Substance Use, Addictions & Related Behaviours

Types of Substances & Drug Use Continuum

What is a Drug?

Drugs are substances, other than food, that affect a person's mental, emotional, or physical state

What are some examples of drugs?

Stimulants (Uppers)

Examples: Caffeine, Nicotine, Cocaine, Crack, Methamphetamines

- Speed up and excite body systems such as the Central Nervous System (CNS) and the cardiovascular system
- General symptoms: increased alertness, decreased appetite, delays fatigue, rapid heartbeat and breathing, increased blood pressure, sweating, dilated pupils

The Face of a Meth User — 10 years

age 28

age 29

age 30

age 31

age 32

age 33

age 34

age 35

age 36

age 37

Dead at age 38

Tobacco

- Tobacco is the shredded, dried leaf of the tobacco plant
- Which happens to be the only natural source of nicotine
- Tobacco smoke contains more than 4,000 chemicals, 69 of which are known carcinogens (cancer causing agents)
- Smoking tobacco forms a tar that causes a variety of healthy problems

Nicotine

- Nicotine is one of the most addictive substances in the world
- Grade 12 students who are regular smokers (began in grade 9) are twice as likely as non-smoking students to report poorer overall health, coughs with phlegm or blood, shortness of breath when not exercising, and wheezing or gasping
- Immediate effects result in reduced fitness and athletic ability

Smoking

440,000 Deaths Each Year Caused by Smoking

Cancers (159,600)

House Fires Set by Cigarettes (970)

Fetus and Infant Deaths (970)

Secondhand Smoke Causing Cancer or Heart Disease (38,000)

Heart Diseases (142,600)

Respiratory Diseases (98,000)
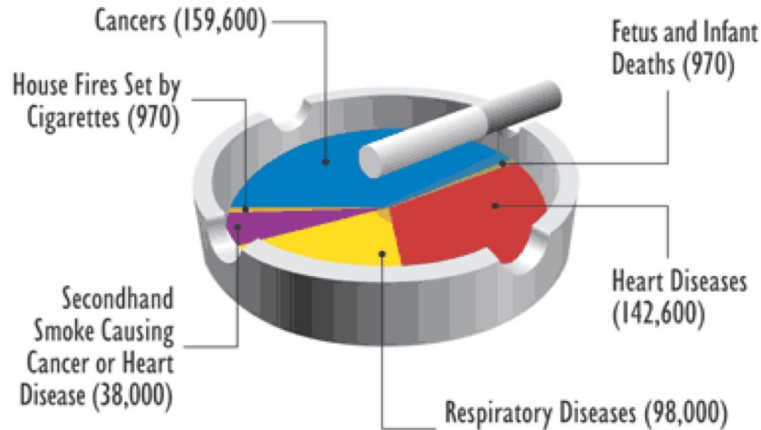
All numbers are rounded.

- Responsible for more than 230,000 deaths in Canada per year (about 17% of all deaths)
- Smoking drastically reduces life expectancy - heavy smokers could lose up to 9 years off their life spans
- Research shows that the younger a person starts smoking, the more difficult it will be to quit later in life

The Long Term Health Effects of Smoking Tobacco

Mouth, Lip, Throat, Larynx
- increased risk of cancer
- inflammation, laryngitis

Respiratory System
- bronchitis
- emphysema (chronic obstructive pulmonary disease)
- lung cancer

Circulatory System
- heart disease
- heart attack
- high blood pressure
- coronary artery disease (poor circulation in the legs causing ulcers, pain, and sometimes the need for amputation)

Bones
- brittle bones (osteoporosis)

Immune System
- depressed immune response
- increased infections

Brain
- increased risk of brain hemorrhage (stroke)
- women using contraceptive pill have an even greater risk of stroke

Stomach and Intestines
- lines becomes tender
- bleeding
- ulcers, slow to heal
- may lead to cancer

Pancreas, Kidney and Bladder
- increased risk of cancer

Reproductive System Male and Female
- decreased sperm count and movement
- lowered sex drive
- egg damage, irregular menstrual cycle and altertered hormone levels
- cancers of the cervix, penis and anus
- early onset of menopause
- increased risk of breast cancer

