

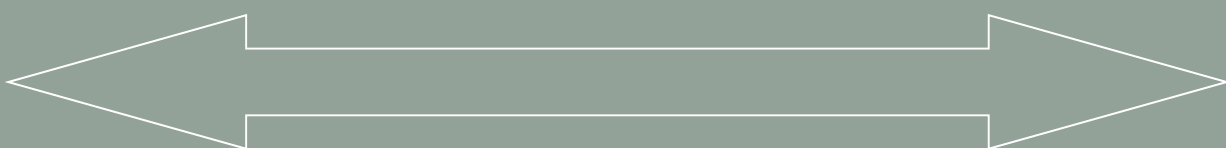
THE BASICS: SUBSTANCE USE AND THE IMPACTS ON ADULT LEARNERS

James Shedden

Prevention and Health Promotion Specialist,
Mental Health and Addiction Services, Nova Scotia Health

Substance Use and impacts on Adult Learners

- What is Health
- Prevention and Health Promotion
- What is a Public Health Perspective
- Substance-related disorders
- Prevalence (Facts and figures)
- Symptoms and risk factors
- Treatment and resources
- Cases



ATTITUDES AND BELIEFS

Strongly Agree

Strongly Disagree

What is Health?

- Health is “a state of (complete) physical, mental and social well-being and not merely the absence of disease or infirmity.” (World Health Organization)

What is Mental Health?

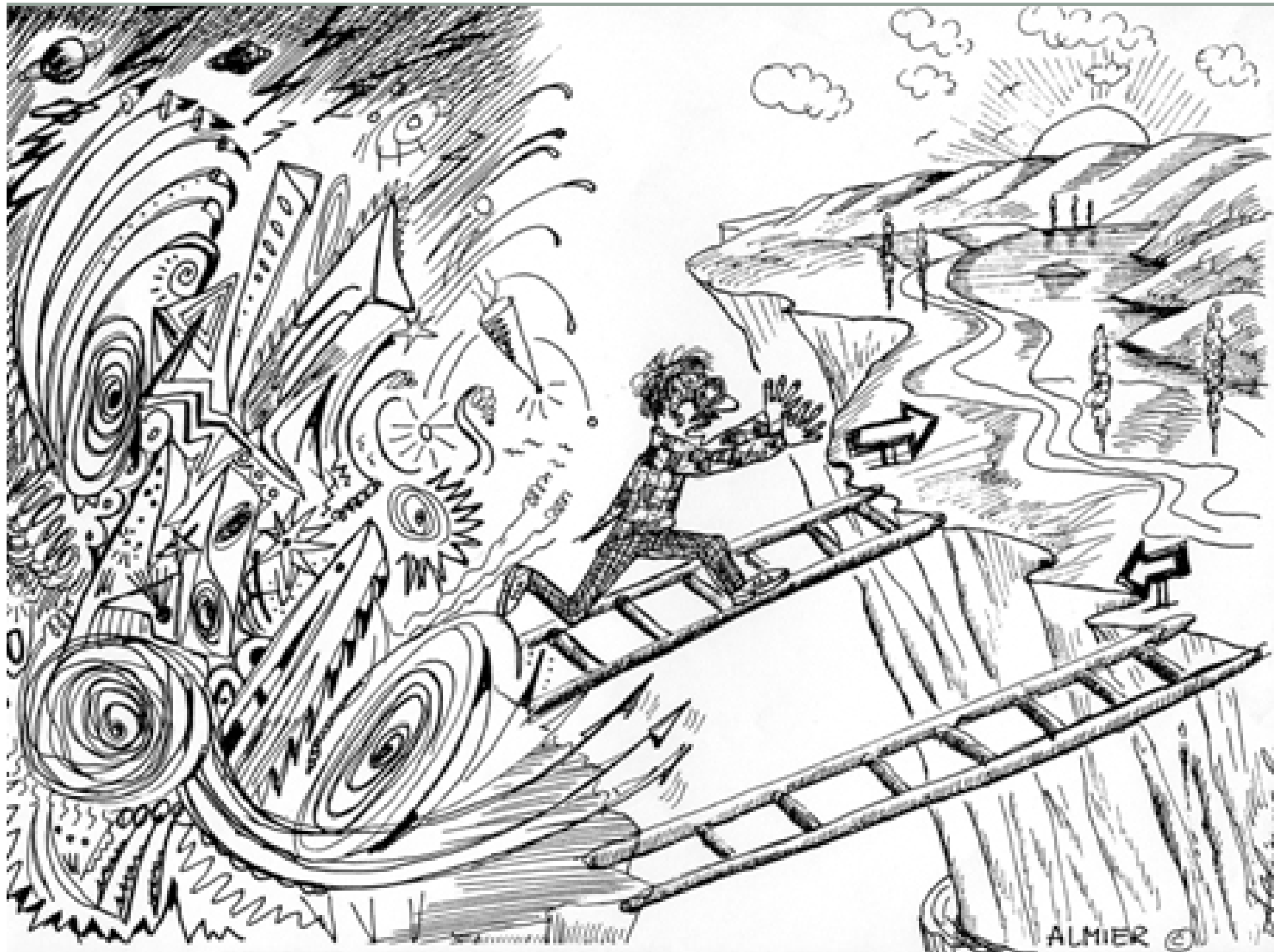
- Mental Health is “the capacity of each and all of us to feel, think, and act in ways that enhance our ability to enjoy life and deal with the challenges we face. It is a positive sense of emotional and spiritual well-being that respects the importance of culture, equity, social justice, interconnections and personal dignity.” (Public Health Agency of Canada)

What is a Mental Disorder?

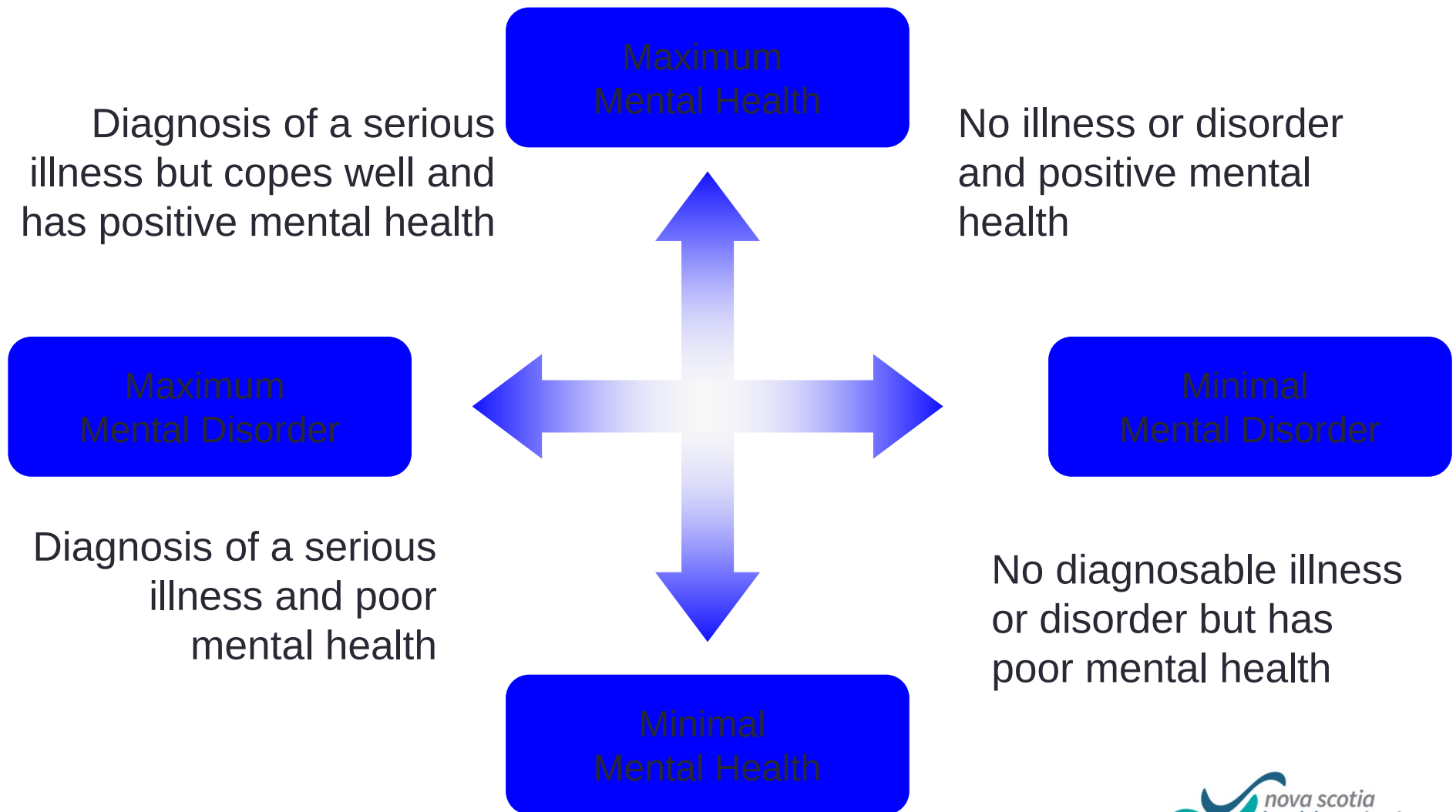
A mental disorder causes major changes in a person's thinking, emotional state and behaviour, and disrupts the person's ability to work and carry out their usual personal relationships.

What are Mental Health Problems?

A mental health problem is broader term that includes both mental disorders and symptoms of mental disorders which may not be severe enough to warrant a diagnosis of a mental disorder.



The Mental Health Continuum



Concurrent Disorders

Drug use and Mental Health issues often happen in the same person

- Individual struggling with mental health issue
- Someone struggling with substance use dependence



What is a Substance-Related Disorder?

