Drugs

Definitions

What is a drug? If you ask your students this question you may get a variety of answers, many of which may be correct but conflicting. Students may also be able to come up with many exceptions to each others' definitions and it may be best to encourage them to compare definitions from a variety of sources in order to come up with a functional understanding of the many meanings of the word. Engaging students in this discussion and exploration will help develop their understanding of the concept, the diversity of practical meanings and the implications for addiction. You may wish to begin by considering and evaluating the following statement with students:

Drugs are substances that change how your body normally functions when they are absorbed, inhaled, injected or ingested by the body.

In general, foods are not considered drugs, because the intake of food is a normal part of body function. Some of the substances in food, like caffeine, alter the normal functioning of some organ systems. With this definition, caffeine could be considered a drug. Some may disagree and say that their daily dose of caffeine is part of their normal bodily function. Others may ask if sugar is a drug if you ingest too much of it and it disrupts your normal body functions? Students may be able to identify other examples that draw a blurry line between substances that are drugs and those that are not, and what is normal bodily function and what is not.

To describe the variety of different circumstances, a different type of definition may be required. As students explore the definition of the word “Drug” from other sources, they will come across definitions which refer to the treatment or prevention of medical conditions and other definitions which refer to non-medical uses which emphasize the psychological or behavioural effects of substances. Distinguishing between the different meanings and uses is a complicated but important task for students to work through in order to the multifaceted nature of drug issues, particularly as they relate to the law.

Licit vs Illicit:

So why are some drugs legal and others illegal? Laws serve a variety of purposes and functions including ensuring rights and freedoms as well as protecting individuals and society. Law makers are faced with the complex task of determining how various substances should or should not be controlled. Some uses of drugs are determined to be “licit”, which means they are legal and lawful, while other uses are determined to be “illicit” or illegal and unlawful. These decisions consider individual freedoms, as well as the potential for individual or social harm. Consideration is given to health, safety and public order. Many drugs are controlled as they have practical licit uses, but they may be used unlawfully and have illicit uses. In order to clarify which substances are licit and which are illicit, law makers specifically name those substances which are to be controlled and how they are controlled. Occasionally the classification of substances change as we come to better understand how they may be useful and how they may cause harm or be misused.

The following are a few of the acts and regulations relating to drugs in Canada:

The Controlled Drug and Substances Act.
Canadian Legal Information Institute http://www.canlii.org/ca/sta/c-38.8/
Department of Justice Canada http://laws.justice.gc.ca/en/C-38.8/index.html

The act defines drug and controlled substance offences and punishments, lists substances that are to be controlled (see Schedules I-VI), and defines how they are controlled.

Food and Drugs Act.
Canadian Legal Information Institute http://www.canlii.org/ca/sta/f-27/

Department of Justice Canada http://laws.justice.gc.ca/en/F-27/

This act details the control of drugs which may be used for pharmaceutical purposes.

Liquor in Alberta

Driving offences are listed in the Criminal Code of Canada and in Provincial Transportation acts. An impaired driving conviction results in a criminal record. In Alberta, advertising and sale of alcohol is controlled by the Gaming and Liquor Act. Alberta also has an Alcohol and Drug Abuse Act which empowers a provincial commission to carry our programs and research related to alcohol and drug abuse.

Alberta Gaming and Liquor Act.
Canadian Legal Information Institute http://www.canlii.org/ab/laws/sta/g-1/index.html
Alberta Government, Queen's Printer http://www.qp.gov.ab.ca/Documents/REGS/1996_143.CFM

Regulates the licensing, distribution and sale of liquor in Alberta including the legal drinking age.

The Tobacco Act
Department of Justice Canada http://laws.justice.gc.ca/en/showdoc/cs/T-11.5)

The production and sale of tobacco is federally regulated by the Tobacco Act.

