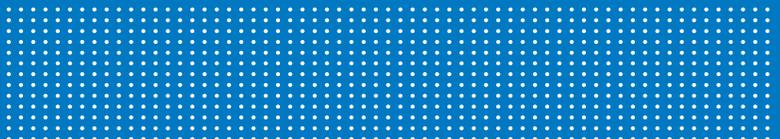


**SCREEN
COMMUNICATE
MOTIVATE**

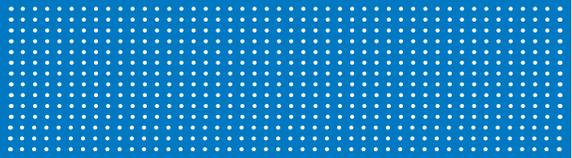
**LEARN
ALCOHOL
BASICS**

Information for **HEALTH CARE PROFESSIONALS**



Virginia Department of
Alcoholic Beverage Control
Education and Prevention
Publication Series

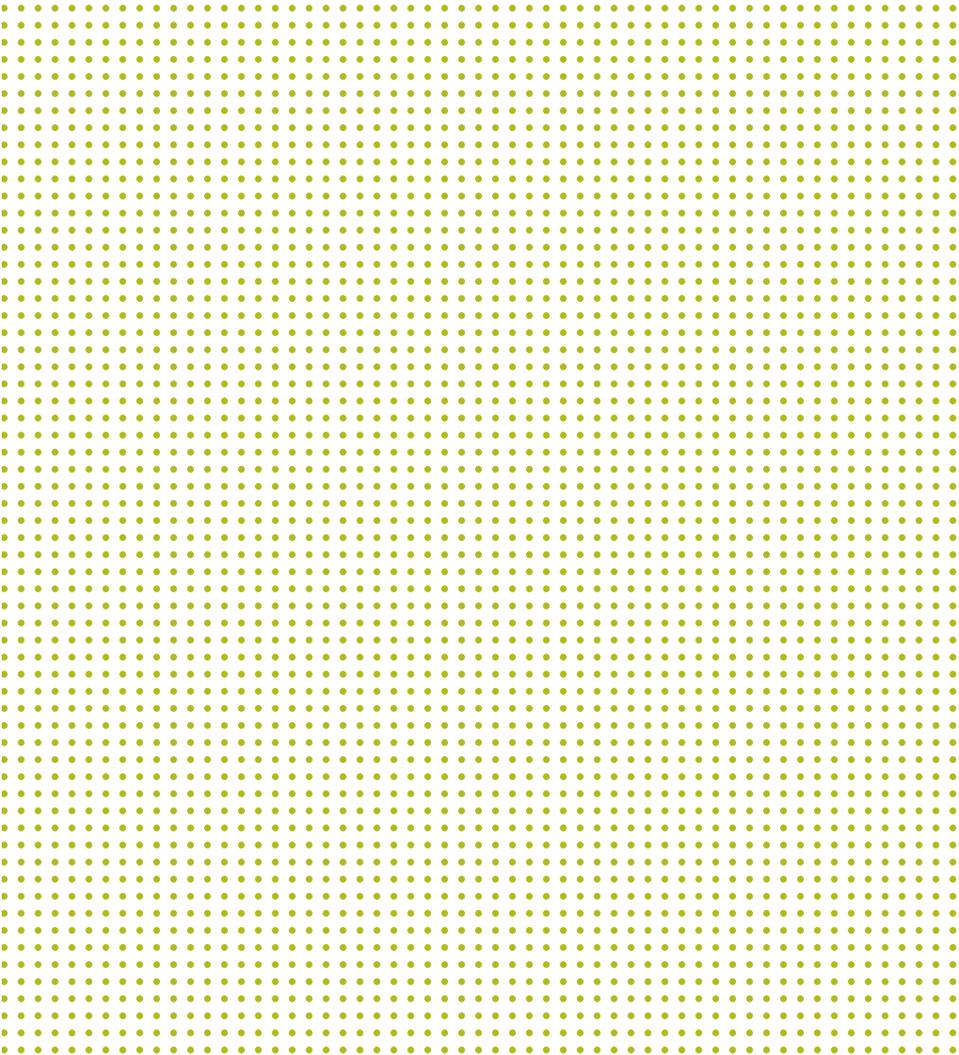
CONTENTS



Introduction.....	2
How does the body process alcohol?.....	3
How does alcohol affect the body?.....	6
High-risk 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

Only one out of six adults talk to their health care provider about the responsible consumption of alcohol and their drinking behaviors. Screening drinking behaviors and providing brief counseling to patients who drink more than the recommended amount of alcohol can reduce a patient's consumption by 25 percent in a single instance and reinforce responsibility. This publication is organized with general information in the front followed by specific tips, tools and resources.