- Use does not equal disorder
- Physical or psychological dependence
- Problems affect a person's life
 - Social
 - Personal
 - Work/school

Substance Use Disorder - Addiction

- **Substance abuse**
- **Substance Dependence**
 - Physical Dependence
 - compulsive use in spite of negative result
 - withdrawal symptoms
 - tolerance where the body no longer functions normally without it.
 - Psychological Dependence
 - immediate source of gratification, pleasure, thrill
 - relief from pain or boredom
 - mental and emotional preoccupation with a drug.
- **Substance-induced disorder**

PREVELENCE

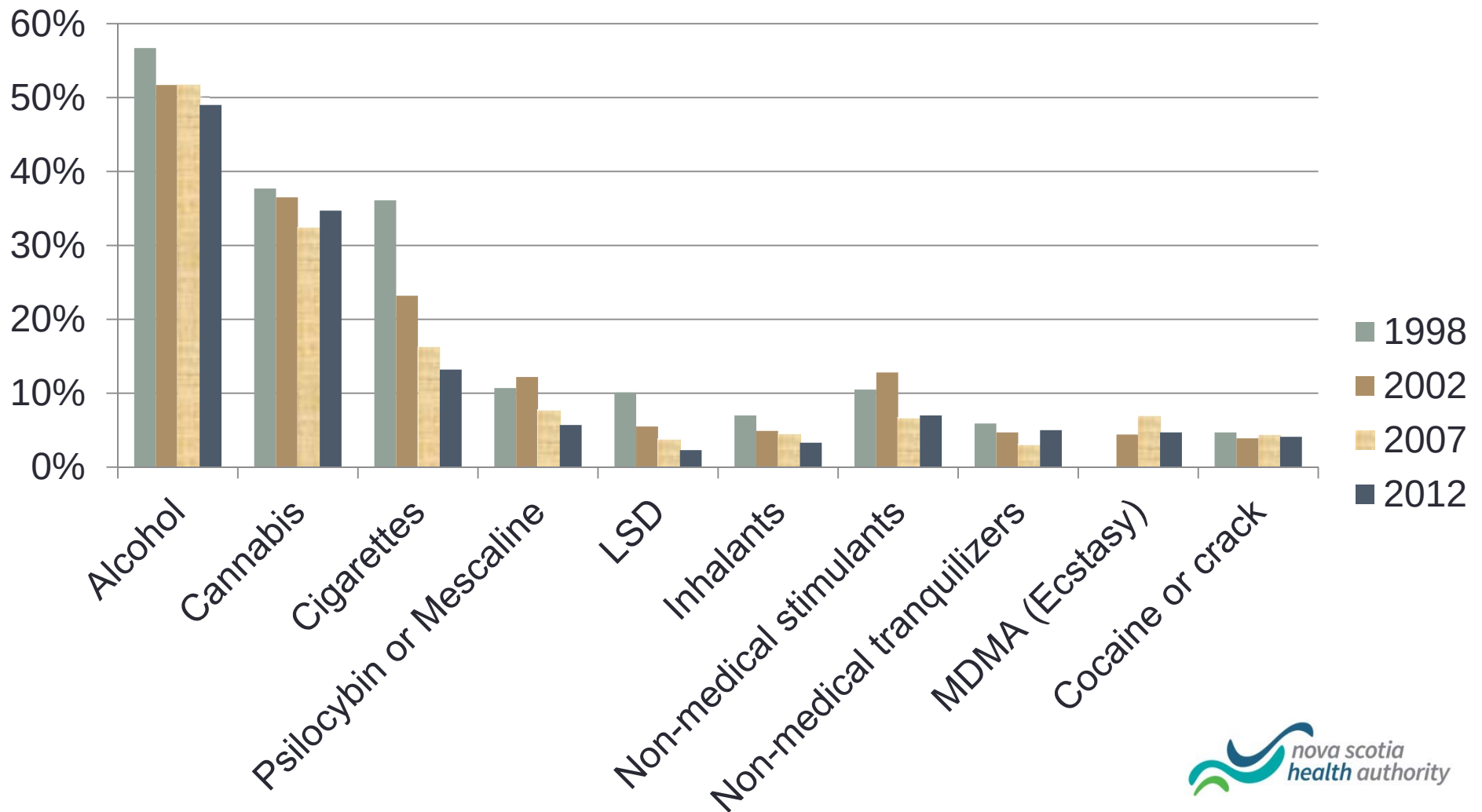
Past year substance use 2012

10%

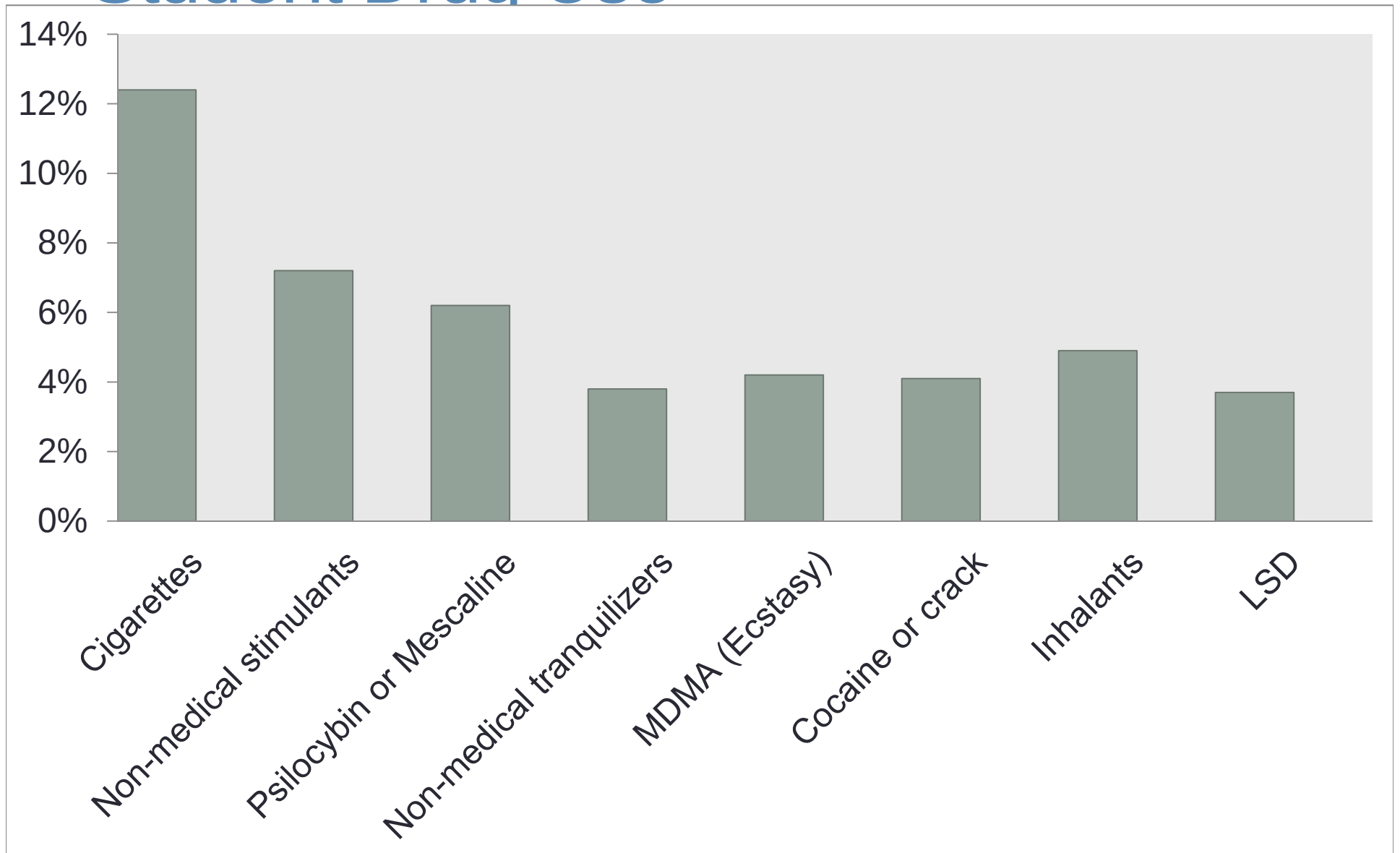
43%

NSSDUS 2012

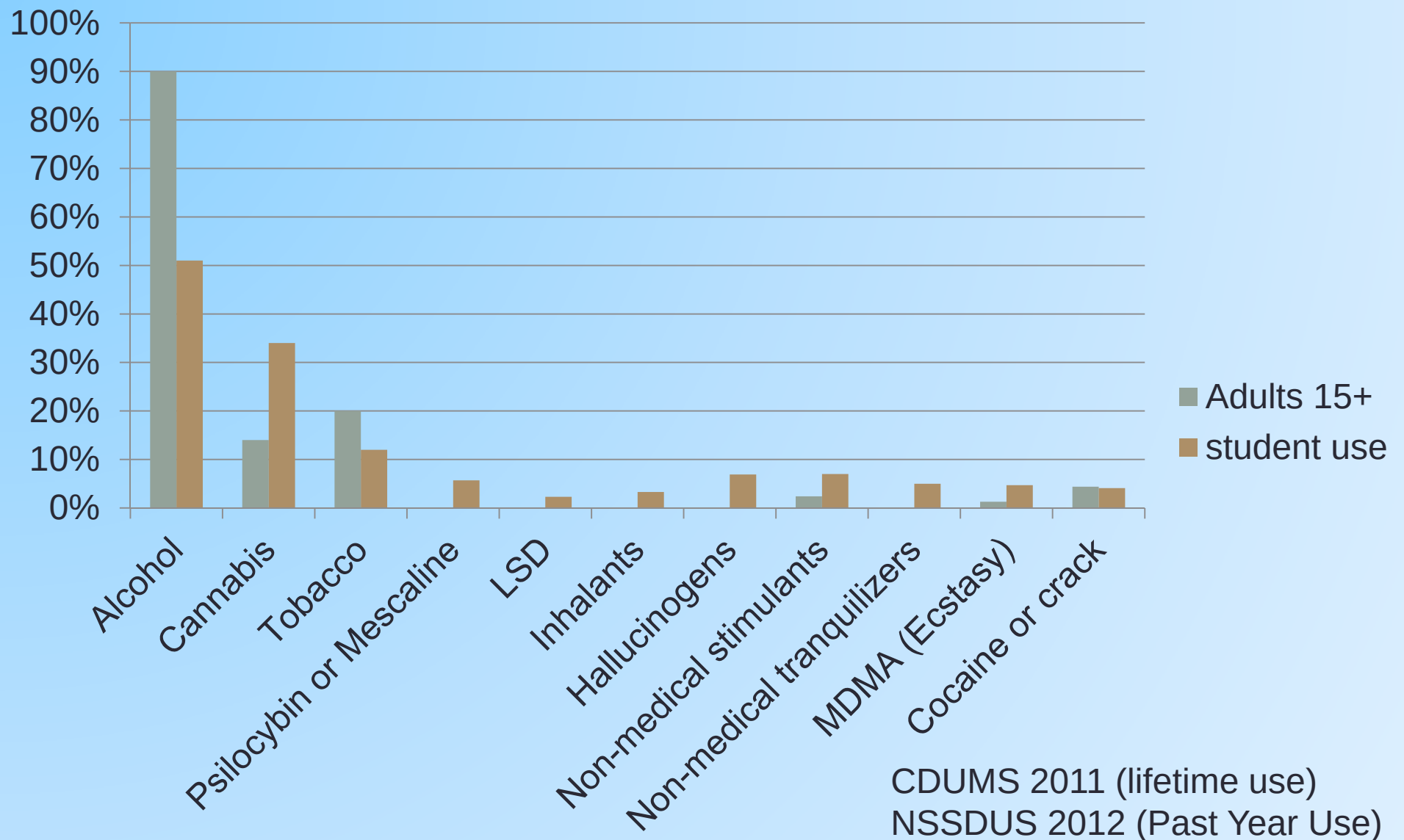
Past year substance use 1998-2012, grades 7,9, 10 & 12



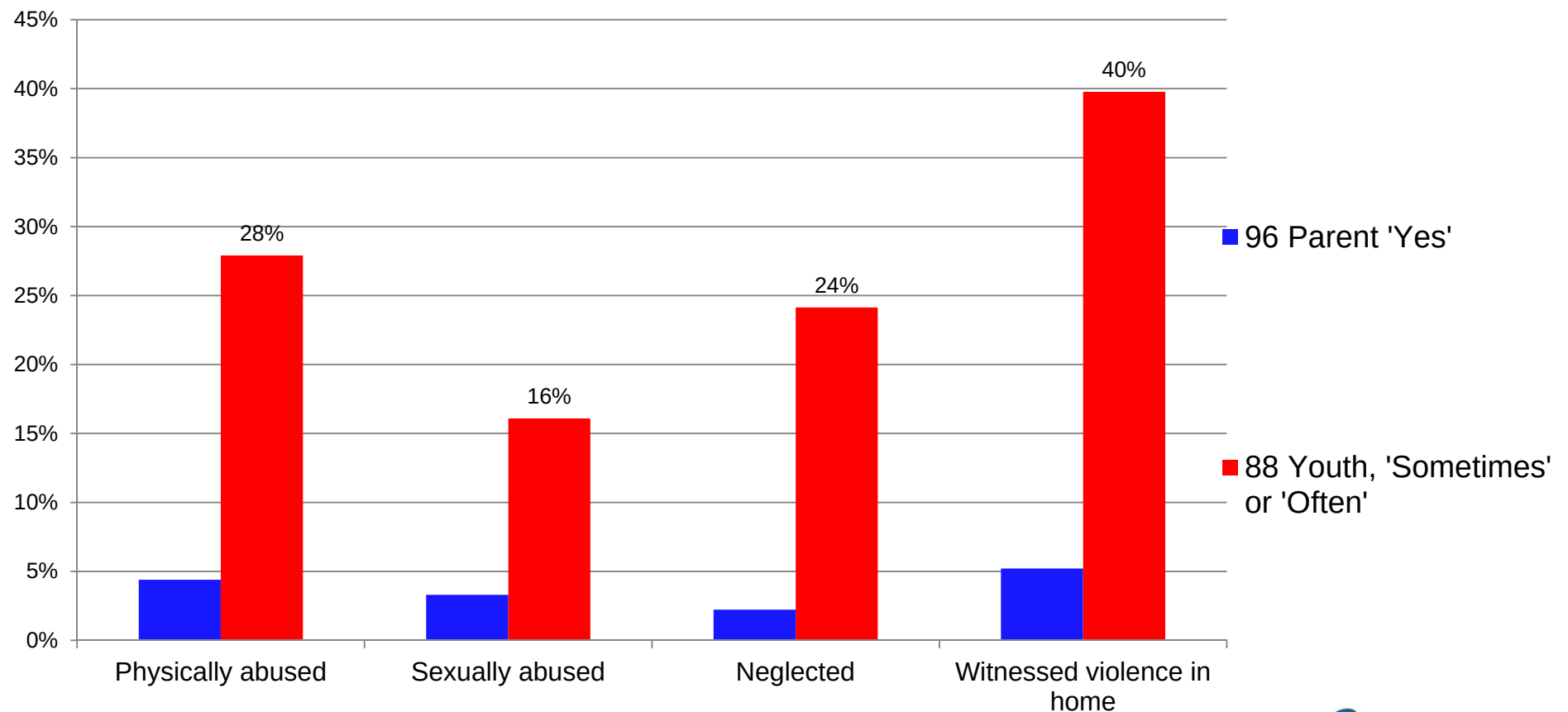
Student Drug Use



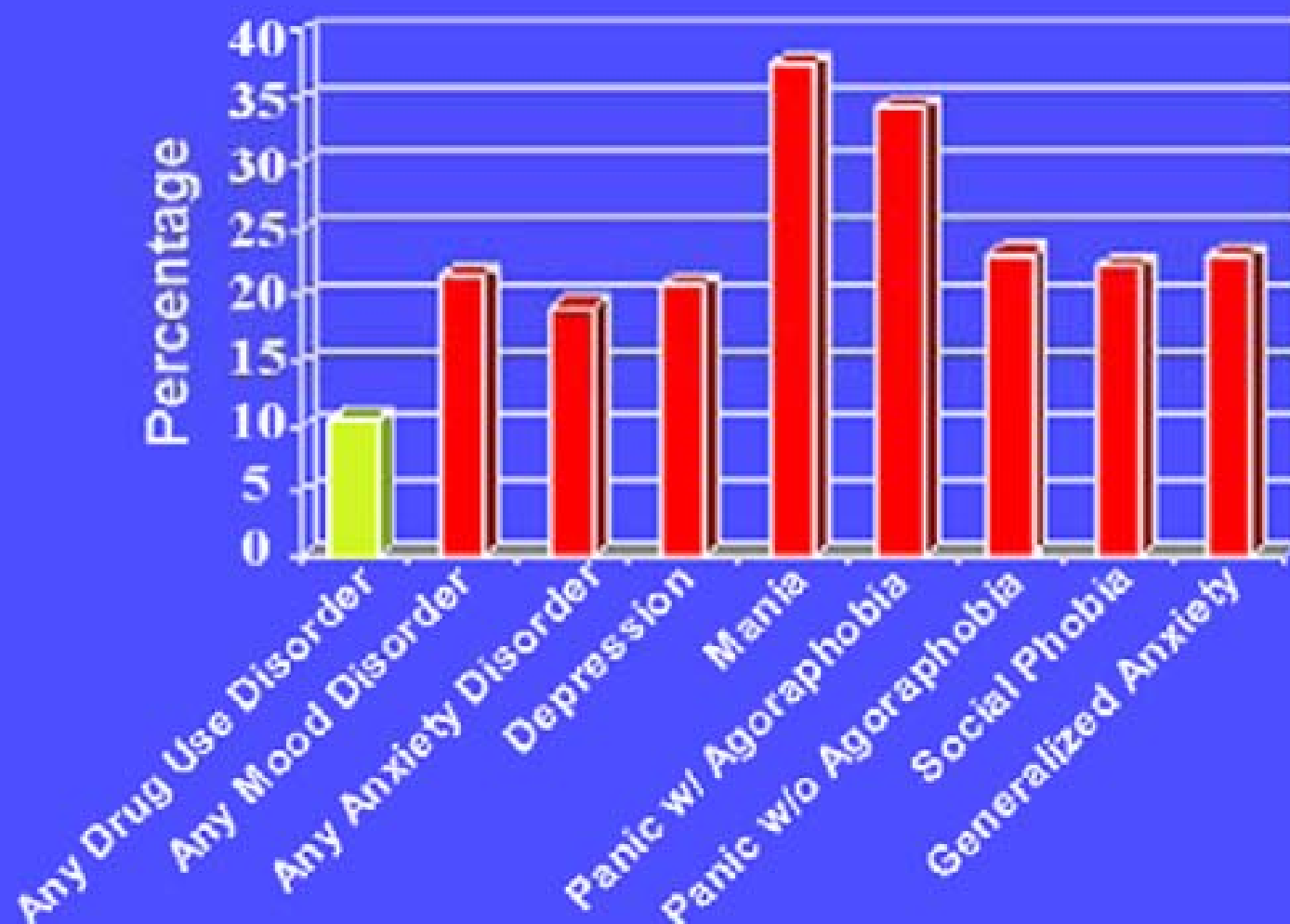
Youth and Adults



Parent & Youth Reported Abuse



Lifetime Prevalence of Drug Disorders Among Persons With Mood and Anxiety Disorders



Conway, Compton, Stinson and Grant. J. Clin. Psychiatry, February 2006

Drug Categories

Depressants

- Barbiturates, benzodiazepines, alcohol, Opiates, inhalants

Hallucinogens

- Cannabis, Mescaline, LSD, PCP, Ecstasy (MDMA), Designer drugs

Stimulants

- Cocaine, amphetamines, nicotine, caffeine



DEPRESSANTS

ALCOHOL

Depressants – Alcohol

- Most widely used substance in Canada
- Found in numerous substances
- Effects vary from person to person



The Limits

Over time, even moderate drinking can increase your risk of some chronic diseases, including high blood pressure, depression and many forms of cancer. To reduce your long-term health risks, follow these guidelines:

Women: 0 to 2 drinks a day, up to 10 drinks a week

Men: 0 to 3 drinks a day, up to 15 drinks a week

Once in a while you might have an extra drink, but it's important to stay within the weekly limits.