Pregnancy and babies
- lower than average birth weight
- high risk of Sudden Infant Death Syndrome
- increased risk of premature birth
- higher increased risk of miscarriage and still births
- increased risk of impairment in mental and physical development
- nicotine carried to baby in breast milk

Smoker

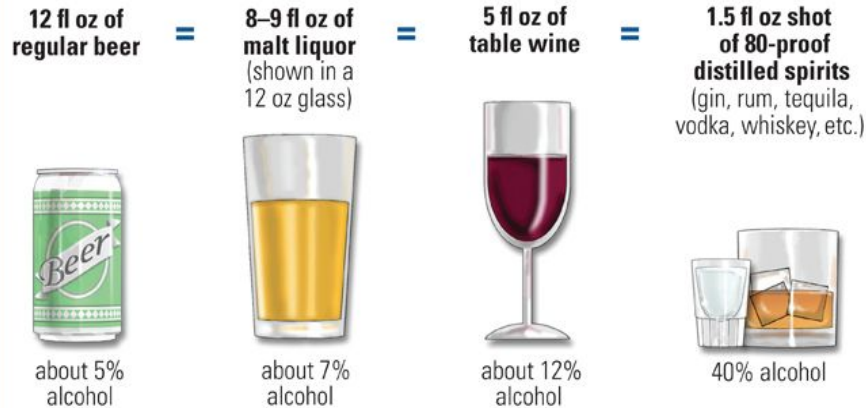Non-Smoker

Depressants (Downers)

Examples: Alcohol, Heroin, Opiates, Sleeping Pills

- Have the effect of depressing or slowing down the CNS and other bodily systems making you feel less aware of events happening around you
- General Symptoms: Slowed brain function, Lower pulse and breathing rate, Poor concentration, Confusion, Fatigue, Dizziness, Slurred Speech

Alcohol

So what is a standard drink?

| 12 fl oz of regular beer | = | 8–9 fl oz of malt liquor (shown in a 12 oz glass) | = | 5 fl oz of table wine | = | 1.5 fl oz shot of 80-proof distilled spirits (gin, rum, tequila, vodka, whiskey, etc.) |
| about 5% alcohol | | about 7% alcohol | | about 12% alcohol | | 40% alcohol |

The percent of "pure" alcohol, expressed here as alcohol by volume (alc/vol), varies by beverage.

- Produced by fermenting or distilling various fruits, vegetables, or grains
- Blood Alcohol Content (BAC) is a measurement of how much alcohol is in a person's bloodstream
  - Legal Limit for impaired driving → 0.08 grams per 100 ml of blood (0.05 or higher can lead to other non-criminal charges)
  - 21 and under? Zero alcohol when driving
- Effects of alcohol mostly depends on the amount consumed but also on size, gender and metabolism of the user
- Liver is responsible for metabolising alcohol

Alcohol

- 83% of gr. 12 Ontario students admit to using alcohol
- 49% of Ontario gr. 12 students admit to binge drinking
- Among Ontario grade 11 drinkers, 13 years was the average age of first exposure, and 14 years was the average age for first intoxication experience.
- Alcohol is the most commonly abused substance in Canada.
- Motor vehicle crashes, liver cirrhosis, suicides, oesophageal cancer, and arrhythmias were the leading causes of alcohol-related deaths. — MADD Canada

According to Teen Challenge (2015)

Physical Effects (short and long term)

- Coordination is impaired, clumsiness, slower reflexes
- High blood pressure, damage to the heart
- Liver damage
- If drinking when pregnant → Fetal Alcohol Syndrome (FASD)
- Life threatening when mixed with other drugs

Mental and Emotional

- Behave in ways that you normally wouldn't
- Increase in aggressive and violent behaviour
- Problems with school and learning

Risks of Bingeing

- What is Binge Drinking?
  - Defined as consuming five or more drinks as a male, four or more drinks as a female
- Can be fatal if consumed in large quantities
- Leading cause of death for teens and young adults in Canada is motor vehicle accidents-many of which involve alcohol use.
- Drivers with a BAC of 0.10 or higher are seven times (7x) more likely to cause a crash due to impairments in hand-eye coordination and judgment

Hallucinogens

Examples: LSD, Psilocybin (mushrooms), Ecstasy/MDMA

- Alter the users' perceptions of the world around them, causing distortions in the way they sense their surroundings
- Most of these are taken orally

