



Medical Society of Delaware

LEADING THE WAY TO A HEALTHY DELAWARE

CAMPAIGN FOR KIDS



Promoting the Health and Well-Being of Delaware Youth ... "It's OBVIOUS"

"It's OBVIOUS"

UNDERAGE DRINKING IN DELAWARE

What will be discussed:

- *Scope of the problem*
- *Costs*
- *Risk factors*
- *Illegality*
- *Risks to the developing brain*
- *Other consequences*
- *What is being done by law enforcement*
- *What families can do to help*

UNDERAGE DRINKING

- Alcohol use by persons under the age of 21
- Major health problem
- Alcohol is the most commonly used and abused drug among youths in the US
- Accounts for 4,700 deaths annually among underage youth

Source: Centers for Disease Control and Prevention

UNDERAGE DRINKING

- People aged 12 to 20 years drink 11% of all alcohol consumed in the US
- More than 90% of this alcohol is consumed in form of binge drinking
- On average, underage drinkers consume more drinks per occasion than adult drinker
- In 2010, there were approximately 189,000 emergency room visits by persons under age 21 for injuries linked to alcohol

Source: Centers for Disease Control and Prevention

Drinking Levels Among Youth

2011 Youth Risk Behavior Survey
High School Students, during past 30 days

- 39% drink some amount of alcohol
- 22% binge drink
- 8% drove after drinking alcohol
- 24% rode with a driver who had been drinking

Source: Centers for Disease Control and Prevention

Tragic health, social, and economic problems
result from use of alcohol by youth:

Homicide

Suicide

Traumatic Injury

Drowning

Burns

Violent Crime

Property Crime

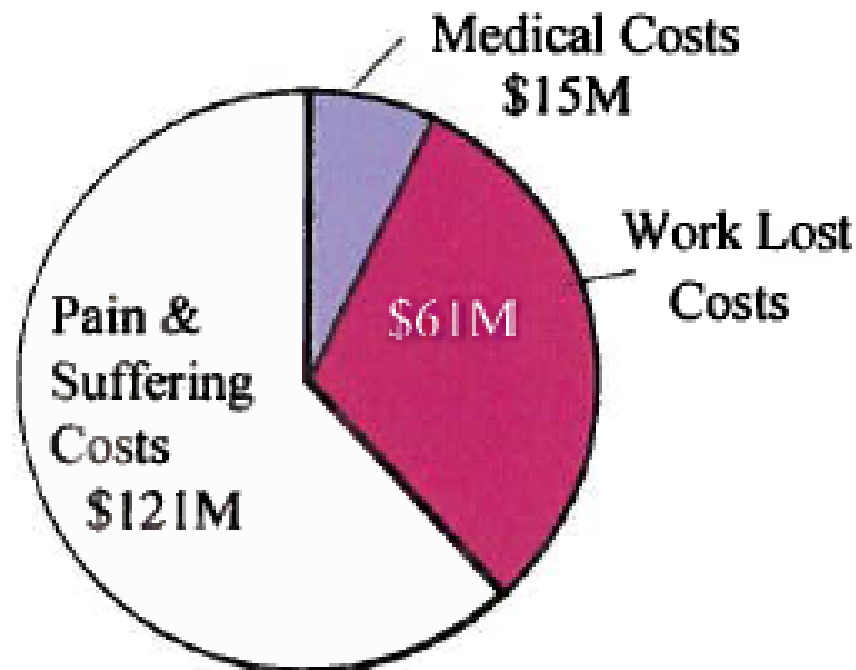
High Risk Sex

Fetal Alcohol Syndrome

Alcohol Poisoning

Problems and Costs Associated with Underage Drinking – *Delaware 2010*

**Costs of Underage Drinking
Delaware, 2010 \$**



Total: \$0.2 billion

Problems and Costs Associated with Underage Drinking – *Delaware 2010*

Cost = \$2,320 per year for each youth in State
\$3.47 per drink consumed underage

Excluding pain and suffering, direct cost of
underage drinking is \$76 million each year

This is \$1.33 per drink

Costs of Underage Drinking

By Problem, *2010*

PROBLEM	Total Costs (in millions)
Youth Violence	\$123.1
Youth Traffic Crashes	\$28.5
High-Risk Sex, Ages 14–20	\$18.7
Youth Property Crime	\$16.2
Youth Injury	\$6.2
Poisonings and Psychoses	\$1.9
FAS Among Mothers Age 15–20	\$2.0
Youth Alcohol Treatment	\$0.3
TOTAL	\$196.9

Risk Factors for Developing a Drinking Problem

- Age: Age 14 or younger are 6x more likely to develop alcohol problems than those who wait until age 21.
- Race and Ethnicity: American Indians and Native Alaskans highest risk.
- Genetics: Teens with alcoholic sibling or parent is 4x more likely to develop a problem with alcohol.
- Personality Traits: Teens who believe alcohol makes it easier to socialize with others tend to drink more.