Pick a couple of non-drinking days each week. This will help you to avoid developing a drinking habit.

Why Do Limits Differ for Men and Women?

- Because of biological and other reasons, women's risk of many types of alcohol related harm are higher than men's for any given level of consumption
- For example, at even one drink per day on average, a woman's risk of getting liver cirrhosis increases by 139 percent as compared with 26 percent for males

Once in a while

The more alcohol you drink on any one occasion, the more likely you are to be hurt or injured. Reduce your short-term safety risks by limiting how much you drink at any one time.

Women: no more than 3 drinks

Men: no more than 4 drinks

Stay within your weekly limits.

How much is 1 drink?



12oz beer
(5% alcohol)



1.5oz distilled liquor
(40% alcohol)



5oz glass of wine
(12% alcohol)

Did You Know: The Lines on a Solo Cup are Measurement Marks



18 oz glass of regular beer (5% alcohol) = **1.5 standard drinks**

- bottle of light beer (3.7% alcohol) = **0.7 standard drink**
- can of extra strength beer (8%) = **1.7 standard drinks**
- a 750 ml bottle of wine (12% alcohol) = **5 standard drinks**
- 9 oz glass of wine (14% alcohol) = **2 standard drinks**
- 2 oz shot of spirits (40% alcohol) = **1.3 standard drinks**

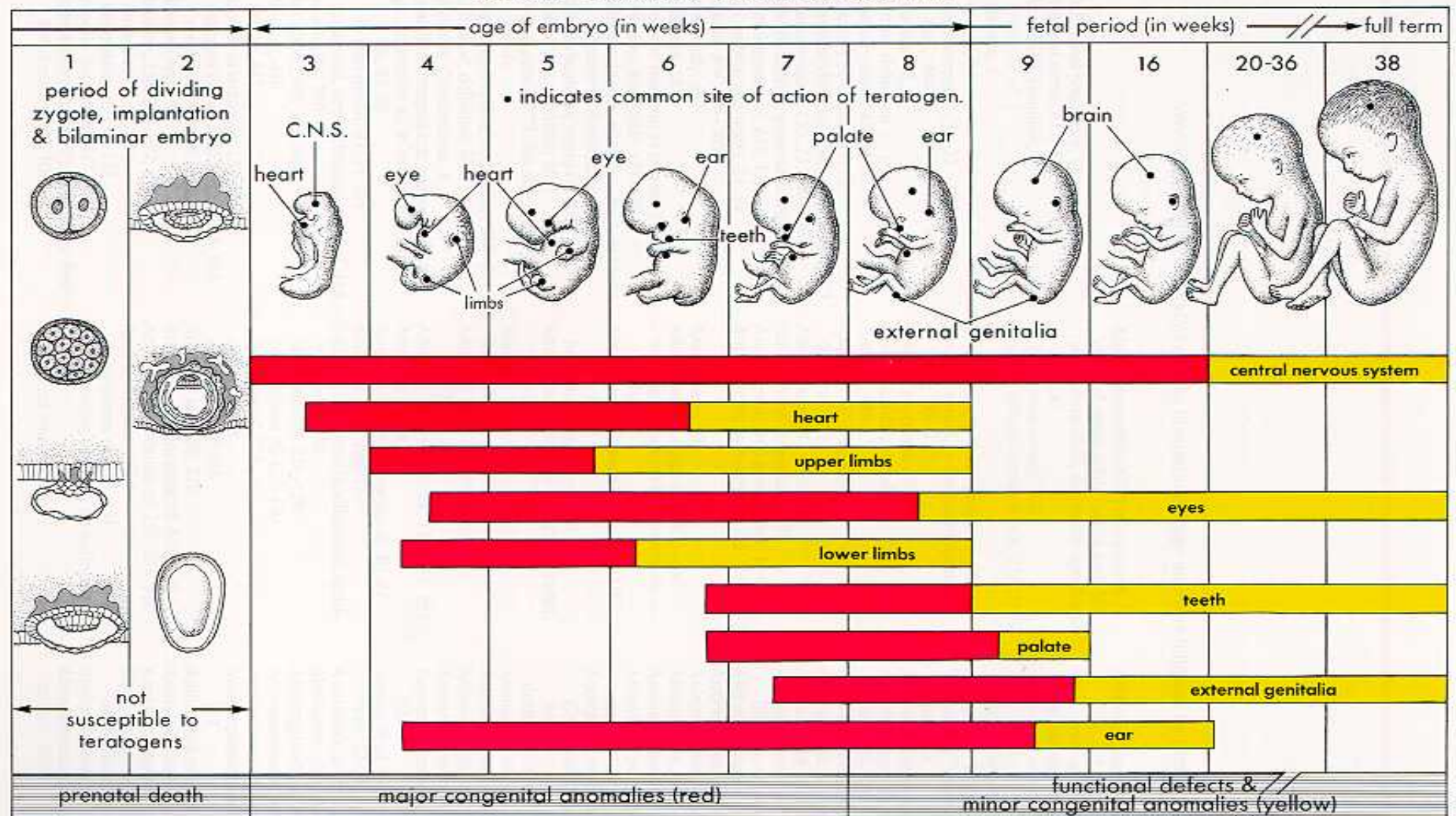
How many drinks does it take to get you over
the PA legal alcohol limit of **0.08**?

198 lb Male = 4 drinks (within an hour) .090 alcohol level*

154 lb Female = 3 drinks (within an hour) .10 alcohol level*

*exact alcohol level will vary based on weight

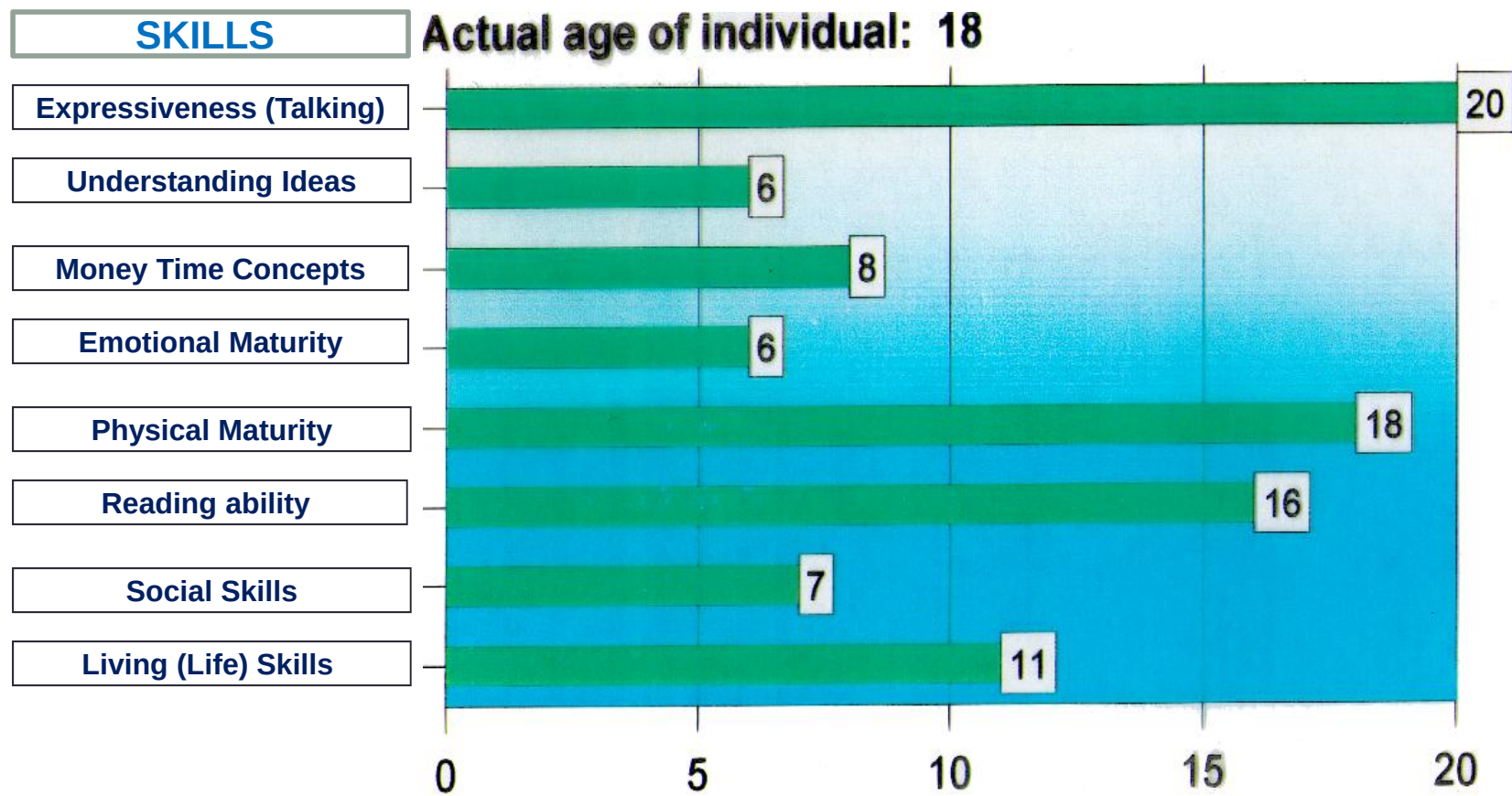
CRITICAL PERIODS IN HUMAN DEVELOPMENT*



* Red indicates highly sensitive periods when teratogens may induce major anomalies.