Ecstasy/MDMA

- Considered a hallucinogen but has stimulant effects
- **Initially**
  - Users' pupils become dilated, their jaw tightens, and often experience nausea, sweating and dry mouth/throat (common with other stimulants)
  - Some users also report a heightened sense of their surroundings, greater appreciation of music and a heightened sensual experience
- However, long term effects include impairments in short term memory, depression, mood changes and disrupted sleep patterns

Cannabis (Marijuana)

- Marijuana is the most popular form, others include hashish, sinsemilla and hash oil
- THC is the major psychoactive ingredient in cannabis
- It is the most commonly used illegal drug in the world
- Considered a hallucinogen, cannabis also has both depressant and stimulant effects as well

Short-Term Effects

- Red eyes, dry mouth and throat, increased appetite and problems with concentration and short term memory
- Depressant effects: slows response time and affects memory
- Stimulant effects: increased heart rate
- Sensory perception may seem enhanced, and sense of time and space is distorted
- Some people however experience more intense and unpleasant effects such as: hallucinations, anxiety, depression or even paranoia

Long Term Risks

- Like tobacco smoke, marijuana damages the respiratory system
    - However marijuana contains more tar and higher amounts of carcinogens (cancer causing agents)
- Long term use can lead to problems with memory and concentration
- Research has shown that long term use has serious implications to developing schizophrenia regardless of if you are predisposed or not
- Users can develop a tolerance and potentially become dependent

Anabolic Steroids

Belong to a class of drugs known as ergogenic, or performance-enhancing drugs
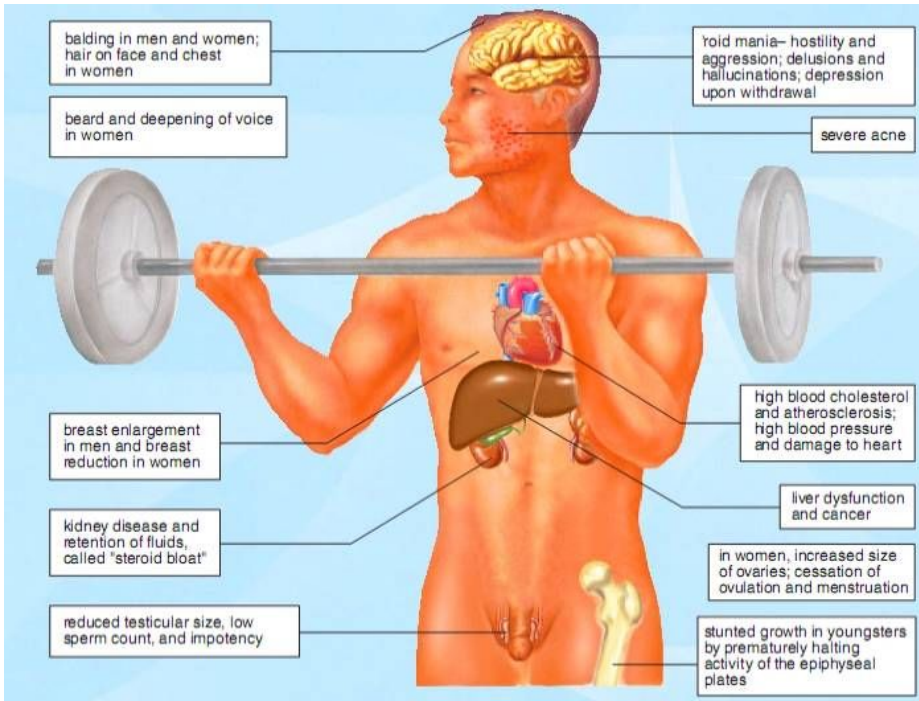
- Also known as "roids, juice, gym candy, pumpers, hype"
- Include both the naturally occurring male sex hormone, testosterone, and synthetic drugs chemically related to testosterone
- Testosterone is responsible for the growth and development of bones, muscles, facial hair and a deeper voice
- Long term effects: balding, severe acne, breast enlargement, kidney disease, liver dysfunction and cancer, reduced testicular size, low sperm count