Risk Factors for Developing a Drinking Problem (Continued)

- Presence of Mental Health Disorders: Alcohol use is higher in patients with depression, bipolar disorder, anxiety, schizophrenia.
- Influence of parents and peers: Teenagers at greater risk if alcohol is readily available at home or among peer group.
- Gender: Males are more likely to drink heavily than females, but females become addicted at lower levels and shorter duration of use.

Sources: Helpguide.org; Teenage Drinking; and Harvard Health Publication

Teen Girls Face Special Challenges

- Teenage girls that drink 5 or more drinks at least 5x in one month are doing so to escape problems or cope with frustration or anger.
- Girls are more likely to drink because of family problems than peer pressure.
- Drinking can delay puberty in girls and abusing alcohol can cause endocrine disorders during puberty.
- Teenage girls are more likely to have unprotected sex putting them at risk for increased risk of pregnancy and STDs

Sources: Helpguide.org; Teenage Drinking

Binge Drinking

- Consuming 5 or more drinks in less than 2 hours for males.
- Consuming 4 or more drinks in less than 2 hours for females.
- Consequences:
 - Blackout (lose memory of events that occurred while drinking)
 - Nausea and vomiting
 - Missed school
 - Uncharacteristic behavior
 - Alcohol poisoning

Source: Helpguide.org

Alcohol Poisoning

- Alcohol is CNS depressant
- Affects bodily functions
 - Unconscious or semi-conscious state
 - Slow respirations
 - Cold, clammy, pale, blue skin
 - Strong odor of alcohol on breath
- Alert
 - Never leave someone in this state
 - Call 911!

Source: Helpguide.org

Why Do Teenagers Drink?

- Self gratification: “I like it,” “Feels good to be tipsy,” “I am bored.”
- Peer pressure: “Because my friends are doing it,” “So my friends won’t make fun of me,” “To fit in.”
- Psychological: “So I can talk more easily to people,” “Gives me courage.”
- Curiosity.
- Adults do it.

Source: WebMD; Teens and Alcohol

Is Alcohol Addictive?

- YES! Highly addictive!
- 18 million adults are addicted
- Can occur any time in life
- Starting to drink as a teenager increases risk
- About 50% of US teens that start before age 14 will become addicted to alcohol
- 9% of people who start drinking at age 21 will become addicted

Source: WebMD; Teens and Alcohol

Is One Drink Safer Than Others?

- NO!
- All alcoholic drinks contain alcohol and can be dangerous
- The more you drink, the more dangerous your risks

Source: WebMD; Teens and Alcohol

Alcohol Contents

- Beer: 3–5% alcohol
- Wine: 12% alcohol
- Liquor: 40% alcohol
- One beer is the same as one glass of wine or one shot of liquor

Source: WebMD; Teens and Alcohol

UNDERAGE DRINKING IS AGAINST THE LAW!



OFFICE OF HIGHWAY SAFETY REPORTS THAT, IN 2009:

- ▶ A traffic crash was reported every 28 minutes in Delaware.
- ▶ In 102 fatal crashes, 118 persons were killed.
- ▶ Alcohol was involved in 42% of the fatal crashes.
- ▶ There were a total of 3,804 DUI arrests.

LAWS ADDRESSING MINORS IN POSSESSION OF ALCOHOL

- ▶ Underage possession of alcohol is prohibited.
- ▶ Underage consumption of alcohol is prohibited.
- ▶ Use of false ID to obtain alcohol is a criminal offense.

LAWS TARGETING UNDERAGE DRINKING AND DRIVING

- ▶ Blood Alcohol Concentration: BAC
- ▶ Underage operators of motor vehicles
 - BAC limit is 0.02%
 - BAC at or above limit is conclusive evidence of a violation
 - Suppliers to drivers under age of 21
 - Length of suspension/revocation is 30 days
 - BAC limit for adults is 0.08%



ALCOHOL'S EFFECT ON THE BRAIN

- ▶ Alcohol affects the brain chemistry by altering the levels of neurotransmitters
- ▶ Neurotransmitters are the chemical messages that transmit signals throughout the body that control:

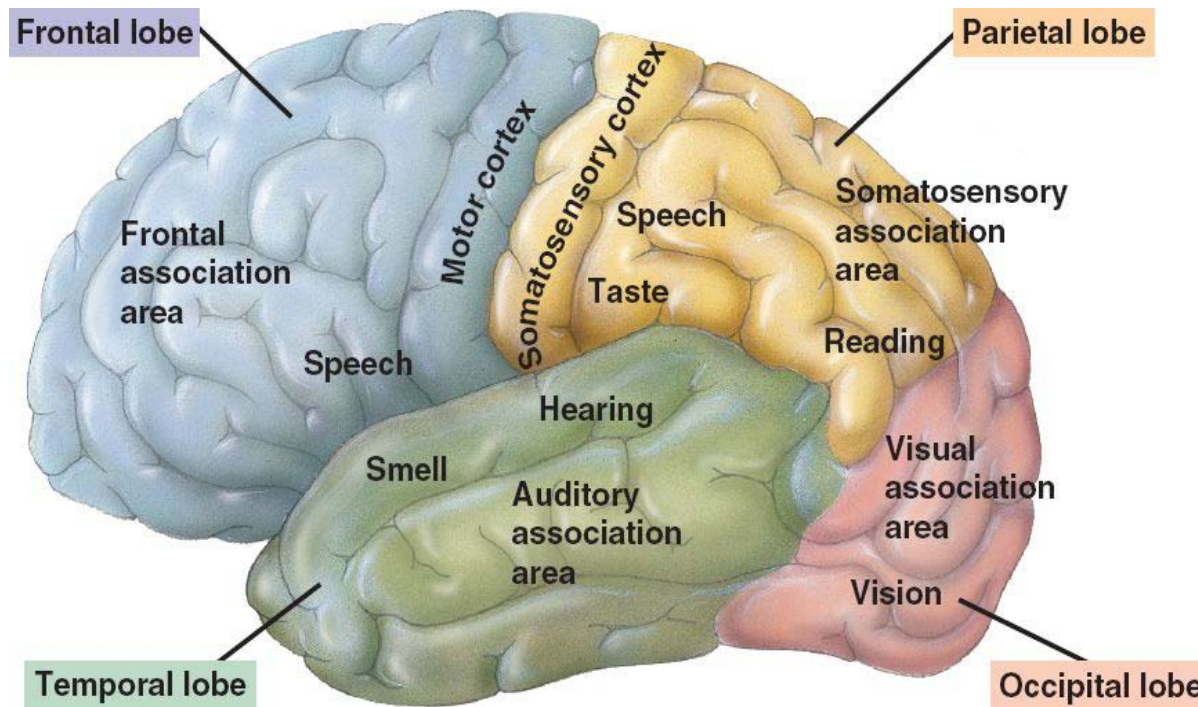
Thought Processes
Behavior
Emotion

PHYSIOLOGIC EFFECTS OF ALCOHOL

Alcohol increases GABA in the brain

- ▶ Increased levels of GABA causes sluggish movements and slurred speech.
- ▶ Alcohol decreases glutamate in the brain which is an excitatory neurotransmitter.
- ▶ Decreased levels of glutamate cause a physiologic slowdown.
- ▶ Alcohol increases the amount of dopamine in the brain.
- ▶ Increased amounts of dopamine creates feeling of pleasure.

