

WRECK YOUR LIFE

Knowledge/Understanding; Communication

Purpose

Through experience and observation, students will be able to identify the physiological changes/effects to the brain and body which occur while impaired. Students will also be able to identify the signs of alcohol poisoning and what to do if faced with these situations.

Equipment Included in Kit:

- 1 bean bag
- 1 bucket
- 1 preschool game
- 1 set of sobriety goggles
- DVD (Alcohol and the Brain, What Would You Do?, More than a Hangover).

Teacher to Provide:

- Computer and projector
- 1 line on floor (masking tape)
- 1 desk/table (for preschool games).

Student Homework: included.

Brief Description:

Please refer to the Alcohol Backgrounder for information that you will find helpful to engage in discussion and to answer student questions. Below you will find five activities that you can do with your class. Each activity is designed to engage students and stimulate discussion.



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Activity 1:

As a class watch the 3 minute DVD segment - Alcohol and the Brain, Get the Facts (Australia) (available online at www.youtube.com/watch?v=zXjANz9r5F0 start at 2:50 stop at 6:14).

Activity 2:

Divide students into three teams to complete three tasks:

1. Walking the line (balance, coordination)
2. Bean bag toss (eye-hand coordination)
3. Pre-school puzzles (eye-hand coordination, fine motor skills, depth perception).

Each member of the team completes the whole circuit first without sobriety goggles, then repeats the circuit wearing sobriety goggles. Team members will "spot" each other while wearing the goggles. Students to describe what they felt and what they observed.

Note: Please limit the use of the goggles to these activities, otherwise it becomes very easy for the message to be lost in the midst of "having fun".

Activity 3:

As a class, review the DVD on alcohol poisoning titled What Would You Do? (**Note:** stats and legislation are American) (available on line at www.youtube.com/watch?v=TuFlyYKsmos)

Activity 4:

As a class, review power point More Than a HANGOVER - Facts About Alcohol Poisoning included on DVD.

Activity 5:

Hand out the student worksheet on alcohol poisoning.

Review the definition of alcohol poisoning with the students by asking them what they think it means to have alcohol poisoning.

Discuss the signs of alcohol poisoning and what to do if alcohol poisoning is observed.

Divide the students into smaller groups to practice the recovery position.



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Alcohol Backgrounder

1. How does alcohol affect the body?

When you take a drink, about 20% of the alcohol is absorbed by your stomach; the remaining 80% is absorbed in your small intestine. After the alcohol is absorbed, it enters your bloodstream and is carried throughout your body. Your body systems simultaneously work to remove the alcohol from the bloodstream. You don't need to drink much before you are taking in alcohol faster than your body can remove it. When this happens, your blood alcohol concentration (BAC) goes up and keeps going up even after you have stopped drinking. The increase in BAC soon causes you to feel the physical effects of alcohol.

Ultimately, many of the effects of alcohol act on your brain. Alcohol affects the different regions of the brain in different ways:

- Alcohol first affects the frontal lobes of your cerebral cortex, where thought processing and consciousness are centered. In these lobes are the behavioural inhibitory centres. Alcohol depresses these inhibitory centres, which means you become less inhibited. Alcohol slows your ability to process information from your eyes, ears, mouth, and other senses. It becomes difficult to think clearly as alcohol inhibits thought processes.
- Next, alcohol affects the cerebellum, your centre of movement and balance, resulting in a staggering, off-balance gait.
- Finally, alcohol affects the medulla or brain stem, which is the area of the brain that handles such automatic functions as breathing, consciousness and maintaining body temperature. It can slow breathing and lower body temperature and even affect the heartbeat. It is the loss of these automatic functions that can cause unconsciousness, coma and death.

2. Why do I get a headache after drinking?

Alcohol has a dehydrating effect. When you drink it, your body increases urine production in order to eliminate the ethanol. The resulting dehydration causes headaches, dry mouth, and lethargy. Dehydration also causes fluids in the brain to be less plentiful. This can be mitigated by drinking water after consuming alcohol. Alcohol's effect on the stomach lining may account for the nausea that might accompany your headache.