Dysmaturity and FASD

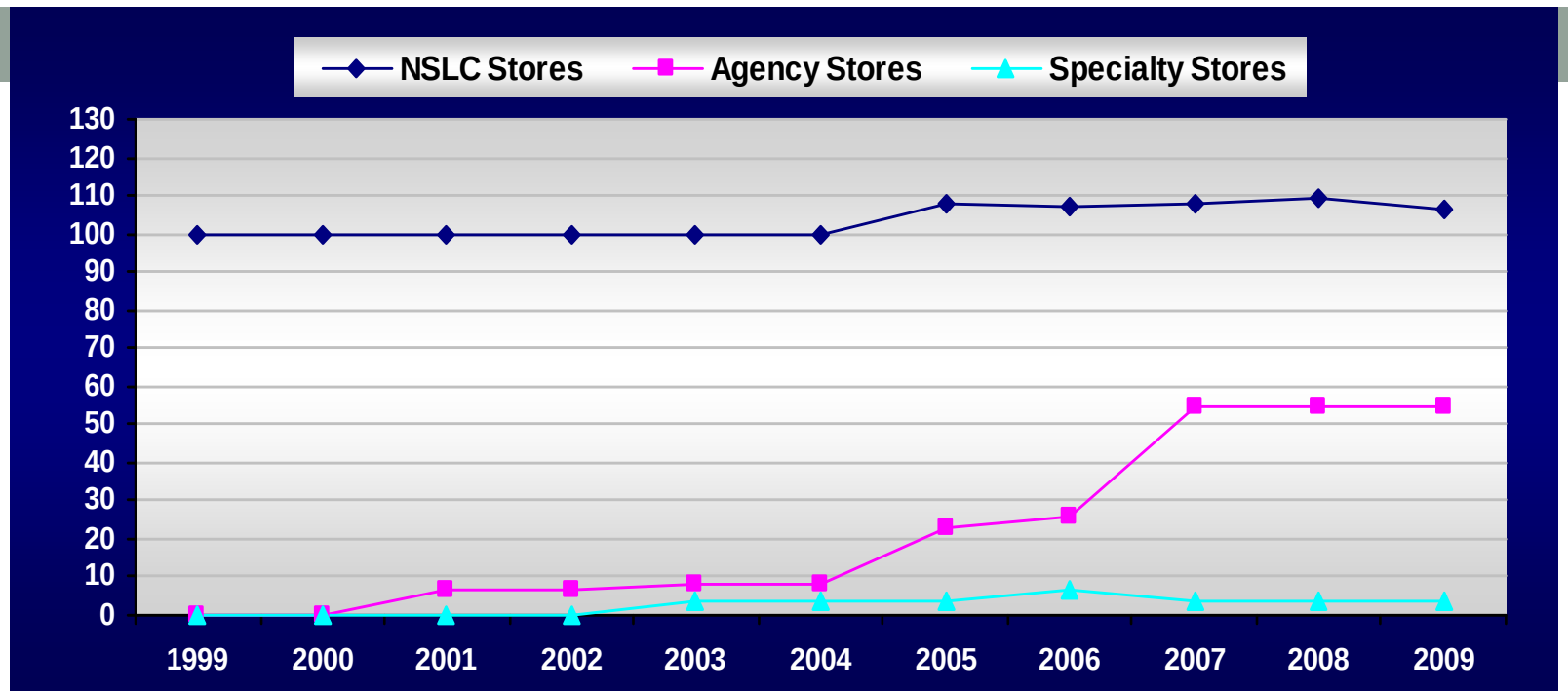
12-13, 21, 97



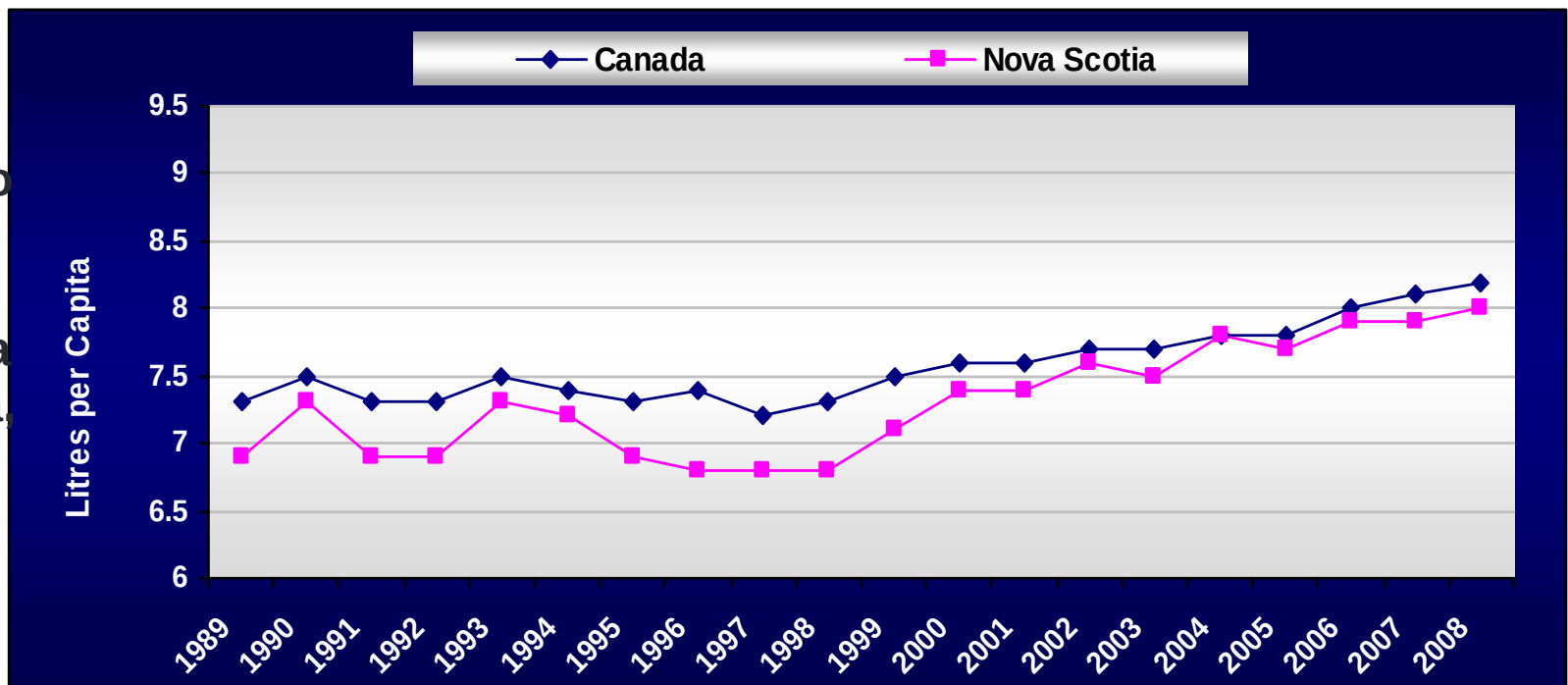
Adapted from Streissguth, Clarren et al, by D. Malbin 94



Number of
Retail
Liquor
Stores,
Nova Scotia
1999-2009



Per Capita
Consumption
of Pure
Alcohol,
Nova Scotia
and Canada,
1989-2008



Brain

Headaches, Blackouts, Delusions, Paranoia, Forgetfulness, Impaired Judgement, Decline in IQ, Dementia, Epileptic fits, Wernickes disease (due to vitamin deficiency), Haemorrhage, Peripheral neuritis, Korsakoff's psychosis & Death

Lungs

A small amount of alcohol escapes unused via breath 2-4%

Liver

Fatty cells, tissue scarring, jaundice, hepatitis, irreversible cirrhosis - the liver breaks down 90% of alcohol consumed

Kidneys

A small amount of alcohol escapes unused via urine 2-4%

Pancreas

Bad digestion, malnutrition, early diabetes

Sweat Glands

A small amount of alcohol escapes unused via sweat glands 2-6%

Sex Organs

Male

Depressed testicular production, impotence, breast growth due to female hormones not broken down by liver

Female

Failure to ovulate, spontaneous abortion

Nervous System

Peripheral neuritis - degeneration of the nervous system supplying limbs

Throat

Pressure on portal circulation- risk of haemorrhage. Increased incidence of cancer - 40x if smoker

Gullet

Corrosive effect - risk of cancer

Muscles

Degeneration, weakness, pain

Heart

Weak & "fatty" heart, weakening of heart muscles, high blood pressure. Anaemias due to decreased absorption of vitamins.