ALCOHOL AFFECTS DIFFERENT REGIONS OF THE BRAIN

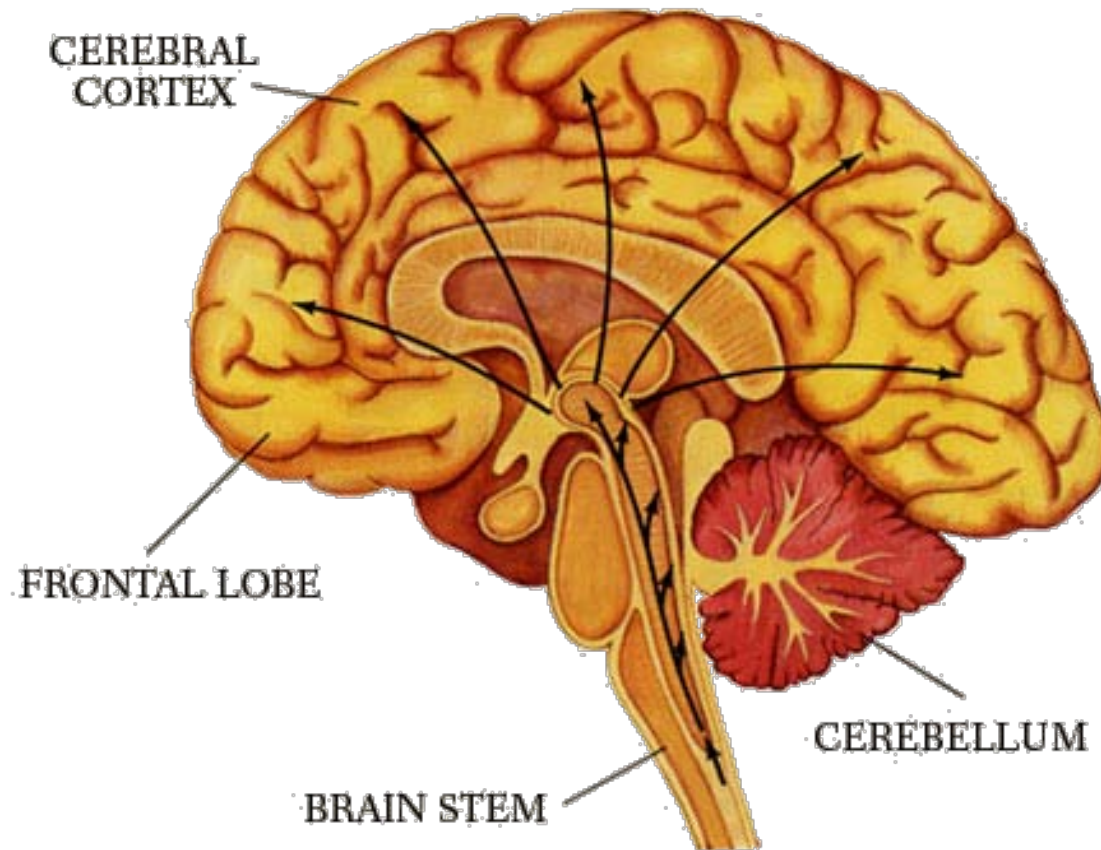


Cerebral Cortex

Thought processing and consciousness are centered.

- Alcohol depresses behavior center making the person less inhibited
- Inhibits thought processes
- Slows down processing information to eyes, ears, and mouth

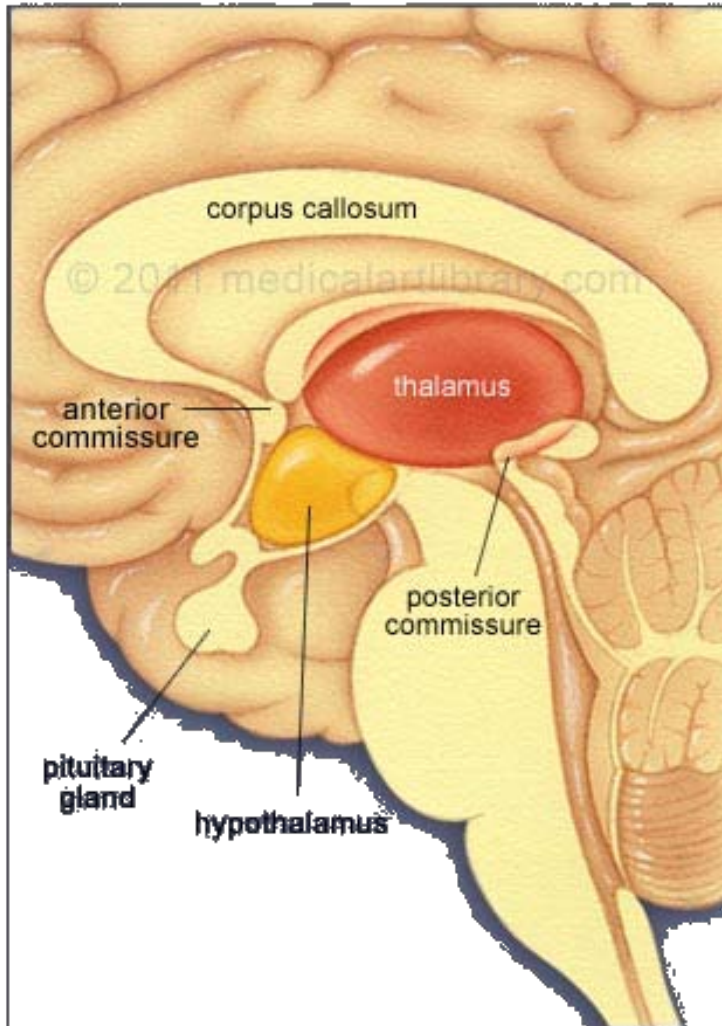
ALCOHOL AFFECTS DIFFERENT REGIONS OF THE BRAIN



