

Chapter 8 Alcohol

Hlth 2 Health and Wellness
Dr. Mark Tomita

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Learning Objectives

1. Define the following terms: alcohol, tobacco, nicotine, proof value, metabolism, blood alcohol concentration (BAC), cirrhosis, fetal alcohol syndrome (FAS), alcohol abuse, alcohol dependence, alcoholism, binge drinking, emphysema, chronic bronchitis, environmental tobacco smoke, mainstream smoke, sidestream smoke.
2. Explain how alcohol is absorbed and metabolized into the body.
3. Describe the immediate and long-term effects of drinking alcohol.
4. Discuss the effect of binge drinking and alcohol abuse in college students.
5. List the reason why people start using tobacco and why they continue to use tobacco.
6. Explain the short- and long-term health risks associated with tobacco use and exposure to environmental tobacco smoke.

Percent Alcohol in Common Drinks

- Beer (3-6%)
- Ale and malt liquor (6-8%)
- Wine (9-14%)
- Fortified wine (up to 20%, sherry, port)
- Hard Liquor (35-50%)

Beer 12 oz. = 5 oz. wine = 1.5 oz hard liquor

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Alcohol Absorption and Metabolism

- 20% rapidly absorbed in stomach and 75% absorbed upper part of small intestines
- Absorption variable: carbonated drinks (champagne) increase and food decrease absorption
- Metabolized in the liver, about 2-10% excreted through lungs, kidneys, and sweat glands unchanged
- Genetic and gender variations:
 - Asians- flushing syndrome;
 - women metabolize less in stomach so more get into blood

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Blood Alcohol Concentration (BAC)

After drink alcohol and absorbed into blood, alcohol levels begin rising and breakdown at a certain rate.

.00-.05%: Slight change in feelings, usually relaxation and euphoria, decreased alertness (2-3 hours to metabolize).

.05-.10%: Emotional instability, exaggerated feelings and behavior. Reduced social inhibitions. Impairments reaction time, fine motor, and driving. Legally drunk at .08% in many states, some .10%. (3-6 hours to metabolize).

.10-.15%: Unsteadiness in standing and walking, loss of peripheral vision, driving extremely dangerous. (6-10 hours to metabolize).

.15-30%: Staggering gait, slurred speech, pain perceptions greatly impaired (10-14 hours to metabolize).

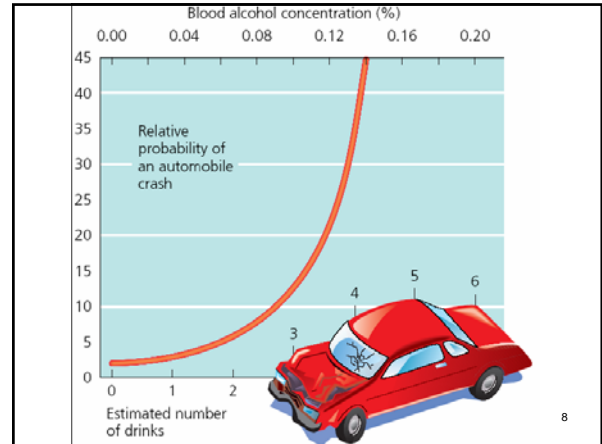
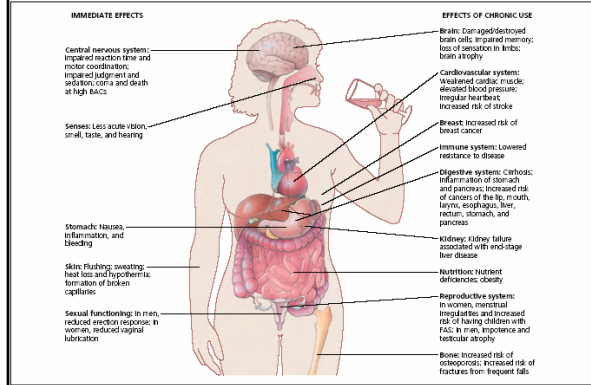
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Immediate and Long-Term Effects of Drinking Alcohol

- CNS depressant
- **Low Concentrations** (.03-.05%)- light-headedness, relaxation, release on inhibition.
- **Higher Concentrations-** interference with motor coordination, speech, thinking. At .10%, senses are decreased, sleepy. At .20%, most drinkers unable to function.
- **Alcohol poisoning-** Coma .35%. Death >.35%.
- Alcohol causes flushing and sweating which lowers body temperature.
- Hangover

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31 Effects of Alcohol Use



Time from First Drink	BAC Zones: 90–109 lb								110–129 lb								130–149 lb							
	Total Drinks								Total Drinks								Total Drinks							
1 hr	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
2 hr	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
3 hr	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
4 hr	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8