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 **AN HOUR TO PROCESS ONE STANDARD UNIT OF ALCOHOL.**



STANDARD DRINK SIZES



12 OZ.
BEER



5 OZ.
WINE



1.5 OZ
LIQUOR

Not all drinks are created equal! For example, a Long Island Iced Tea includes multiple shots of alcohol that could equal up to three drinks. Keep in mind that one shot of 80 proof liquor, one standard glass of wine and one standard beer all contain approximately the same amount of alcohol. Some wines and beers contain a higher percentage of alcohol than others.

There are many factors that impact the way an individual responds to alcohol and their 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?



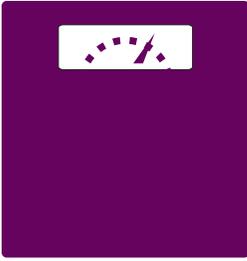
STRENGTH OF DRINK

Drinks can have different effects based on their composition. Mixing a drink with a carbonated soda, for example, will quicken the effects of the alcohol due to the carbonation.

RATE OF CONSUMPTION

Taking shots or chugging drinks will increase the amount of alcohol absorbed within a certain time period. The liver metabolizes alcohol at the average rate of one drink (12 oz. beer, 5 oz. wine, 1.5 oz. of 80 proof distilled liquor) per hour. If a person consumes more than one drink per hour, the remaining alcohol will circulate in the bloodstream until the liver is able to metabolize all of it.





BODY SIZE/WEIGHT

People who weigh less will generally be affected faster by alcohol than people who carry more weight. This is because people with a greater body weight have more blood and water in their bodies, which assists in the dilution of alcohol.

FOOD

A full stomach slows the absorption of alcohol into the bloodstream. Drinking on an empty stomach, however, will cause the BAC to rise more rapidly without food to assist in absorption.



GENDER

Women tend to reach a higher BAC faster because they typically have a greater fat-to-muscle ratio than men. Fat repels alcohol, whereas muscle absorbs it. Therefore, it generally takes less alcohol for a woman to show signs of its effects since women are typically smaller and have less muscle to absorb the alcohol.

DRUG USE

The presence of other legal or illegal drugs in a person's body can increase the effects of alcohol and may cause an unpredictable and dangerous outcome.



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 impaired
 - Recognition of cognitive motor deficits is lost
- ▶ Virginia defines the legal limit for driving while intoxicated at a BAC of .08 percent for those 21 years of age or older



.10%

- Lack of coordination and balance
- Memory and judgment are severely impaired
- Recognition of impairment is lost
- Emotions are exaggerated to the extreme point of belligerence in some cases



- Significant impairment of all mental and physical functions with deficits in judgment
- Feeling as if one is in a stupor
- Blackouts (drug induced amnesia)
- 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

HIGH-RISK DRINKING



High-risk drinking is often referred to as binge drinking and defines the overconsumption of alcohol or consuming alcohol in a way that is harmful to a person's health. It increases the chances of cirrhosis, fertility problems, heart disease, cancer and many other health related consequences. The 2015-2020 *Dietary Guidelines for Americans* defines moderate alcohol consumption as one drink per day for women and two drinks per day for men. A person is considered a high-risk drinker if they drink more than the recommended amount of alcohol occasionally, daily or weekly.

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 11 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, one in four people who exceed any of these limits either meets the criteria of an alcohol use disorder or faces a greater risk for developing one.

High Risk Populations

(ACCORDING TO PREVALENCE OF BINGE DRINKING)



DID YOU KNOW?



NEARLY 88,000 PEOPLE (approximately 62,000 men and 26,000 women) die from alcohol-related causes annually, making it the fourth leading preventable cause of death in the United States.

UNDERAGE DRINKING

A common topic of discussion is the minimum legal drinking age of 21 in Virginia. Some believe that lowering the legal drinking age would decrease problems associated with underage drinking. This belief is a myth as underage drinking problems were worse when states had a lower legal drinking age. In fact, the National Highway Transportation Safety Administration estimates that about 900 lives are saved annually because of fewer alcohol-related traffic crashes involving underage drivers. Research also shows that Europe faces more problems directly related to underage drinking than the United States due to its lower legal drinking age.



What are the risks associated with drinking alcohol before the age of 21? Alcohol affects the brain of an adolescent or young adult differently than it affects that of a mature adult. The human brain does not completely develop until a person reaches their early twenties. Drinking during adolescence can cause temporary and permanent damage to long-term and short-term memory. Additionally, the areas of the brain that encourage impulsivity and risk-taking develop early in a teen, while the areas that improve self-control don't develop until the early twenties. Teens are more likely to experience the negative consequences of drinking alcohol, such as alcohol poisoning, blackouts and memory loss.



DID YOU KNOW?