Cerebellum

- Area of movement and balance
- Results in staggering, off balance, swagger

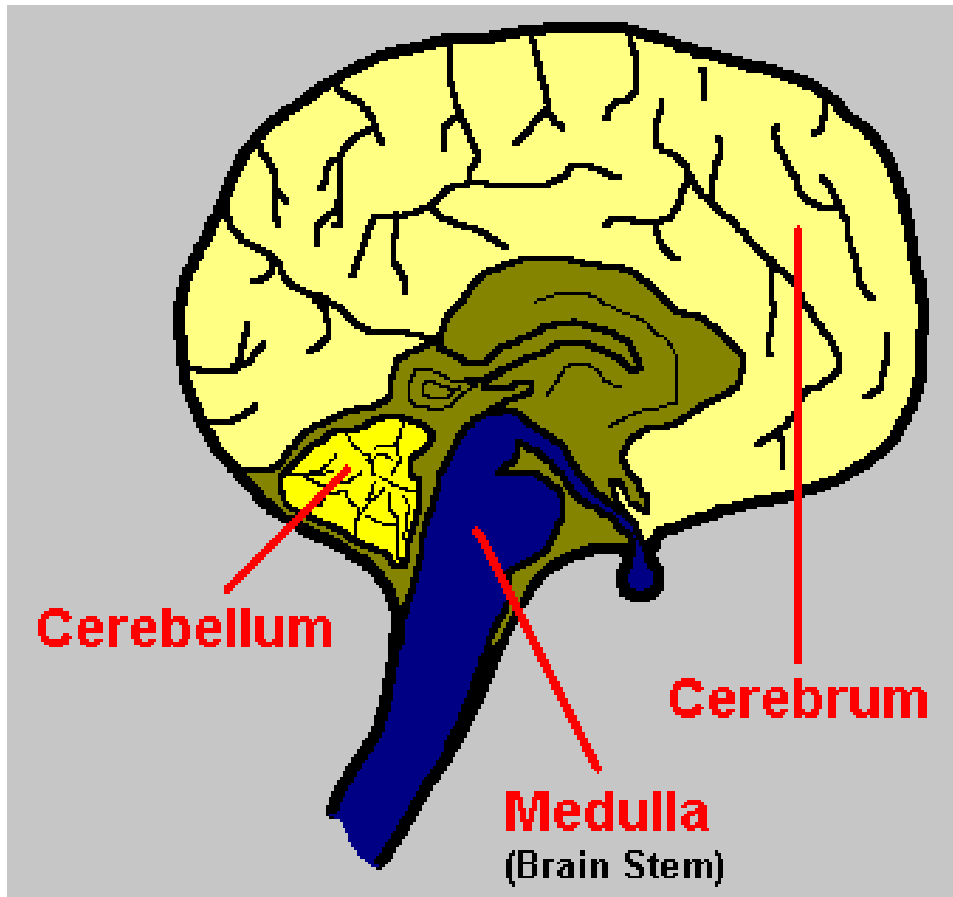
ALCOHOL AFFECTS DIFFERENT REGIONS OF THE BRAIN



Hypothalamus and Pituitary

- These two coordinate autonomic brain function and hormone release
- Alcohol depresses nerve centers in hypothalamus that control sexual performance and arousal
- Although urge to have relations may increase, sexual performance does not

ALCOHOL AFFECTS DIFFERENT REGIONS OF THE BRAIN



Medulla

- Area of brain where breathing, consciousness and body temperature occur
- Alcohol increases sleepiness
- Can slow breathing
- Lower body temperature (too much alcohol to this area can be life threatening)

SHORT TERM EFFECTS OF ALCOHOL

Blackouts: short term memory lapses

- ❖ Especially occurs with binge drinking
- ❖ Underage drinkers who black out tend to drink too much too quickly with rapid rise of blood alcohol level
- ❖ Females may be more vulnerable to alcohol's effect on brain than males

LONG TERM EFFECTS OF ALCOHOL

- ❖ Can leave permanent damage causing the brain to shrink
- ❖ Can lead to deficiency in fibers that carry information between brain cells
- ❖ Wernicke–Korsakoff Syndrome
 - ✓ Confusion, lack of coordination
 - ✓ Caused by deficiency of Vitamin B
 - ✓ Results in memory lapses and learning problems

LONG TERM EFFECTS OF ALCOHOL

(Continued)

- ❖ Can lead to dependence
 - ✓ Brain adjusts to a certain level of alcohol
- ❖ Withdrawal of symptoms include:
 - ✓ Disorientation
 - ✓ Hallucinations
 - ✓ Delirium
 - ✓ Seizures

ALCOHOL'S EFFECT ON THE REST OF BODY

Drinking excessive amounts of alcohol over time can seriously impact your health.

ALCOHOL'S EFFECT ON THE REST OF BODY

Liver

- ▶ Particularly vulnerable because it cleanses toxins from the body
- ▶ Drinking causes alcoholic hepatitis (nausea, vomiting, fever, loss of appetite, jaundice)
- ▶ 70% of those with alcoholic hepatitis develop cirrhosis