Total Drinks	150–169 lb								170–189 lb								190–209 lb								210 lb & Over							
	Total Drinks								Total Drinks								Total Drinks								Total Drinks							
1	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
2	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
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(0.00%) Not impaired
 (0.05–0.07%) Usually impaired
 (0.01–0.04%) Sometimes impaired
 (0.08% and up) Always impaired

Warning Signs of Abuse

- Drinking alone or secretly
- Deliberately using alcohol to perform or cope
- Feeling uncomfortable on certain occasions when alcohol is not available
- Escalating alcohol consumption beyond an already-established drinking pattern
- Consuming alcohol heavily in risky situations
- Getting drunk regularly or more frequently than in the past
- Drinking at unusual times

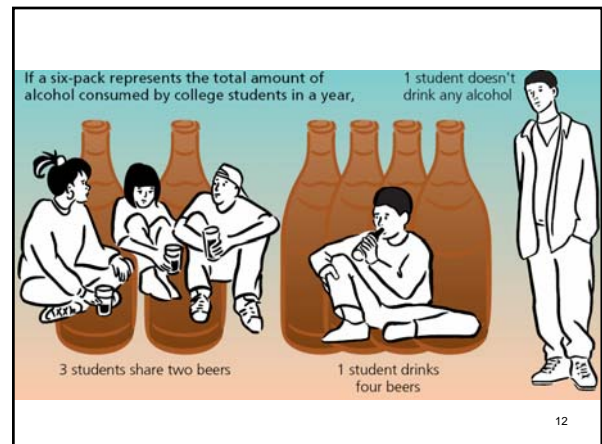
Binge Drinking

Most common in **traditional** college students attending residential college (live in dorms), but does not necessarily apply to commuter colleges with older populations of students.

Five drinks in a row for males, 4 females.

Frequent binge drinkers are more likely to:

- Miss classes and get behind in school work
- Argue with friends
- Engage in unplanned or unprotected sex
- Drive after drinking
- Get into trouble with campus police
- Damage property
- Get hurt or injured



Fetal Alcohol Syndrome

Pregnant Women Should Not
Drink Alcohol !!

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Fetal Alcohol Syndrome Facial Characteristics

The diagram shows a baby's face with the following labeled characteristics:

- microcephaly (flat forehead)
- epicanthal folds
- short palpebral fissures (small eye slits)
- low nasal bridge
- flat midface
- minor ear anomalies (set, pointed)
- indistinct philtrum
- short nose
- thin upper lip
- micrognathia (pointed chin)

FAS Facial Characteristics

The photograph shows a baby with the following labeled characteristics:

- Small Eye Openings
- Smooth Philtrum
- Thin Upper Lip

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FASD Most Serious Characteristics

- Attention deficits
- Memory deficits
- Hyperactivity
- Difficulty with abstract concepts
- Inability to manage money
- Poor problem solving skills
- Difficulty learning from consequences
- Immature social behavior
- Inappropriately friendly to strangers
- Lack of control over emotions
- Poor impulse control
- Poor judgment

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Chapter 8 Alcohol and Tobacco

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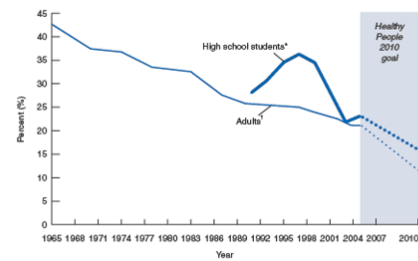
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Tobacco Use Statistics

- Percent of Tobacco Addicts in USA: 26% men, 22% women
- >400,000 Americans die annually from cigarettes
- Environmental tobacco smoke causes more than 60,000 deaths annually among nonsmokers
- 10% of infant deaths are caused by pregnant women smoking
- Spit tobacco, cigar use, and hookahs are rapidly rising

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Trends in Current Smoking by High School Students and Adults, United States, 1965-2005



* Percentage of high school students who smoked cigarettes on 1 or more of the 30 days preceding the survey (Youth Risk Behavior Surveys, 1991-2005).
 † Percentage of adults who are current cigarette smokers (National Health Interview Survey, 1995-2005).

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Tobacco Addiction

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Why People Smoke

- **Nicotine addiction** - addiction can start a few days after have a few cigarettes. Half of teenagers progress to daily smoking, and become addicted
- **Social and psychological factors**- physical addiction, and habits (using tobacco in social situations), character
- **Why start in the first place?**-- appear older, mature, cool, manly, parents smoke do not discourage smoking.
- **Who uses tobacco?**- 90% of new smokers are children and teens, average age is 13.

