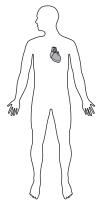
HANDOUT P/C/P-3.4 What Can Alcohol Do?

According to the National Institute on Alcohol Abuse and Alcoholism, there are many ways that alcohol can affect your body:

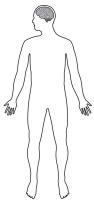
HEART



Some heavy drinkers can develop heart trouble because alcohol can weaken the muscles in and around the heart, resulting in the heart not pumping enough blood to nourish other organs in the body. Also, heavy drinking can constrict blood vessels, causing high blood pressure. Other potential consequences of heavy alcohol use are irregular or fast heartbeats, heart disease, and increased risk for some kinds of stroke.

BRAIN

Alcoholism may "speed up" normal aging or cause premature aging of the brain. Research also shows that shrinkage of the frontal lobes increases with chronic drinking for both moderate and heavy drinkers. This is related to intellectual impairment in both older and younger drinkers and may affect learning and memory.



CANCER

Long-term heavy drinking increases the risk of developing several types of cancer () because alcohol weakens the body's immune system, reducing its ability to fight diseases and infections. Some forms of cancer are especially common in heavy drinkers, such as cancer of the esophagus, mouth, throat, and voice box. Women who have two or more drinks a day are at greater risk of developing breast cancer. Other cancers that may be related to heavy drinking include cancer of the colon and the rectum.

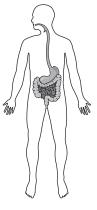
DIGESTIVE SYSTEM

Heavy drinkers are more prone to have excessive heartburn, ulcers, and even bleeding in the digestive system. They may suffer from illnesses caused by an injured pancreas as well. The pancreas helps to regulate the amount of blood sugar by making insulin. When there is heavy drinking, the pancreas can become inflamed and extremely painful. This is called "pancreatitis" and can cause diabetes or even death. Symptoms of pancreatitis are severe abdominal pain and excessive weight loss.

Drinking alcohol interferes with sugar processing and with the hormones that regulate sugar levels. Chronic heavy drinkers often have low levels of healthy blood sugars (called glucose). Because many heavy drinkers go without proper food while they are drinking, their stores of healthy sugar can be exhausted in a few hours. Also,

the body's monitoring of sugar can be affected while alcohol is being digested. The combination of these effects can cause severely low levels of blood sugar (a condition called "hypoglycemia") from 6 to 36 hours after a binge-drinking episode. Failure to treat this condition could have life-threatening results.

(continued)



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REPRODUCTIVE SYSTEM

Males



According to Montana State University, alcohol can affect the male reproductive system by causing reduced testosterone levels. Prolonged use can also cause the testes to shrink, which can result in infertility, impotence, and "feminization" of male sexual characteristics. Examples of the latter are breast enlargement, reduced chest and facial hair, and a shift in fat distribution to the hip area from the abdomen. Alcohol also affects how hormones are

released from the pituitary and hypothalamus glands, which can cause problems with male reproductive and sexual functions.

Females

Chronic drinking can also cause a variety of problems in the female reproductive system. West Virginia University states that abnormal menstrual cycles and failure to ovulate are two of the main effects

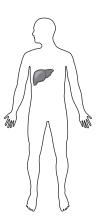


of alcohol on women. Others include an increased risk of spontaneous abortions and early menopause; the incidence of breast cancer is also higher in women who consume alcohol. Women, like men, have a higher risk of contracting an STD while under the influence of alcohol, as lowered inhibitions from alcohol consumption often lead to unprotected casual sexual encounters.

LIVER

The liver is responsible for removing alcohol and other harmful substances from the body. Drinking more alcohol than the liver can break down usually results in the buildup of excess fat in the liver. This may lead to alcoholic hepatitis, or inflammation of the liver, as a result of heavy drinking. Symptoms include fever; yellowing of the skin, eyeballs, and urine ("jaundice"); and pain in the abdomen. Although this condition can cause death if alcohol consumption continues, the process can be reversed.

Another way that alcohol can affect the liver is by causing cirrhosis—10 to 20% of all heavy drinkers develop this disease. This scarring of the liver prevents it from filtering waste from the body and can cause death. In contrast to alcoholic hepatitis, it is not possible to reverse the damage done to the liver by cirrhosis, although the symptoms can be relieved and liver functioning improved by abstaining from alcohol. Treatment for the complications caused by cirrhosis is available, and the last resort is liver transplantation. Alcohol induced liver damage can disrupt the body's metabolism



transplantation. Alcohol-induced liver damage can disrupt the body's metabolism, eventually impairing the function of other organs.

SLEEP



Any alcohol use disrupts the normal sleep cycle. Although people fall asleep more quickly and sleep more deeply during the first half of the night, they also experience more insomnia or restless sleep in the second half of the night. This impacts the repair and restorative work that the body does during sleep. People who drink heavily appear to be at increased risk for sleep apnea, especially if they snore. Sleep apnea is a condition where the upper air passage narrows or closes during sleep, resulting in a lack of oxygen to the brain. In particular, drinking alcohol at night can lead to narrowing of the air passage, causing

episodes of apnea. Alcohol's depressant effects can increase the duration of periods of apnea as well. Finally, the combination of alcohol, sleep apnea, and snoring increases a person's risk for heart attack, arrhythmia, stroke, and sudden death.