Stomach

Gastritis, peptic ulcer (direct corrosive effect)

Fingers

Pins & needles

Intestines

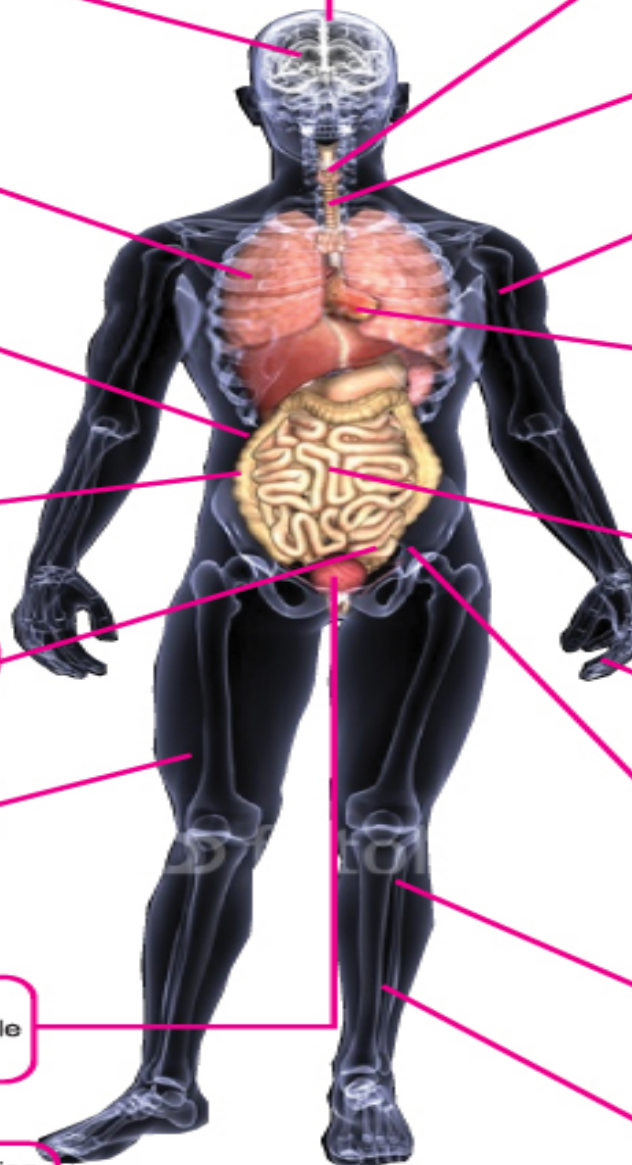
Inflammation (corrosion from alcohol)

Nervous System

Malfunctions, skakiness, tremors

Bones

Degeneration - risk of fracture



Children and youth

Children and youth should not drink before they reach Nova Scotia's legal age of 19. A young person's brain and body continue to develop into the late teens and early 20s. Alcohol can harm mental and physical development. It is safer to delay drinking for as long as possible.

Daily Guidelines for Young Adults

Daily guidelines for young adults are lower than for adults

- Risky drinking peaks in young adults with approximately 50% of drinkers consuming above the upper daily limit of the LRDG (i.e., more than four drinks per occasion for men and more than 3 for women) monthly or more often in the past year
- The new guidelines recommend that young adult males never exceed 3 drinks on a single occasion and women never exceed 2 drinks up to age 24
- This lower threshold reflects growing evidence of the detrimental effects of risky alcohol use on the developing brains of young adults

If Everyone Followed the Guidelines ...

- Alcohol consumption would **decrease** by at least 50%
- Alcohol-related deaths would **decrease** by at least 4,600 per year

Stockwell et al. (2009)

DEPRESSANTS

Barbituates - Amytal[®] and phenobarbital

Benzodiazepines - Valium[®] and Ativan[®]

Inhalants - Cleaning fluids, glues, paint thinners and removers, hair and deodorant sprays, gasoline, etc.

Opiates – Oxycontin, hydromorphone, heroin



Depressants – Barbiturates

- Amytal[®] and phenobarbital
- Street names: reds, yellow jackets, blue heaven
- Produce a feeling of calm, drowsiness and well-being
- First developed as sleeping pills



Depressants – Benzodiazepines

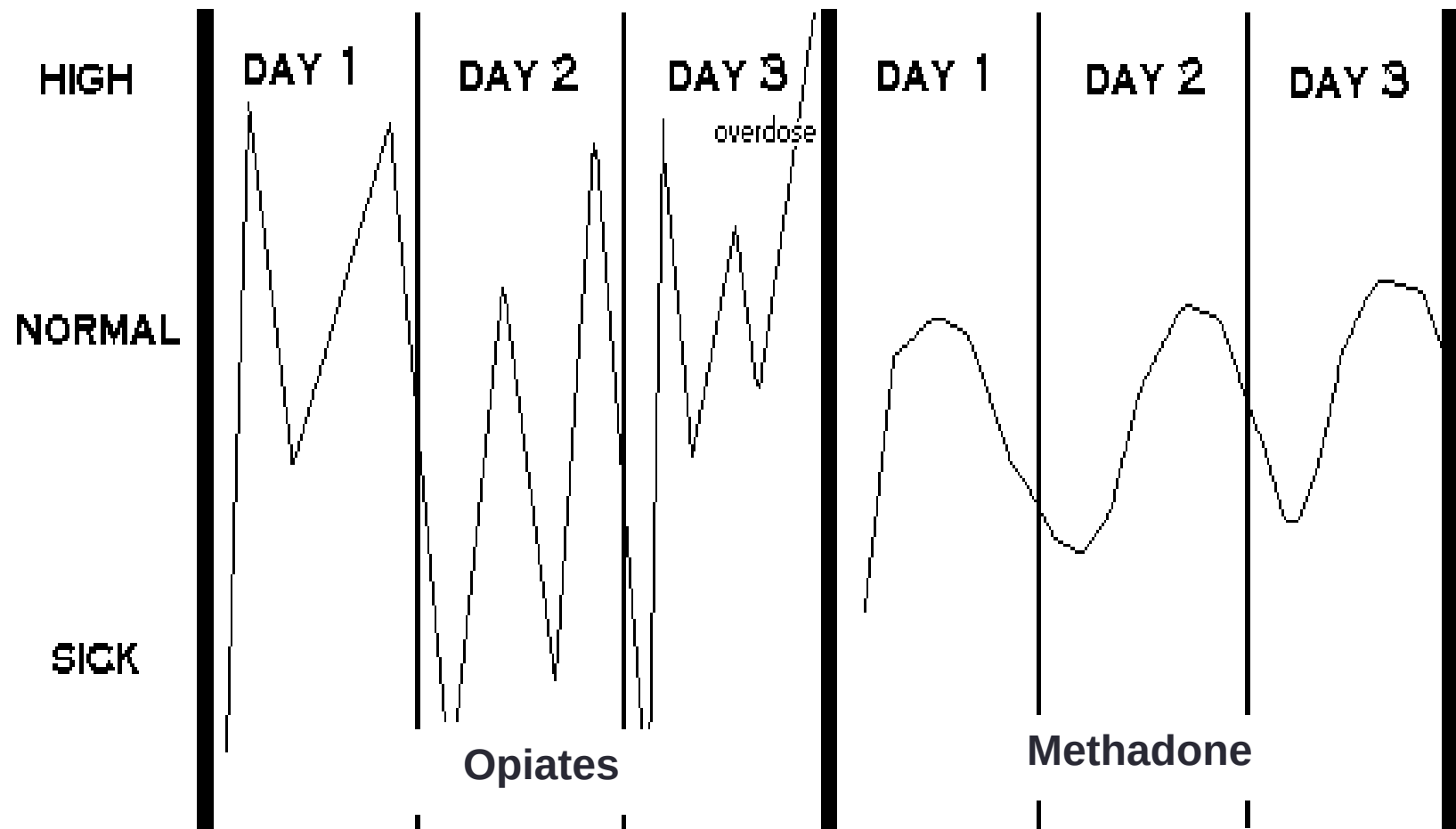
- Valium® and Ativan®
- Street names: tranks, downers, roofies
- Produce a feeling of calm, drowsiness and well-being
- Commonly prescribed for anxiety, sleep problems



Depressants – Opiates

- Heroin, codeine, morphine, fentanyl oxycodone and others
- Produce a short-term feeling of euphoria and well-being and relieve pain
- Have a high risk of creating dependence





Depressants – Inhalants

- Cleaning fluids, glues, paint thinners and removers, hair and deodorant sprays, gasoline, etc.
- Produce feelings of euphoria, light-headedness, exhilaration and vivid fantasies or hallucinations
- Sniffed or inhaled



STIMULANTS

Amphetamines - Dexedrine® and Ritalin®

Caffeine – Coffee, chocolate

Cocaine- Crack or ice

Nicotine



Stimulants – Amphetamines

- Dexedrine® and Ritalin®
- Street names: speed, crystal meth, ice, uppers, crank
- Have the temporary effect of increasing energy and apparent mental alertness
- Risk of amphetamine psychosis – symptoms similar to schizophrenia