The purpose of the tobacco act is as follows:

4. 4) The purpose of this Act is to provide a legislative response to a national public health problem of substantial and pressing concern and, in particular,

(a) to protect the health of Canadians in light of conclusive evidence implicating tobacco use in the incidence of numerous debilitating and fatal diseases;
(b) to protect young persons and others from inducements to use tobacco products and the consequent dependence on them;
(c) to protect the health of young persons by restricting access to tobacco products; and
(d) to enhance public awareness of the health hazards of using tobacco products.

(c)

From http://laws.justice.gc.ca/en/ShowTdm/cs/T-11.5///en

The Tobacco Act regulates access, labelling, and promotion of tobacco products as well as enforcement of these regulations.

In Alberta, there are also a number of acts controlling the sale and use of tobacco:

Tobacco Reduction Act (http://www.qp.gov.ab.ca/documents/Acts/T03P8.cfm?frm_isbn=9780779727513)

Tobacco Reduction Act Regulation (http://www.qp.gov.ab.ca/documents/Regs/2007_240.cfm?frm_isbn=9780779727742), further control the sale of tobacco products and designates smoking and no smoking areas.

Prevention of Youth Tobacco Use Act (http://www.qp.gov.ab.ca/documents/Acts/P22.cfm?frm_isbn=0779731654)

Addiction

There are many dimensions to addiction. Here we will explore two perspectives: physical and psychological.

Physical impact of drug use
The physical or medical approach focuses on how drugs interact directly with the body, including the brain. Different drugs affect different organ systems in a number of ways. Most drugs do not have singular affects: they affect a number of organ systems in a variety of ways. Some of the effects may be intended while others are unintended or "side effects".

A common example may be ASA (Aspirin) use. One intended use of the drug is to relieve headaches. While this may be an intended or prescribed use, some of the other effects of the drug are changes in blood clotting and in stomach acidity. While an individual may take the drug to relieve pain, they will be simultaneously be changing the ability for their blood to clot and be changing the acidity of they stomach. The ability for ASA to affect blood clotting was an important discovery and this effect has been used to treat individuals with circulatory problems. A negative side effect is that the acidic nature of the drug and anti-clotting properties can complicate stomach ulcers. Aspirin is also used to reduce fever and reduce inflammation, but it can also cause tinnitus (ringing in the ears) and Reyes Syndrome. ASA may also interact with other drugs, minimizing or increasing their impact. You may notice from this example that a common drug, like ASA has a number of associated costs and benefits.

Drugs are chemicals which produce changes in the body's chemical systems: the body responds to the drugs. For many drugs, over time the body becomes accustomed to having the drug and expects it. This is commonly called *tolerance*. When the drug is no longer present, the body reacts to the change. This is commonly referred to as *withdrawal*. Caffeine, for example, stimulates the central nervous system, increases heart rate, causes blood vessel dilation and increases urine secretion. If caffeine is regularly present, some chemical systems compensate for its presence and become tolerant to it, reducing its effect. When caffeine is no longer present, the body must readjust to the absence of caffeine. The central nervous system is no longer stimulated and the dilated blood vessels contract. Along with a variety of other symptoms, the caffeine user may feel tired and may experience a headache from the change in blood flow to the brain as the body reestablishes its chemical balance.

So how is tolerance and withdrawal related to addiction? Over time, the initial effect or euphoria of a drug diminishes as tolerance develops. Sometimes more of the drug will be needed to produce the same effect. The body can develop a tolerance for many prescription drugs and non-prescription drugs, including alcohol and tobacco, and responds negatively when the drug is no longer present. The withdrawal symptoms stop with the reintroduction of the drug. This is sometime called physical dependency or physical addiction. The withdrawal symptoms and severity of withdrawal varies depending on the type of drug and the extent that it has be used. For some drugs, such as alcohol, the withdrawal symptoms can can be life threatening if the drug use is suddenly discontinued. To reduce the impact of the withdrawal symptoms, many drugs need to be discontinued gradually. This effect can contribute to a cycle of continued use as the symptoms of withdrawal are avoided by maintaining or increasing use rather than decreasing use.

