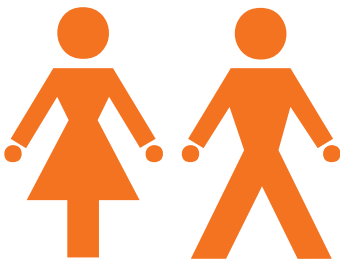


BODY SIZE/WEIGHT

Smaller people usually have a higher concentration of alcohol in their blood and become intoxicated more quickly if they drink the same amount a heavier person drinks. This is because the greater your body weight, the more blood and water you have to help dilute or weaken the alcohol.

FOOD

Eating food immediately before and while drinking will slow the absorption of alcohol into the bloodstream. Advise people to pick foods that are high in healthy fat or protein since they take longer to leave the stomach. Drinking on an empty stomach will raise your BAC much faster and increase your risk of alcohol poisoning.



BIOLOGICAL SEX

A female will have a higher BAC if they drink the same amount of alcohol as a male. This is because females generally have a higher proportion of body fat and fat has less water than muscle. Therefore, females have less body water to dilute or weaken the alcohol than males of the same weight. Females also have less of the enzyme alcohol dehydrogenase which breaks down alcohol, so the alcohol they drink stays in their bodies for longer.

OTHER DRUG USE

The use of medications or illegal drugs can increase the dangerous effects of alcohol and may cause unpredictable interactions.



HOW DOES ALCOHOL AFFECT THE BODY?



.02%

- Relaxation
- Loss of inhibitions
- Mild intensification of existing mood
- Lightheadedness
- May impair your ability to drive

.05%

- Mild euphoria
- Emotions and behavior become exaggerated
- Deficits in fine motor skills
- Delayed reaction time
- Lack of recognition of these deficits

.08%

- Motor skills impaired
- Mild speech impairment
- Balance is affected
- Sight and hearing are reduced
- Impaired judgment such that one's ability to evaluate or respond to sexual situations is affected
- Recognition of cognitive motor deficits is lost

.10%

- Lack of coordination and balance
- Memory and judgment are severely impaired
- Recognition of impairment is lost
- Emotions may be exaggerated to the point of aggression or violence

WARNING ZONE

0.00% - 0.06% BAC

When BAC is within this zone, the euphoric effects of alcohol are experienced, causing a release of dopamine from the brain.

- ▶ Virginia defines the legal limit for driving while intoxicated at a BAC of .08 percent for those 21 years of age or older



.15%



.20%



.30%



.40%

- Significant impairment of all mental and physical functions with deficits in judgment
- Feeling as if one is in a stupor (daze)
- Blackouts (loss of memory)
- Higher risk of accidental injury to self and others
- Significant loss of control over behavior

- Confusion
- Difficulty standing upright
- Movement requires assistance from others
- Physical harm to self often goes unnoticed or is ignored
- Vomiting may occur or gag reflex is affected with increased risk of asphyxiation from choking on vomit

- In a trance-like state
- Unconsciousness (passed out)
- Difficulty in becoming aroused
- ▶ This is equivalent to the level of surgical anesthesia

- Comatose
- ▶ Extremely high likelihood of death due to respiratory or cardiac failure

DANGER ZONE!
0.06% - 0.40% BAC

When BAC is within this zone, the depressant effects of alcohol are experienced, increasing your risk of negative outcomes.

BINGE AND HEAVY DRINKING



Binge drinking is the excessive consumption of alcohol that brings BAC levels to at least .08% in about two hours. This typically happens when males consume 5+ drinks or females consume 4+ drinks in one sitting. Heavy drinking is defined as more than 14 drinks per week for men or more than 7 drinks per week for women. Binge and heavy drinking are harmful to a person's health and can lead to liver damage, stroke, heart disease, cancer and many other health-related consequences. The Dietary Guidelines for Americans defines moderate alcohol consumption as up to one drink per day for females and up to two drinks per day for males.

What qualifies as high-risk drinking?

- For males, four or more drinks a day or 14 per week
- For females, three or more drinks a day or 7 per week
- Any alcohol consumption while pregnant
- For adults older than 65, no more than seven standard drinks per week
- Any alcohol consumption while younger than 21 years of age

According to the National Institute on Alcohol Abuse and Alcoholism, binge and heavy drinking can increase an individual's risk of alcohol use disorder. (<https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking>)

High Risk Populations

(ACCORDING TO PREVALENCE OF BINGE DRINKING)



COLLEGE STUDENTS & YOUNG ADULTS
AGES 18-24



MALES
AGES 35-64



UNDERAGE YOUTH



PREGNANT WOMEN



FEMALES
AGES 18-34



DID YOU KNOW?