Drug Use Continuum

Drug Use like many other things works on a continuum, meaning that there is no linear progression from stage to stage, you can move in both directions
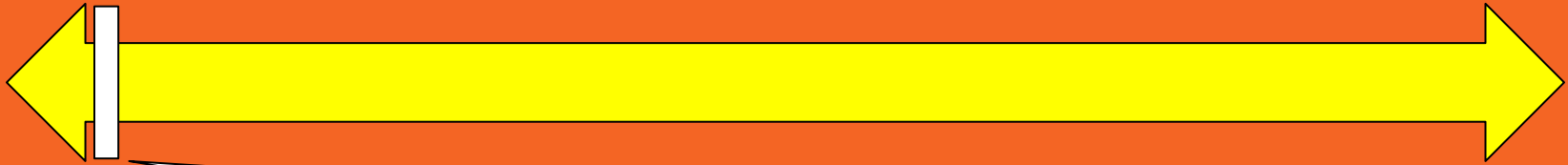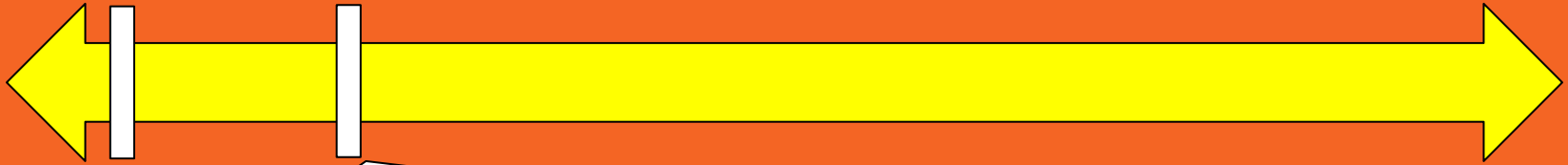
Non-Use: Never used the drug and/or substance

- This is the healthiest choice because it involves zero risk
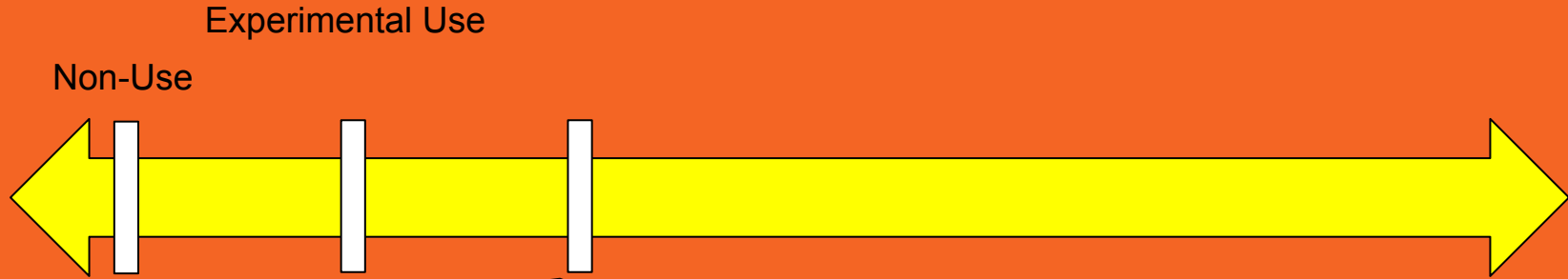
Drug Use Continuum

Non-Use

Experimental Use: Use has occurred once or several times

- Usually motivated by curiosity or peer influence
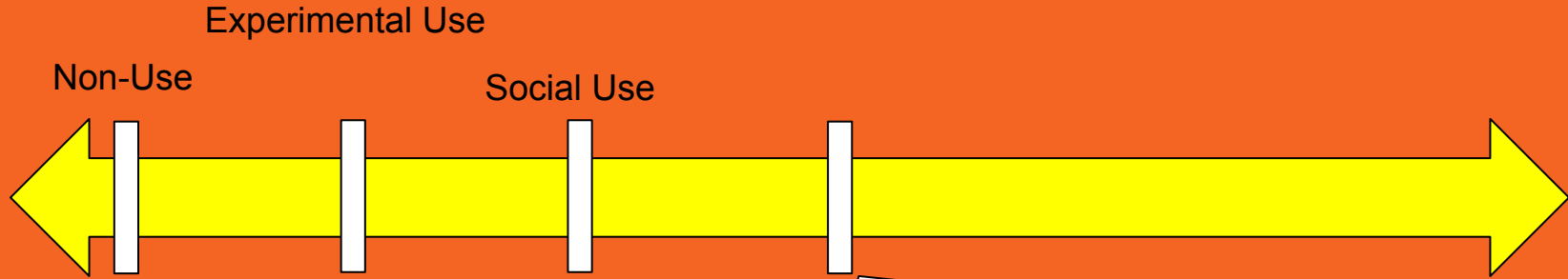- May never appear again - low risk