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Loss of Control

- 75% of tobacco addicts **SAY** want to quit
- 60-80% of addicts quit at stop-smoking clinics, but nearly all relapse
- tobacco addicts have dysfunctional need-gratification cycle
- average 40 minutes between nicotine fix (get edgy, irritable, trouble concentrating if no drug)

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Tolerance and Withdrawal

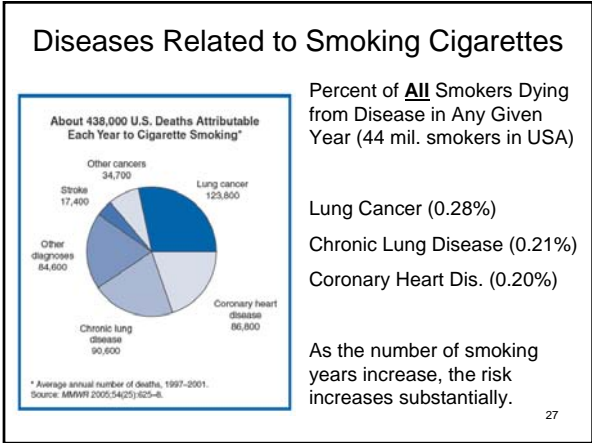
- need to smoke more to have same effect
- withdrawal symptoms- cravings, insomnia, confusion, tremors, nausea, irritability, anger, depression
- most symptoms gone in 2-3 days
- many have cravings for several years after stop smoking

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Tobacco and Disease

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- ### Health Hazards
- Tobacco smoke: A poisonous mix
 - The immediate effects of smoking
 - The long-term effects of smoking
 - Other forms of tobacco use
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- ### Immediate Effects of Mild Nicotine Poisoning
- dizziness, faintness, rapid pulse, cold and clammy skin, N/V, diarrhea
 - either excite or tranquilize
 - stimulates cerebral cortex and adrenal glands (epinephrine release)
 - increase blood pressure, constricted blood vessels
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- ### Long-Term Effects of Smoking
- Coronary heart disease (CHD) and other cardiovascular diseases such as stroke, aortic aneurysm, and pulmonary heart disease
 - Lung cancer and other cancers
 - Chronic obstructive lung disease (COLD) including emphysema and chronic bronchitis
 - Additional health, cosmetic, & economic concerns such as ulcers, impotence, reproductive health problems, dental diseases, diminished physical senses, injuries, cosmetic concerns (wrinkles and more), & economic costs
 - Cumulative effects on reduced life expectancy and reduced quality of life
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- ### Other Harmful Forms of Tobacco
- Spit (smokeless) tobacco
 - snuff
 - chewing tobacco
 - Cigars and pipes
 - Hookahs
 - Clove cigarettes and bidis (from India, Indonesia, and Pakistan)
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Effects of Environmental Tobacco Smoke (ETS)

- ETS is also known as secondhand smoke
- Mainstream smoke is exhaled by tobacco addicts
- Sidestream smoke comes off the burning end of the tobacco product
- Nonsmokers are subjected to health hazards
- Children have increased health problems
- Smoking and ETS present dangers for both a pregnant woman and the fetus
- Try avoiding ETS

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Avoiding ETS

- Speak up tactfully and politely to get the addict to stop smoking near you
- Display reminders if necessary
- **NEVER** tolerate smoking indoors, including cars
- Don't go to restaurants and other facilities that permit smoking
- Fight for a smoke-free work environment
- Discuss quitting strategies with the addict

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Breaking the Addiction Cycle

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Benefits of Quitting Smoking

- Improved appetite, sense of taste and smell
- Improved cardiopulmonary functions
- Increased energy and alertness
- Decreased need for sleep
- Fewer headaches
- Improved respiratory status
- Reduced risk of lung, oral, and other cancers
- Reduced risk of cardiovascular diseases

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Behavior Change and Tobacco Addiction (Social Learning Theory)

1. Tobacco addicts can quit if they value the healthy behavior (VALUE).
2. Tobacco addicts must believe they are in control of their own behaviors (INTERNAL LOCUS OF CONTROL).
3. Tobacco addicts must feel confident that they can stop abusing drugs (SELF-EFFICACY).
4. Tobacco addicts must set realistic and specific goals, both short term and long term.
5. Tobacco addicts must have social support to maintain a tobacco-free life.

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Alternative Products to Help With the Nicotine Addiction Withdrawal

- Patches
- Gum
- Bottled water (4mg nicotine per bottle)

<http://www.niclite.com>



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