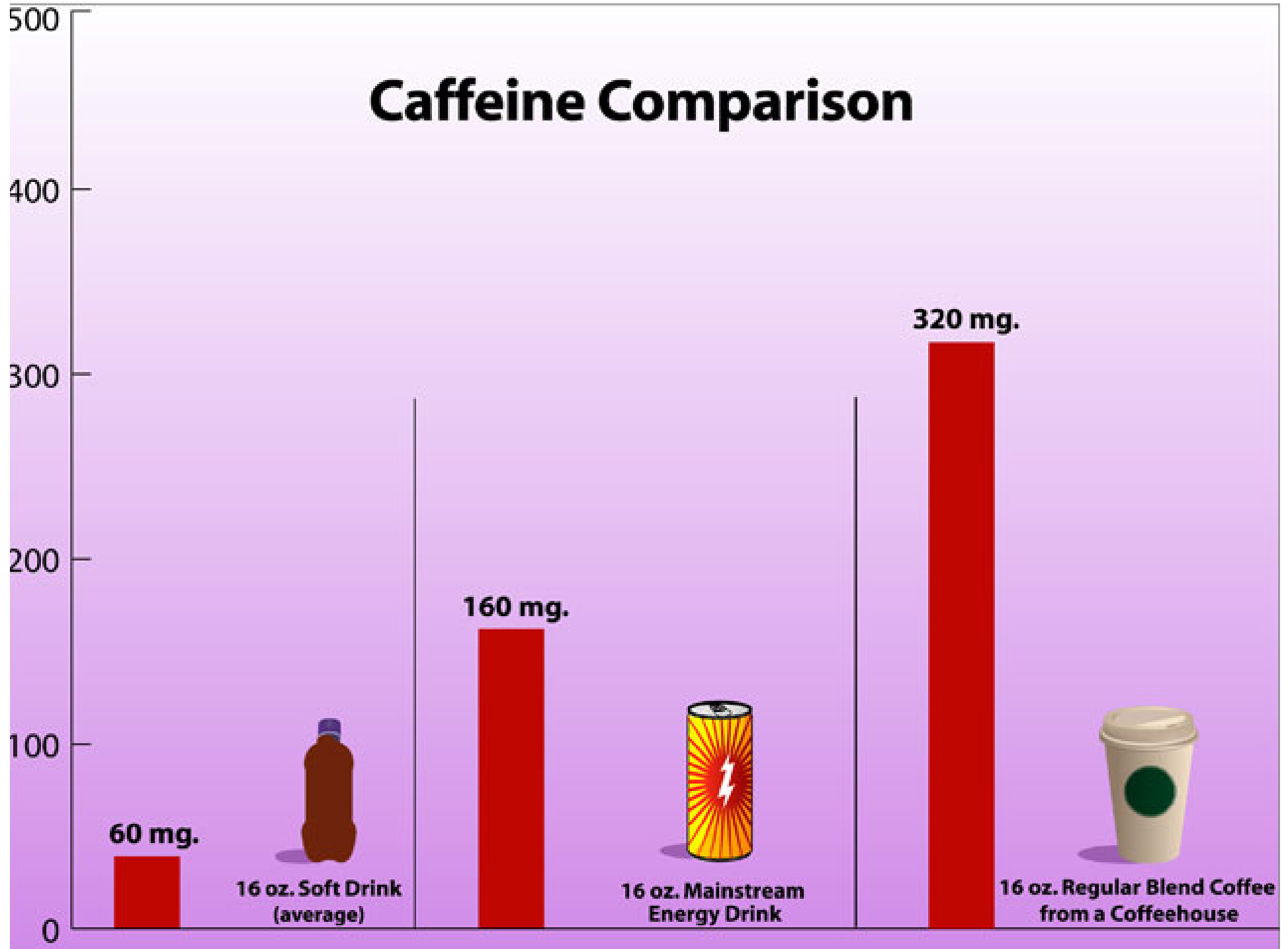


Stimulants - Caffeine

- Can be found in many substances including tea, coffee, chocolate, cola drinks or medication
- Causes mild mood elevation and reduced drowsiness and fatigue



Caffeine Comparison



Stimulants – Cocaine

- Street names: Coke, C, snow, flake
- Two forms – powder and crack
- Produces intense pleasure, euphoria, hallucinations, twitching, agitated behaviour and fever
- Psychological dependence produced by cocaine is believed to be among the strongest of all drugs



NICOTINE

Stimulants – Nicotine

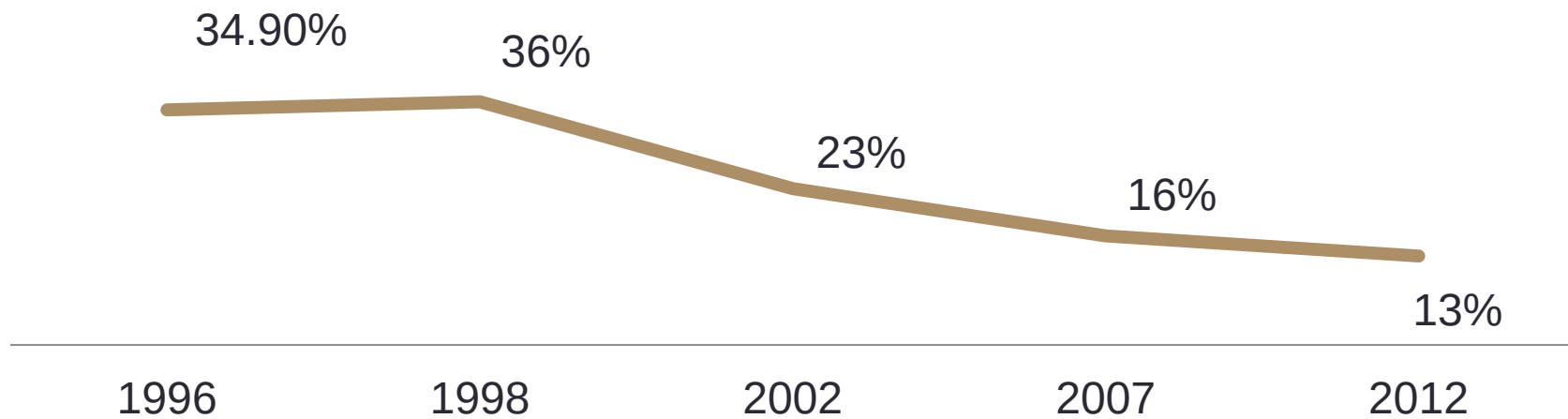
- Comes from tobacco leaves
- Can be burned and inhaled or absorbed
- Smoking affects the metabolism of many medications prescribed for the treatment of mental disorders and of other substances



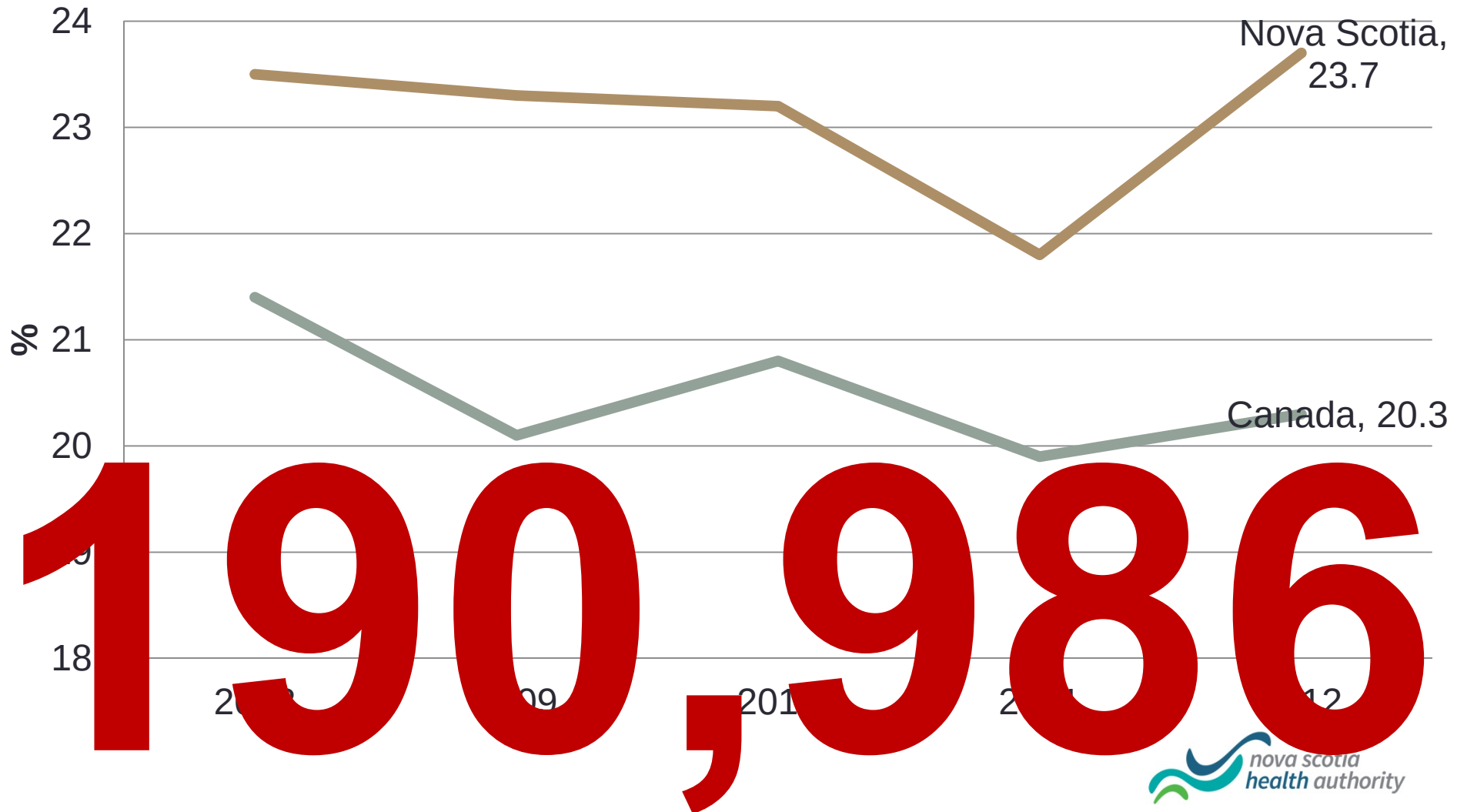
Cigarette smoking - Youth

Past year smoking 1996-2012

NSSDUS 2012



Tobacco Usage in Canada (12+)





SMOKE ANYWHERE

- AIRPLANES
- RESTAURANTS
- NIGHT CLUBS
- BARS
- HOTEL/MOTELS
- EVERYWHERE!



Opponents

- E-cigarettes are unproven cessation devices; should be required to undergo same rigorous testing for safety/efficacy as other NRTs
- E-cigarettes have potential to undermine major tobacco control gains

Proponents

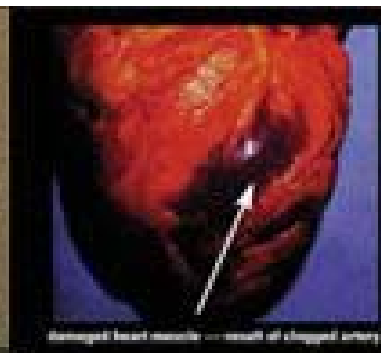
- E-cigarettes are clean drug delivery device that can satisfy smokers' addiction to nicotine and to smoking behaviours
- Even if untested, health risks of e-cigarettes could not come close to those of cigarettes



WARNING
CIGARETTES CAUSE MOUTH DISEASES

Cigarette smoke causes oral cancer, gum diseases and tooth loss.