ALCOHOL USE DURING THE TEENAGE YEARS could interfere with normal adolescent brain development and **INCREASE THE RISK OF DEVELOPING AN ALCOHOL USE DISORDER (AUD).**



Roughly **20 PERCENT** of college students meet the criteria for an AUD.

ALCOHOL POISONING

Alcohol poisoning occurs when an excessive 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 deaths are men.



An average of **SIX PEOPLE IN THE U.S. DIE PER 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 THESE DEATHS.



Out of all adults who **BINGE DRINK 10 TIMES OR MORE A MONTH**, only **ONE IN THREE** have discussed drinking with their primary care physician.

ALCOHOL AND PREGNANCY



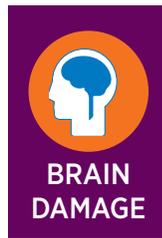
There is no known safe amount of alcohol consumption during pregnancy. Drinking any amount of alcohol can cause serious health problems and developmental issues to an unborn baby. More than three million women in the United States are at risk for exposing their child to fetal alcohol spectrum disorders.

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 counseling from doctors, nurses and other health professionals. FASD causes a variety of short-term and long-term effects.

Signs and Symptoms of FASD

ABNORMAL FACIAL FEATURES
AND A SMALLER HEAD SIZE

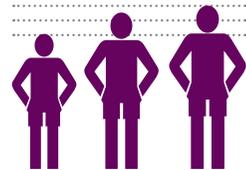


BRAIN
DAMAGE

DIFFICULTY
PAYING
ATTENTION



HYPERACTIVITY



LESS THAN
AVERAGE HEIGHT

INTELLECTUAL
DISABILITY OR
LOW IQ



LEARNING
DISABILITIES

LOW BIRTH WEIGHT
AND GROWTH



POOR
COORDINATION
AND MEMORY

POOR
REASONING
AND
JUDGMENT
SKILLS



PROBLEMS
WITH THE
HEART, KIDNEYS
OR BONES

SPEECH AND
LANGUAGE
DELAYS



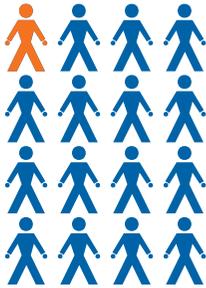
VISION OR HEARING
PROBLEMS



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?



ONE IN 20 school children in the United States have FASD

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 EIGHT WOMEN of child-bearing age binge drink at least three times a month



The healthcare costs associated with pregnant women drinking during pregnancy cost the United States more than **\$5.5 BILLION DOLLARS**



ONLY 17 PERCENT of pregnant women have talked about their alcohol use with their health care provider

IS YOUR PATIENT AT RISK OF AN ALCOHOL USE DISORDER?

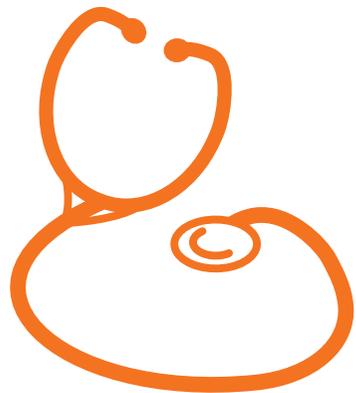
An alcohol use disorder (AUD), or alcoholism, is when drinking starts to become a problem to the individual and those around them. It is important to recognize if your patient displays any symptoms of an AUD and to immediately refer them to seek help.

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

In the past year, have you:

- 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?

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 (www.dbhds.virginia.gov/individuals-and-families/substance-abuse/substance-abuse-screening).

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 (www.pubs.niaaa.nih.gov/publications/arh28-2/78-79.htm).

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 (www.drugabuse.gov/nidamed-medical-health-professionals).

CAGE AID is a commonly used, five-question tool used to screen for drug and alcohol use (www.pubs.niaaa.nih.gov/publications/inscage.htm).

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 (www.dbhds.virginia.gov/individuals-and-families/substance-abuse/substance-abuse-screening).

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 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.

RESOURCES

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 alcoholic 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.

Virginia ABC Education and Prevention Resources

The Virginia ABC Education and Prevention Section 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.

College Tour

A multi-stop conference that focuses on promoting zero tolerance for underage drinking, social responsibility, collaboration and leadership on college and university campuses across Virginia.

Responsible Sellers & Servers: Virginia's Program (RSVP)

Managers' Alcohol Responsibility Training (MART)

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.

Alcohol and Aging Awareness Group (AAAG)

A statewide affiliate group that provides education, training and resources to prevent the misuse of alcohol and medications as adults age.

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 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 DEPARTMENT OF
ALCOHOLIC BEVERAGE CONTROL*

Virginia Department of Alcoholic Beverage Control
www.abc.virginia.gov • (804) 977-7440
2901 Hermitage Road • Richmond, VA 23220

Design by the Office of Graphic Communications: Virginia Department of General Services