AN ESTIMATED 95,000 PEOPLE (approximately 68,000 males and 27,000 females) die from alcohol-related causes annually, making alcohol the third-leading preventable cause of death in the United States.

According to the National Institute on Alcohol Abuse and Alcoholism (<https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/alcohol-facts-and-statistics>)

UNDERAGE DRINKING

Alcohol is the most widely abused substance among youth. The Centers for Disease Control and Prevention report that youth ages 12 through 20 drink 11% of all alcohol consumed in the United States. Underage drinking is dangerous because it negatively affects brain development and increases the risk of physical and sexual assault, legal problems, other drug abuse, heavy drinking later in life, suicide and homicide. This is not simply a problem for some families, it is a statewide concern that touches all members of the community regardless of age or drinking status.

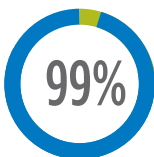


The earlier in life alcohol use begins, the greater the likelihood of problems. According to the National Institutes on Alcohol Abuse and Alcoholism, nearly 30% of youth have had at least one drink by age 15. These youth are five times more likely to develop alcohol use disorder compared to those who begin drinking at or after age 21. This is because the adolescent brain is more malleable and susceptible to harm than the adult brain. The part of the adolescent brain that controls reasoning and impulses – known as the prefrontal cortex – develops last and does not fully mature until the age of 25. This means that the brain is still under construction and adolescents are more likely to experience the negative consequences of drinking alcohol, such as alcohol poisoning and blackouts.



DID YOU KNOW?

ALCOHOL CAN BE EASY FOR YOUTH TO OBTAIN. IN MANY CASES, ADOLESCENTS ACCESS ALCOHOL THROUGH FAMILY MEMBERS OR FIND IT AT HOME.



Roughly 99 PERCENT of 12 to 14 year olds say they got alcohol for free the last time they drank.

According to the National Institute on Alcohol Abuse and Alcoholism
(<https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/underage-drinking>)

ALCOHOL POISONING

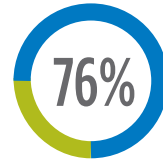
Alcohol poisoning happens when a toxic amount of alcohol is consumed, resulting in a high BAC. A large volume of alcohol in the bloodstream causes the body and its major functioning organs like the brain to consequently shut down.



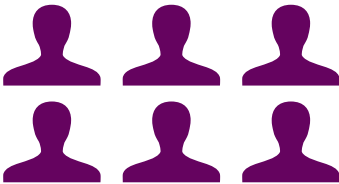
DID YOU KNOW?



According to the Centers for Disease Control and Prevention, **76 PERCENT** of alcohol poisoning deaths are among **ADULTS 35 TO 64**.



About **76 PERCENT** of those who die from alcohol poisoning are males



An average of **SIX PEOPLE** in the U.S. die each day because of alcohol poisoning with a total of **2,200 DEATHS** per year.

ALCOHOLISM WAS IDENTIFIED AS A MAJOR FACTOR IN **30 PERCENT** OF ALCOHOL POISONING DEATHS.



According to the CDC
(<https://www.cdc.gov/vitalsigns/alcohol-poisoning-deaths/index.html>)

ALCOHOL AND PREGNANCY



There is no known safe amount of alcohol consumption during pregnancy. Drinking any amount of alcohol can cause serious health problems and developmental issues to an unborn baby. More than three million women in the United States are at risk for exposing their child to fetal alcohol spectrum disorders.

What is a Fetal Alcohol Spectrum Disorder?

When a pregnant woman drinks an alcoholic beverage, the alcohol is transferred through her bloodstream and the umbilical cord to the fetus. Fetal Alcohol Spectrum Disorder, or FASD, is completely preventable especially with ongoing screening and brief intervention from doctors,

Signs and Symptoms of FASD

ABNORMAL FACIAL FEATURES
AND A SMALLER HEAD SIZE



BRAIN
DAMAGE

DIFFICULTY
PAYING
ATTENTION



HYPERACTIVITY

INTELLECTUAL
DISABILITY OR
LOW IQ



LEARNING
DISABILITIES



LESS THAN
AVERAGE HEIGHT



POOR
COORDINATION
AND MEMORY

POOR
REASONING
AND
JUDGMENT
SKILLS

LOW BIRTH WEIGHT
AND GROWTH

SPEECH AND
LANGUAGE
DELAYS



PROBLEMS
WITH THE
HEART, KIDNEYS
OR BONES



VISION OR HEARING
PROBLEMS



nurses and other health professionals.