Drug Use Continuum

Non-Use

Experimental Use

Social Use: Ongoing drug use with moderate consumption
- Risk can be low to moderate depending on the particular drug and how it is used
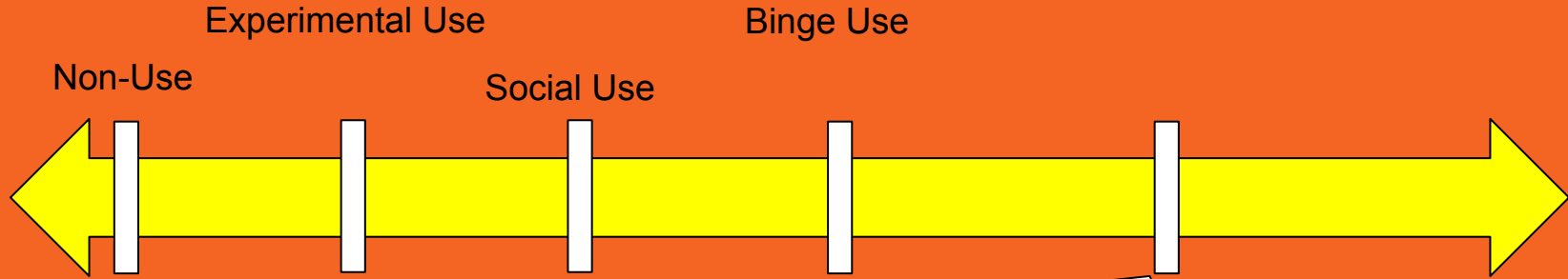- Availability, accessibility, and affordability influence use

Drug Use Continuum

Non-Use

Experimental Use

Social Use

Binge Use: Use of a large amount of the substance at one time

- Even on a single use the risk of harm is high

Drug Use Continuum
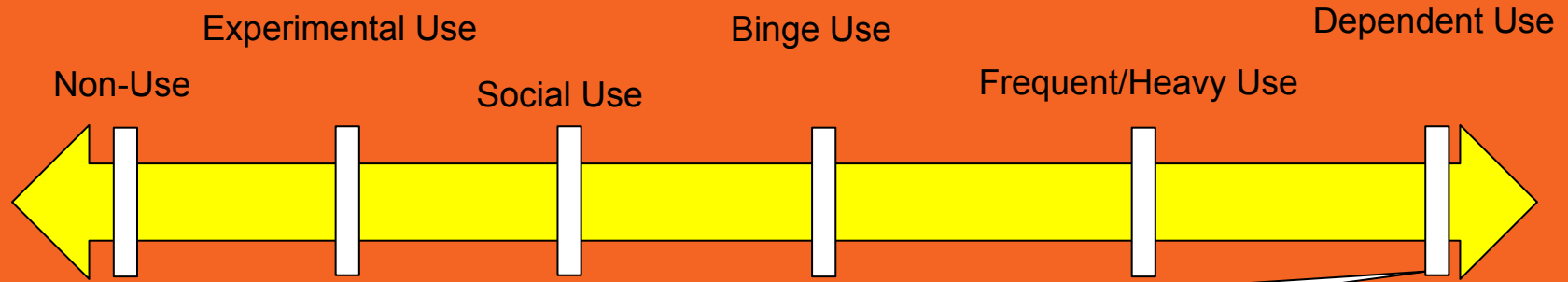
Drug Use Continuum

Non-Use | Experimental Use | Social Use | Binge Use | Frequent/Heavy Use | Dependent Use

Dependent Use: Compulsive and excessive drug use that continues despite problems in various areas of life

- Risk of significant and lasting harm is very high