Liver



Healthy



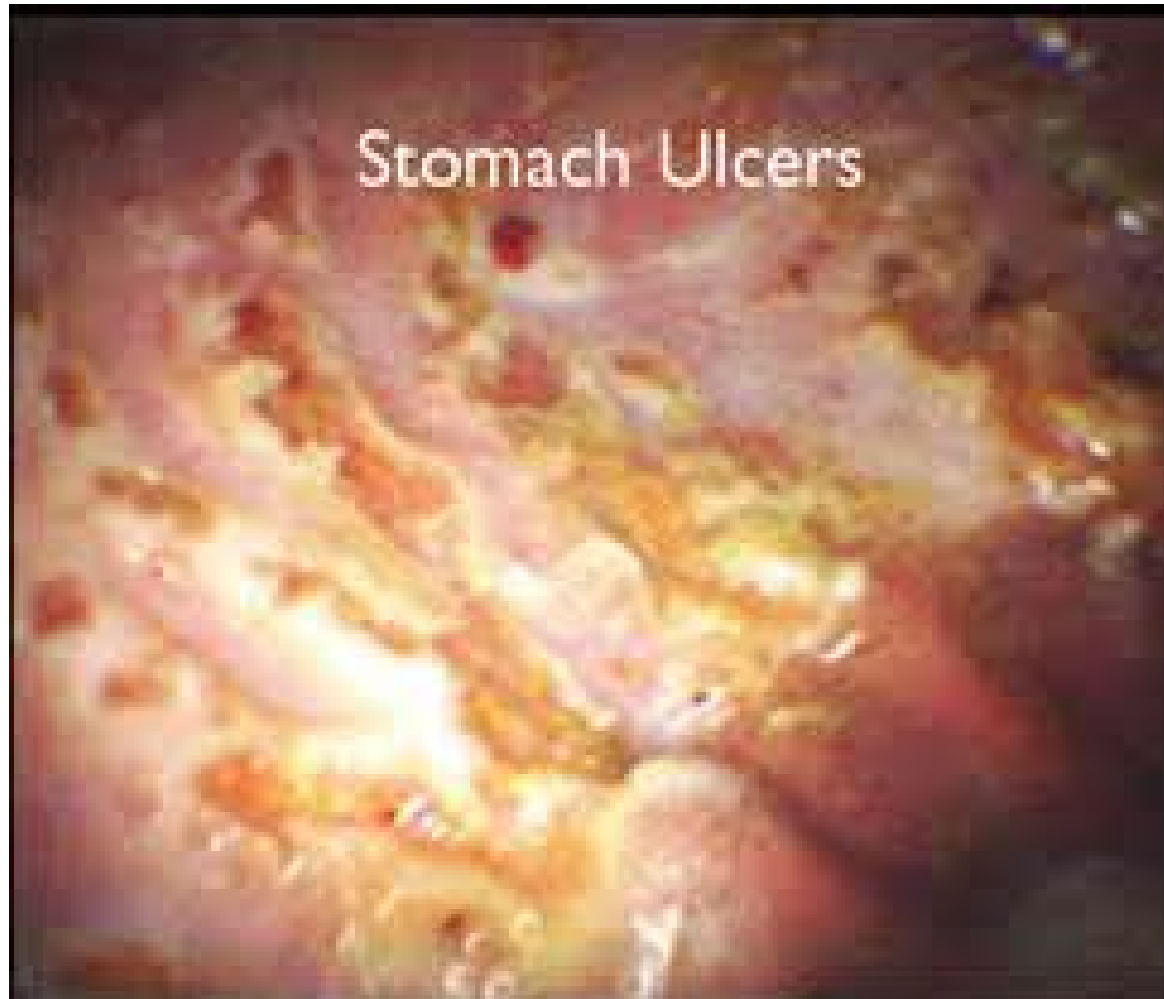
Cirrhosis

ALCOHOL'S EFFECT ON THE REST OF BODY

Stomach

- ▶ Irritates the lining of the stomach
- ▶ Can lead to ulcers
- ▶ Can lead to tears of the esophagus