Talk with your patients about their alcohol use at each appointment and recommend that they do not drink if they are pregnant or plan on becoming pregnant.



DID YOU KNOW?



6-9 OUT OF 1,000
school children

Alcohol use during pregnancy can also cause **ATTENTION-DEFICIT/HYPERACTIVITY DISORDER, LOW BIRTH WEIGHT, MISCARRIAGE, PREMATURE BIRTH, STILLBIRTH AND SUDDEN INFANT DEATH SYNDROME**



ONE IN TWENTY
WOMEN of child-bearing age reported binge drinking in the last 30 days



The healthcare costs associated with pregnant women drinking during pregnancy cost the United States more than **\$4 BILLION DOLLARS**

Pregnant people who experienced frequent mental distress and those who did not have a usual healthcare provider were MORE LIKELY TO REPORT ALCOHOL USE.

According to the CDC
(<https://www.cdc.gov/ncbddd/fasd/data.html>)

IS YOUR PATIENT AT RISK OF ALCOHOL USE DISORDER?

Alcohol use disorder (AUD), or alcoholism, is when drinking starts to become a problem for an individual and those around them. It is important to recognize if your patient displays any symptoms of an AUD and to immediately refer them to seek help.

To assess whether your patient may have AUD, here are some questions to ask.

In the past year, have you:

- Had times when you ended up drinking more, or longer than you intended?
- More than once wanted to cut down or stop drinking, or tried to, but couldn't?
- Spent a lot of time drinking, or being sick or getting over the aftereffects?
- Experienced craving — a strong need, or urge to drink?
- Found that drinking — or being sick from drinking — often interfered with taking care of your home or family? Or caused job troubles? Or school problems?
- Continued to drink even though it was causing trouble with your family or friends?
- Gave up or cut back on activities that were important or interesting to you, or gave you pleasure, in order to drink?
- More than once gotten into situations while/after drinking that increased your chances of getting hurt (such as driving, swimming, using machinery, walking in a dangerous area, or having unsafe sex)?
- Continued to drink even though it was making you feel depressed or anxious or adding to another health problem? Or after having had a memory blackout?
- Had to drink much more than you once did to get the effect you want? Or found that your usual number of drinks had much less effect than before?
- Found that when the effects of alcohol were wearing off, you had withdrawal symptoms, such as trouble sleeping, shakiness, irritability, anxiety, depression, restlessness, nausea, or sweating? Or sensed things that were not there?

If your patient answers yes to one or more of these questions, you should help them craft a treatment plan or refer them to the appropriate medical professional.

BRIEF COUNSELING AND SCREENING



Routinely communicating with your patients about their alcohol behaviors can promote responsible choices that enhance overall health and wellness. Using approaches that focus on changing drinking behavior by incorporating empathy and motivational support have been proven to be more effective.

Brief counseling and screening tips:

1. Ask all underage and adult patients about their alcohol use. Keep the recommended guidelines in mind when they respond. Your patient may not be aware that their drinking habits may be considered risky.
2. Advise women not to drink at all if there is a chance they could be or are planning to become pregnant.
3. Express empathy and avoid arguments by being understanding and not casting judgement.
4. Develop discrepancies by allowing your patient to identify what is good and what is not good about their drinking habits.
5. Roll with resistance and provide personalized feedback to help your patient find ways to reach their goals.
6. Support personal responsibility and elicit self-motivation. Help your patient to develop and commit to a strategy for change.
7. If needed, provide information on local treatment programs or use the SAMSHA treatment locator at www.findtreatment.samhsa.gov.
8. Leave the conversation on good terms no matter the outcome of the conversation.

Most importantly, make an effort to acknowledge and support any steps your patients take to stop or reduce their use.

Screening Tools



There are multiple screening tools available for use with your patients. Here are a few commonly used resources:

Screening, Brief Intervention and Referral to Treatment (SBIRT) is a comprehensive, integrated, public health approach to the delivery of early intervention and treatment services for persons with substance use disorders, as well as those who are at risk of developing these disorders. The purpose of SBIRT is to identify individuals who may have alcohol and/or other substance use problems. Following screening, a brief intervention is provided to educate individuals about their use, alert them to possible consequences and, if needed, begin to motivate them to take steps to change their behavior. Reimbursement for screening and brief intervention is now available in Virginia through commercial insurance CPT codes, Medicare G codes and Medicaid HCPCS codes.