Initial effect or euphoria -> tolerance/decrease in effect or euphoria ->withdrawal of drug-> withdrawal symptoms-> withdrawal avoidance -> continued use ->increased tolerance -> continued withdrawal avoidance.

The physical effects of the drug are not the only factor contributing to addiction.

Psychological impact of drug use:

Typically, people take drugs to overcome an illness or to feel better. If a drug makes a person feel better they are more likely to use that same drug again. If an Aspirin gets rid of someone's headache, they are

more likely to take an Aspirin again when they have a headache. If caffeine helps someone stay alert, they are more likely to use caffeine again when they are tired and want to be alert. The physical effects of a drug are tied to this emotional element or feeling. Even though there may be other factors which lead to the headache or tiredness that could be changed (i.e. taking frequent breaks when studying, getting more sleep and exercise), the user may associate the feelings of relief with the use of the drug,

How does the "feel better" principle relate to the misuse of drugs?

Lets first look at the example of antibiotics are used to fight bacterial infections. If your Doctor prescribes antibiotics to fight a bacterial throat infection, the next time you have a sore throat, you are likely to go to the doctor again for antibiotics. However, most sore throats are caused by viral infections which are unaffected by antibiotic treatment. A Doctor can use a number of criteria as well as take a swab and test it to determine if your sore throat is caused by a virus or if it is a bacterial infection. Despite this fact, many people will associate the antibiotic with getting better and feeling better, and ask for antibiotic treatment even though it may have no effect. The antibiotic continues to be associated with getting better and feeling better. Even though antibiotics are not physically addictive, people will seek them out because of their perception. There is a psychological impact to using the drug.

What about other addictive substances?

When a person uses tobacco for the first time, they may identify the initial feeling of the drug with the tobacco product. Tobacco contains nicotine which is a drug that directly affects the brain, producing a number of psychoactive effects including activating the brains reward system and causing changes in blood pressure, heart rate and respiration. The user may continue to use tobacco in order to re-experience that feeling. Social factors such as the level of risk and the presence of others may also contribute to smoking being a positive experience. A young person who is sneaking off to try smoking with their peers will experience a certain level of excitement and social reinforcement from the experience. Social users will associate positive social experiences (taking a break, relaxing, eating, drinking, and socializing) with tobacco use. Each time they use tobacco, this positive physical, psychological and social effect will contribute to their likelihood of using tobacco again, even if there is an extended period of time between use. With no immediate negative consequences, they are more likely to try use again.

These positive psychological and social experiences combined with the physical effects of tolerance and withdrawal can lead to more frequent use. The user seeks out more positive psychological and social experiences and seeks to avoid the negative experience associated with withdrawal or discontinuing use. The tobacco user identifies tobacco use with feeling good. It is not simply a physical addiction but is also an emotional attachment. As the tobacco user continues to use tobacco, it becomes a habitual part of their daily schedule and they may even identify tobacco use as part of their personal identity. When they do not use tobacco they may experience cravings and be restless, depressed, or irritable. Their use of the drug is a physical, psychological and social experience.

While some drugs may not be as physically addictive as other drugs, they may still have a powerful psychological impact. The drug may make the user feel better or different. They may effect perception or alter how they experience reality. Users will seek out and use these drugs in order to repeat these positive experiences or to escape negative personal or social experiences. Rather then developing other coping mechanisms for dealing with issues, responsibilities, anxiety, problems, pain, relationships, social circumstances or even boredom, the person will use drugs to feel better or escape, and the other factors will remain unchanged, or in some cases contribute to greater use. In these cases a change in behaviour is an integral part of breaking the addiction.

Drug use is not simply an individual issue or a physical issue, it is a social and mental health issue. Laws regulating drugs take into consideration all of these factors. In addition as, physical, psychological and social factors all play a role in ongoing drug use, considerations for each of these components must also be made for successful treatment. Each individual is different and there may be factors which make some individuals more susceptible to addiction than others and different individuals may respond differently to a variety of treatment.