Stomach



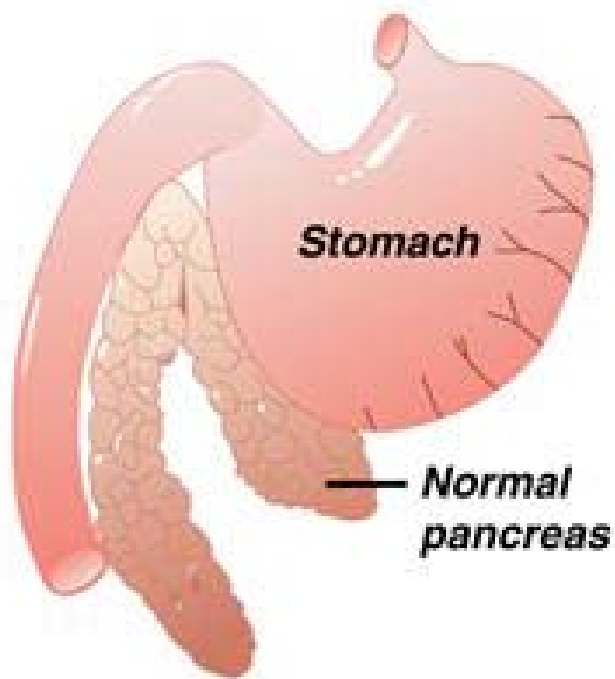
ALCOHOL'S EFFECT ON THE REST OF BODY

Pancreas

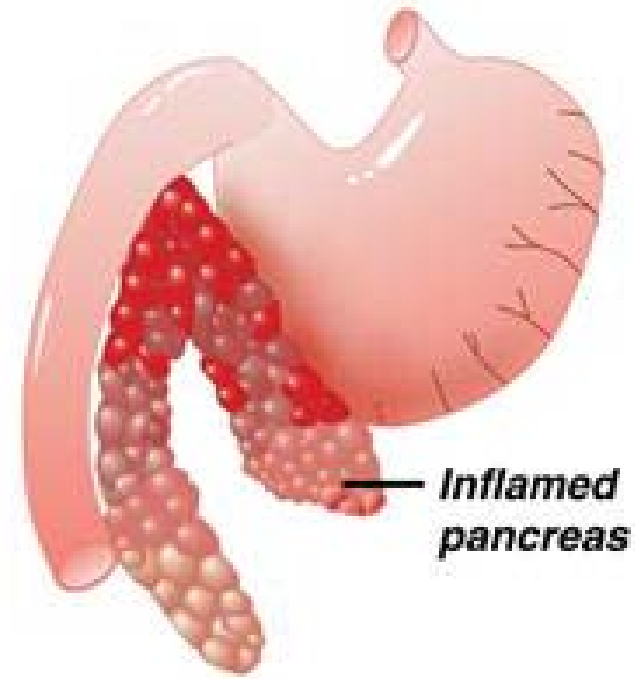
- ▶ Long term alcohol use leads to tenacious pain of alcoholic pancreatitis