3. Why do I say and do things I never intended to when I'm drunk?

The answer to this question goes back to what we learned about the brain in the first question. Alcohol depresses (slows down) different parts of the brain, including the part that controls inhibition, reasoning and judgment. This is the part of your brain that allows you to make good decisions ,or for example, to think before you speak. Since alcohol depresses the inhibitory and reasoning centres, you are less likely to think before you act or speak.

4. Why do I pass out?

The answer to this question also goes back to our earlier discussion of the brain. Excessive drinking leads to a high concentration of alcohol in the blood, which eventually affects the brain stem, the part of our brain that controls automatic functions like maintaining the heart rate and breathing. This is very serious: passing out, in plain language, is your body shutting down. But passing out is not the only sign of alcohol poisoning.

Other signs include:

- mental confusion
- vomiting
- seizures
- slow breathing (fewer than eight breaths per minute)
- irregular breathing (10 seconds or more between breaths)
- hypothermia (low body temperature)
- bluish skin color and paleness.



5. How much alcohol is too much?

Many different factors affect a person's level of intoxication, so it is difficult to gauge exactly how much is too much. What is known is that it takes one-and-a-half to two hours for your body to metabolize one standard drink (see below for definition of a standard drink).

It is important to note that there are a large number of factors that greatly affect how your body may react to alcohol. For example, if you drink at a rate faster than your body can eliminate alcohol or mix alcohol with other substances such as energy drinks, you are at an increased risk of harm. For that reason, Health Canada has released low-risk drinking guidelines.

Not all alcohol is created equal. Serving sizes and alcoholic strength vary and often contain more alcohol than one standard drink. These guidelines refer to a "standard drink" of beer, wine, liquor and coolers. The following are equal to one standard drink:

- 341-ml (12 ounces) bottle of 5% strength beer, cider or cooler
- 142-ml (5 ounces) glass of 12% strength wine
- 43-ml (1.5 ounces) shot of 40% strength liquor.

6. Is there a difference in the way alcohol affects women and men?

In general, if a woman and a man drink the same amount of alcohol, the woman feels stronger effects and feels the effects sooner. This is because women have a lower body water content. Alcohol is more diluted in a man's body, more concentrated in a woman's. The way alcohol is processed by women's bodies is also different from the way it is processed by men's. These differences cause women to feel intoxicated more quickly than men do. Body fat and weight will also affect the way men and women metabolize alcohol. Women naturally have a higher body fat composition than men.

7. How do I sober up quickly?

You can't. The bottom line is that only time can help you sober up. The time it usually takes for your body to remove one standard unit of alcohol is one-and-a-half to two hours. Coffee helps you feel more awake, a shower refreshes you, and eating feeds you, but none of these helps you to get sober. After an extremely heavy night of drinking, it is possible to still be drunk the next morning even if you don't feel like you are.

8. How long do I have to wait before I can drive?

There are so many factors that affect how alcohol is metabolized and absorbed into the bloodstream that there is no one definitive answer. That being said, five 12-ounce beers represent five standard drinks, which would take a total of 7.5 to 10 hours to fully clear out of the bloodstream. It is worth reminding students that with graduated licensing, the law does not tolerate any alcohol in the bloodstream. So remember, you can still have a BAC that is too high to drive by the next morning.

References:

Alberta Health Services-Alcohol 101



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Alcohol Poisoning

Alcohol poisoning is simply another name for a drug overdose. An alcohol overdose is a dangerous and often deadly result of drinking too much alcohol in a short period of time (binge drinking) that results in toxic blood alcohol levels. A person with alcohol poisoning needs immediate medical attention. If you suspect someone has alcohol poisoning, call 911.