Alcohol Use Disorders Identification Test (AUDIT) is a 10-item questionnaire developed by the World Health Organization that screens for hazardous or harmful alcohol consumption.

NIDAMED is a comprehensive tool developed by the National Institute on Drug Abuse that gives medical professionals tools and resources to screen their patients for tobacco, alcohol, illicit drug and nonmedical prescription drug use.

CAGE AID is a commonly used, five-question tool used to screen for drug and alcohol use.

Virginia Behavioral Health Risks Screening Tool for Pregnant Women and Women of Child Bearing Age combines standardized screening tools for substance use, perinatal depression and intimate partner violence. The adapted tool is approved for reimbursement by the Department of Medical Assistance.

RESPONSIBLE DRINKING TIPS FOR YOUR ADULT PATIENTS

Here are some tips you can provide for your patients to be responsible drinkers:



Keep track of how much you drink.



Know what a standard drink size is so that you can accurately count your drinks and estimate your BAC level.



Remember there is no known safe amount of alcohol if a woman is pregnant.



Pace yourself and don't consume more than one standard drink every hour. Alternate between a non-alcoholic beverage, water and food.



Don't drink on an empty stomach. Eat foods high in protein before, during and after you drink.



Engage in healthy activities that don't include drinking alcohol. Don't rely on alcohol to make a social situation more comfortable or fun. Focus on having as much fun without drinking as you do when you are!



Be aware of urges to drink. Don't use having a good or bad day as an excuse for drinking excessively.



Know how to say "no" when you are offered a drink but don't want one.



Be responsible for yourself and those around you. Don't allow your friends to drive drunk. Know how to identify a potentially dangerous situation and get help when needed.



Never drink and drive!

Virginia ABC provides free additional publication guides for all age groups that could be a great resource for your patients. Visit our website at www.abc.virginia.gov/education to learn more.

RESOURCES

Centers for Disease Control and Prevention (www.cdc.gov)

CDC works to protect America from health, safety and security threats, both foreign and domestic. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens in doing the same.

The Foundation for Advancing Alcohol Responsibility (www.responsibility.org)

The Foundation for Advancing Alcohol Responsibility leads the fight to eliminate drunk driving and underage drinking and promotes responsible decision-making regarding alcohol beverages.

National Institute on Alcohol Abuse and Alcoholism (www.niaaa.nih.gov)

NIAAA supports and conducts research on the impact of alcohol use on human health and well-being. It is the largest funder of alcohol research in the world.

Text4baby (www.text4baby.org)

Text4baby is a free service where women receive text messages three times per week, timed to their due date or their baby's birth date, through pregnancy and up until the baby's first birthday. Text4baby allows women to privately read about substance use during pregnancy and provides phone numbers to call and get help if needed.

Virginia ABC Education and Prevention Resources

Virginia ABC Education and Prevention provides programming and resources for all age groups. Please call or visit us online for more information.

Phone: 804-977-7440

E-mail: education@abc.virginia.gov

Web: www.abc.virginia.gov

[Facebook.com/VirginiaABCEducationAndPrevention](https://www.facebook.com/VirginiaABCEducationAndPrevention)

Miss Virginia School Tour

In partnership with Virginia ABC, Miss Virginia travels across Virginia to elementary schools spreading a message of health, wellness and prevention with students and teachers.

Being Outstanding Leaders Together (BOLT) Against Drugs and Alcohol

Provides drug and alcohol prevention knowledge to middle school students through regional community collaboration and high school peer leadership.

Project Sticker Shock

Supplies are provided to community groups in an effort to decrease social providing. The project includes stickers being placed on alcohol packaging reminding buyers to not provide to minors and is done in conjunction with a press event to help raise awareness.

Youth Alcohol and Drug Abuse Prevention Project (YADAPP)

A high school youth-led leadership conference equipping teens with a strategic plan and empowering them to keep their schools and communities alcohol and drug free.

Licensee Training Resources

Trainings are held regionally and conducted by ABC special agents to help businesses that sell alcohol become more responsible and to better understand Virginia laws, rules and regulations.

Virginia Office for Substance Abuse Prevention (VOSAP)

An organization that promotes collaboration among state and local agencies, organizations, coalitions and faith communities that address substance abuse prevention.

Educational and Prevention Materials

Brochures, posters, training DVDs and public service announcements are available to the general public at no cost.

Grant Program

Alcohol education and prevention grants assist community partners to develop and enhance initiatives related to alcohol education and prevention. Grant cycle is July through June with applications due in the spring.



**Virginia Alcoholic Beverage
Control Authority**

Virginia Alcoholic Beverage Control Authority
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