Pancreas



Healthy



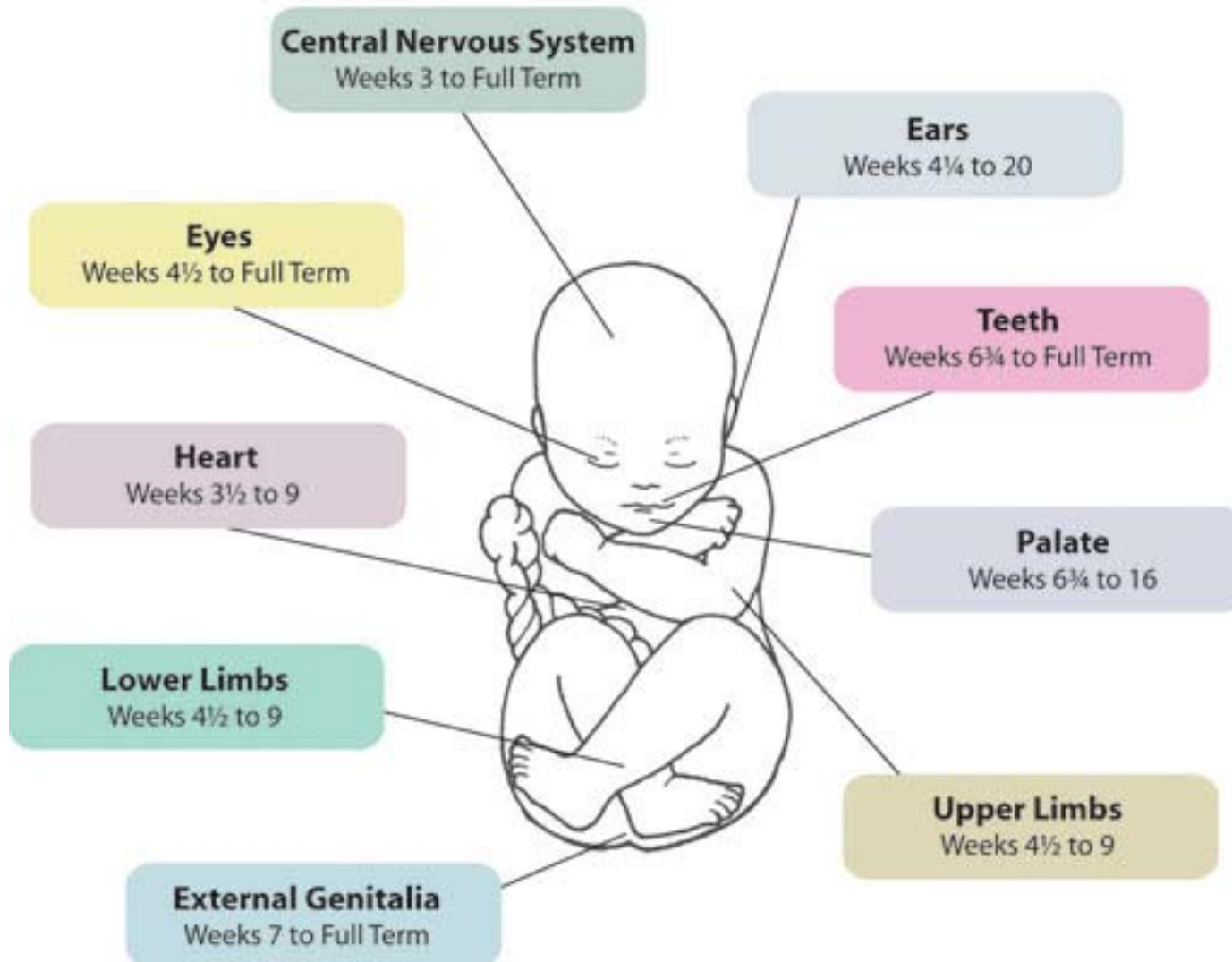
Pancreatitis

FETAL ALCOHOL SYNDROME

- Alcohol is especially dangerous to unborn babies
- Exposure to alcohol in womb leads to Fetal Alcohol Syndrome
- Features:
 - *Smaller than average size heads*
 - *Smaller amount of brain cells*
 - *Problems with learning*
- 1 / 3 of babies born to mothers who are alcoholics will develop Fetal Alcohol Syndrome

FETAL ALCOHOL SYNDROME

Periods of Fetal Development



FETAL ALCOHOL SYNDROME



Small head circumference

Epicanthic folds

Short nose

Short midface

Indistinct philtrum
(an underdeveloped groove
in the center of the upper
lip between the nose and
lip edge)

Low nasal bridge

Short palpebral fissures
obscure the canthus
(the inner corner of the
eye), a normal
feature in some people

Thin reddish upper lip

**What is being done to
address the problem of
UNDERAGE DRINKING**

?

Office of Highway Safety

Dedicated to reducing the number of impaired driving crashes and fatalities on Delaware's roadways

DUI Checkpoints

Special attention during 4th of July holiday, weekends, and winter holidays

Don't DUI It Campaign

- 1995 – Delaware passed its Zero Tolerance Law
- Law states anyone under 21 found to have BAC of 0.02% or higher will have suspension and fines
- Billboards, public service announcements, TV, radio

DUI Tracking System

- 1998 – Computer database which follows offenders from arrest through treatment and back to re-licensing
- GOAL: Real time information on the status of the offender
- Only agency, county, treatment providers have access to the system

Cops in Shops

- Program designed to eliminate purchase of alcohol by minors
- Undercover law enforcement officer in liquor stores posing as customers or employees

What can families do to
help prevent underage
alcohol use?

www.toosmarttostart.samhsa.gov

Be aware of factors that may increase the risk of alcohol use

- ▶ Social transitions such as graduating to middle or high school
- ▶ History of conduct problems
- ▶ Depression
- ▶ Family history of alcoholism
- ▶ Contact with peers involved in drinking alcohol or substance abuse

Be a positive adult role model

- ▶ If you drink yourself, drink responsibly (not too much, not too often)
- ▶ Stay away from alcohol in high risk situations
- ▶ Get help yourself if you have an alcohol related problem
- ▶ Do not give alcohol to your teens (make it off limits to them and friends)

Work with schools, communities, and government to protect teens from underage alcohol use by:

- ▶ Rewarding young people's decisions not to drink
- ▶ Establish rules about underage drinking at home, school, and in the community
- ▶ Insure penalties for breaking rules are well-known and enforce them the same way for everyone
- ▶ Parties and social events at home and elsewhere shouldn't permit underage drinking

Support your children and teens and give them space to grow

- ▶ Be involved in your teens' lives
- ▶ Encourage your teen's independence but set limits
- ▶ Make it easy for teens to share information about their lives

COMMUNICATE!

- ▶ Know where your teens are, what they are doing, who they are with, and who their friends are

Support your children and teens and give them space to grow (Cont'd)

- ▶ Set clear rules including rules about alcohol use. Enforce the rules you set
- ▶ Help your teens find ways to have fun without alcohol
- ▶ Do not let your teen attend parties where alcohol is served
- ▶ Remove alcohol so it is not available to teens at parties held at your home

Support your children and teens and give them space to grow (Cont'd)

- ▶ Help your teens avoid dangerous situations, such as riding in a car driven by someone who has been drinking
- ▶ Have your teen get professional help if you are worried about their involvement with alcohol

RESOURCES

▶ YOUR PHYSICIAN

- ▶ Al-Anon and Alateen Family Group Headquarters
www.al-anon.alateen.org (888) 4-AL-ANON
- ▶ Alcoholics Anonymous (various groups throughout Delaware)
- ▶ National Drug & Alcohol Treatment Referral Routing Service (800) 662-HELP (4357)
- ▶ Alcohol Hotline (800) ALCOHOL
- ▶ www.StopAlcoholAbuse.gov (prevention resources)
- ▶ Delaware Helpline
<http://www.delaware211.org/Services>

Thank you!

Stephen J. Kushner, DO, FAAFP
President



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