Signs of Toxic Blood Alcohol Levels (Alcohol Poisoning)

- Very slow breathing (or no breathing at all)
- Cold skin
- Lips and nails turning blue
- Throwing up
- Seizures
- Loss of consciousness (and you can't wake the person up)

What to do if someone has alcohol poisoning:

People experience the effects of alcohol differently. If a large amount of alcohol is in a person's system, it can result in unconsciousness.

- ✓ Try to wake the person up by calling their name, shaking or pinching them. If they don't respond, call 911.
- ✓ Put the person in the recovery position (shown below) so they will not choke to death on their vomit if they get sick.

It is important to contact emergency services quickly. If you aren't sure what to do, it's always better to be safe than sorry. Get help if you suspect an alcohol overdose, even if the person is underage.

The Recovery Position



If someone passes out from drinking too much, you can help by putting them in the recovery position. The most important thing is to keep the person's airway open so they don't choke on their vomit.

1. Raise the person's closest arm above their head and bend knee of opposite leg. Prepare the person to roll toward you.
2. Gently roll the person's entire body toward you. Guard their head while you roll them.
3. Tilt the person's head to keep their airway open. Tuck their nearest hand under their cheek to help keep their head tilted.

What NOT to do if somebody is overdosing on drugs. The wrong actions could make things worse!

- | | |
|--|--|
| • Do not leave them alone | • Do not smack, hit or hurt them to try to bring them around |
| • Do not put them in a shower or cold bath | • Do not give them other drugs |
| • Do not leave them on their back | • Do not try to force them to eat or drink |

Myths & Facts

1. Food will help slow the absorption of alcohol in your body.

True - especially high protein food such as meat, cheese and peanuts. It is recommended that people eat when consuming alcohol.

2. Drinking water in between alcoholic beverages helps to keep the blood alcohol concentration (BAC) level down.

True - having water and other non-alcoholic drinks in between alcoholic drinks does help to keep the BAC level down.

3. Coffee will help to sober a person who has had too much to drink.

False - only time can sober someone.

4. Blood Alcohol Concentration (BAC) continues to rise even if a person has stopped drinking?

True - a person's blood alcohol concentration continues to rise even after they've stopped drinking. Even after drinking has stopped, alcohol in the stomach and intestine continues to enter the blood stream and circulate throughout the body.

5. Alcohol affects every system in the body.

True - consuming too much alcohol affects the brain and causes unclear thinking, poor coordination, and slurred speech. It affects the eyes and causes blurred vision. Alcohol can affect the heart by causing an irregular heartbeat and high blood pressure. It can also cause blood vessels to widen, resulting in headaches. Drinking too much alcohol over a period of years also can cause damage to the liver, stomach, pancreas, or kidneys.

6. Binge Drinking is 4 - 5 or more drinks at one time.

True - Binge Drinking is considered to be five drinks or more in a row for a man and four drinks or more for a woman.

Questions:

What are some of the negative consequences of drinking alcohol?

Some of the answers could include: impaired judgment, impaired decision-making, violence, sexual assault, impaired driving, destroyed relationships, criminal behaviour, addiction, poor health, cancer, heart disease and stroke.

What are some things people can do to prevent these consequences?

Some of the answers could include:

- Know your limits and stick to them.
- Alternate alcoholic drinks with caffeine-free, non-alcoholic beverages, such as juice, water, pop or mocktails.
- Eat before and while drinking.
- Drink slowly, no more than two standard drinks in a three-hour period.
- Avoid any situation/activity that requires your full attention when it comes to decision-making and judgment.
- Have a plan to keep yourself safe (sober driver ,buddy system, call a responsible adult...).



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Alcohol

MYTHS & FACTS

(circle True or False)

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2. Drinking water in between alcoholic beverages helps to keep the blood alcohol concentration level down. **T or F**
3. Coffee will help to sober a person who has had too much to drink. **T or F**
4. Blood Alcohol Concentration (BAC) continues to rise even after a person has stopped drinking. **T or F**
5. Alcohol affects every system in the body. **T or F**
6. Binge Drinking is 4 - 5 or more drinks at one time. **T or F**

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