Health Canada



WARNING
CIGARETTES ARE A HEARTBREAKER

Tobacco use can result in the clogging of arteries in your heart. Clogged arteries cause heart attacks and can cause death.

Health Canada



WARNING
CIGARETTES HURT BABIES

Tobacco use during pregnancy reduces the growth of babies during pregnancy. These smaller babies may not catch up in growth after birth and the risks of infant illness, disability and death are increased.

Health Canada



WARNING
TOBACCO USE CAN MAKE YOU IMPOTENT

Cigarettes may cause sexual impotence due to decreased blood flow to the penis. This can prevent you from having an erection.

Health Canada



WARNING
TOBACCO SMOKE HURTS BABIES

Tobacco use during pregnancy increases the risk of preterm birth. Babies born preterm are at an increased risk of infant death, illness and disability.

Health Canada



WARNING
CHILDREN SEE CHILDREN DO

Your children are twice as likely to smoke if you do. Half of all premature deaths among life-long smokers result from tobacco use.

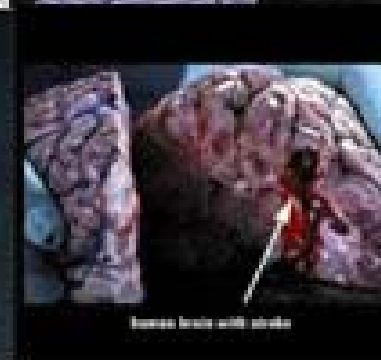
Health Canada



WARNING
YOU'RE NOT THE ONLY ONE SMOKING THIS CIGARETTE

The smoke from a cigarette is not just inhaled by the smoker. It becomes second-hand smoke, which contains more than 50 cancer-causing agents.

Health Canada



WARNING
CIGARETTES CAUSE STROKES

Tobacco smoke can cause the arteries in your brain to clog. This can block the blood vessels and cause a stroke. A stroke can cause disability and death.

Health Canada

HALLUCINIGENS

HALLUCINOGENS

Cannabis

Ecstasy

Psilocybin

Designer drugs



CANNABIS

Hallucinogens - Cannabis

High in Class?

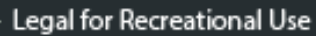
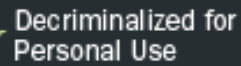
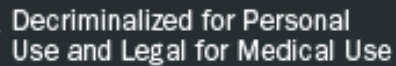
- Most widely used illegal drug
- Can cause both hallucinogenic and depressant effects
- May contribute to development of mental illness or psychosis in people who are vulnerable



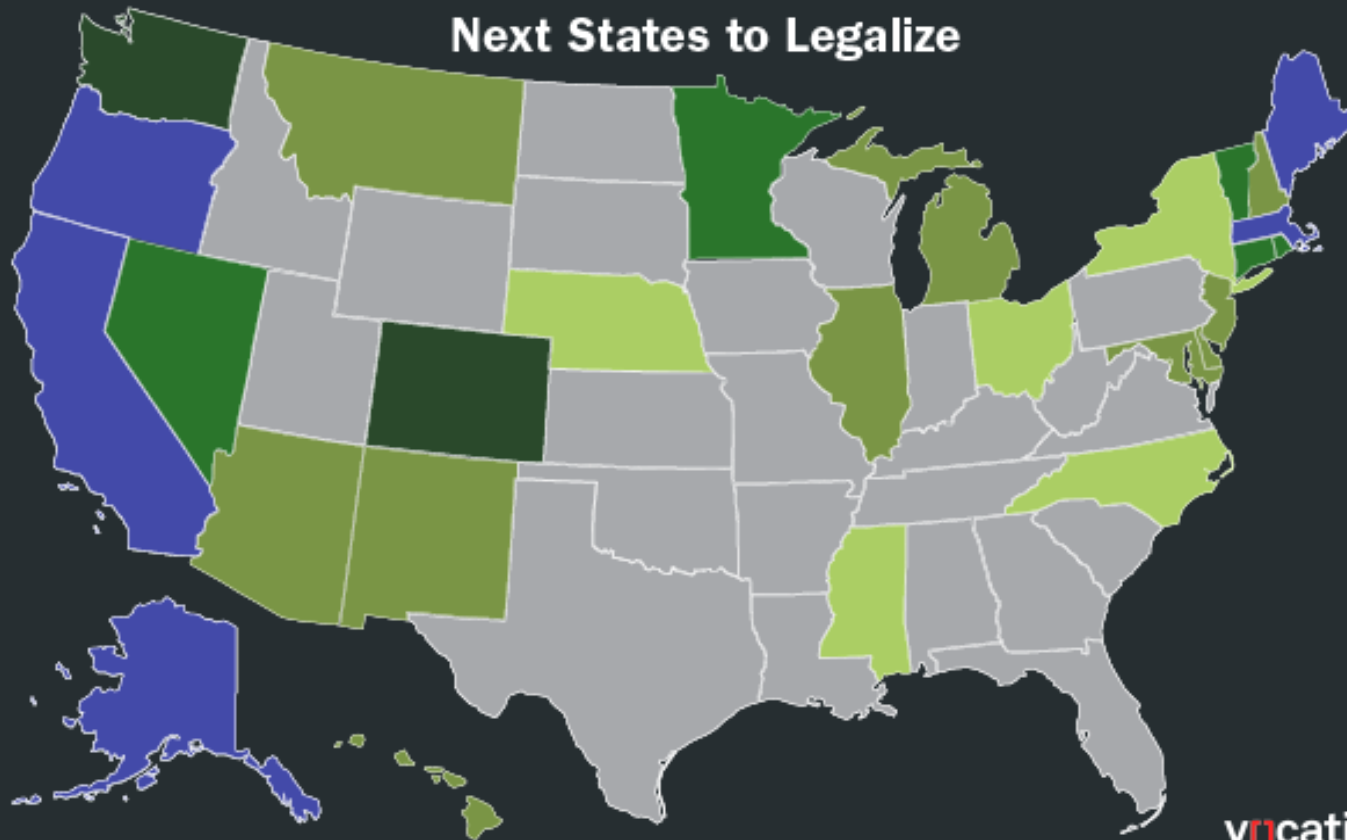
January 2014

America's Rapidly Evolving Marijuana Laws

Next States to Legalize for Recreational Use



Next States to Legalize



Source: NORM L

vocat

5 2 %

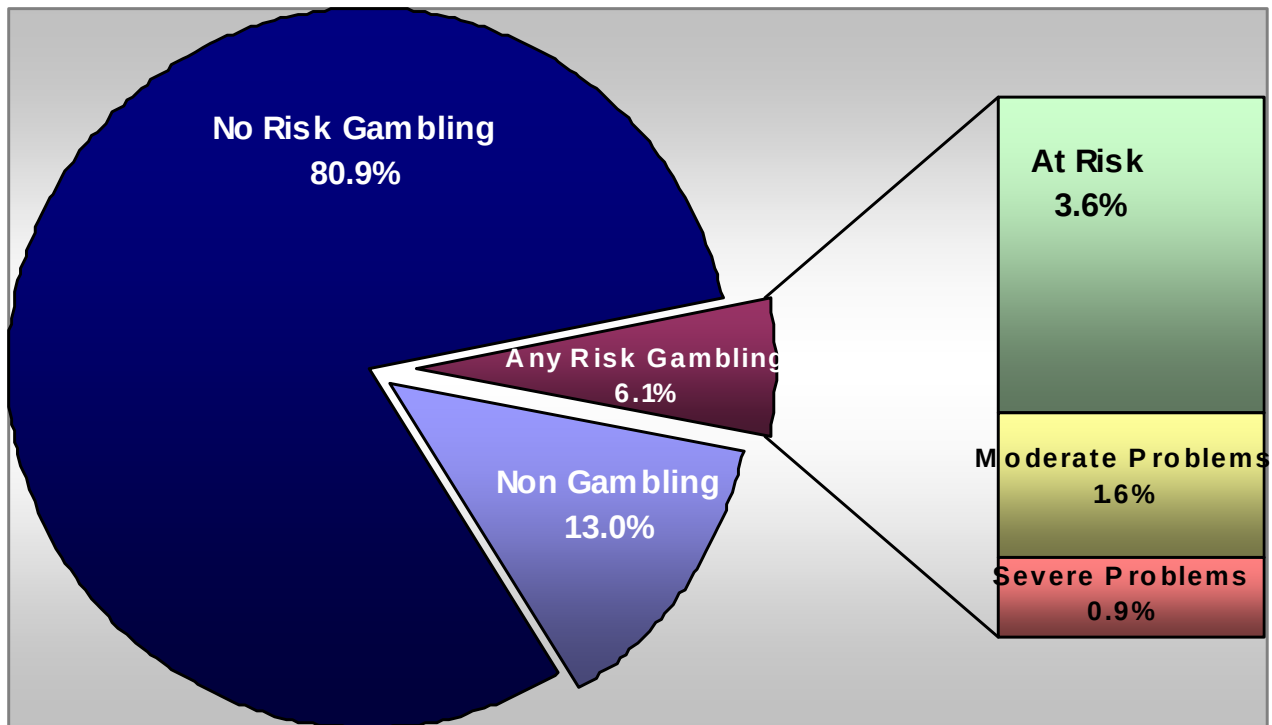
Club Drugs

- GHB
- Ketamine
- Rohypnol
- Ecstasy
- Designer Drugs
 - Bath Salts
 - Krokodil

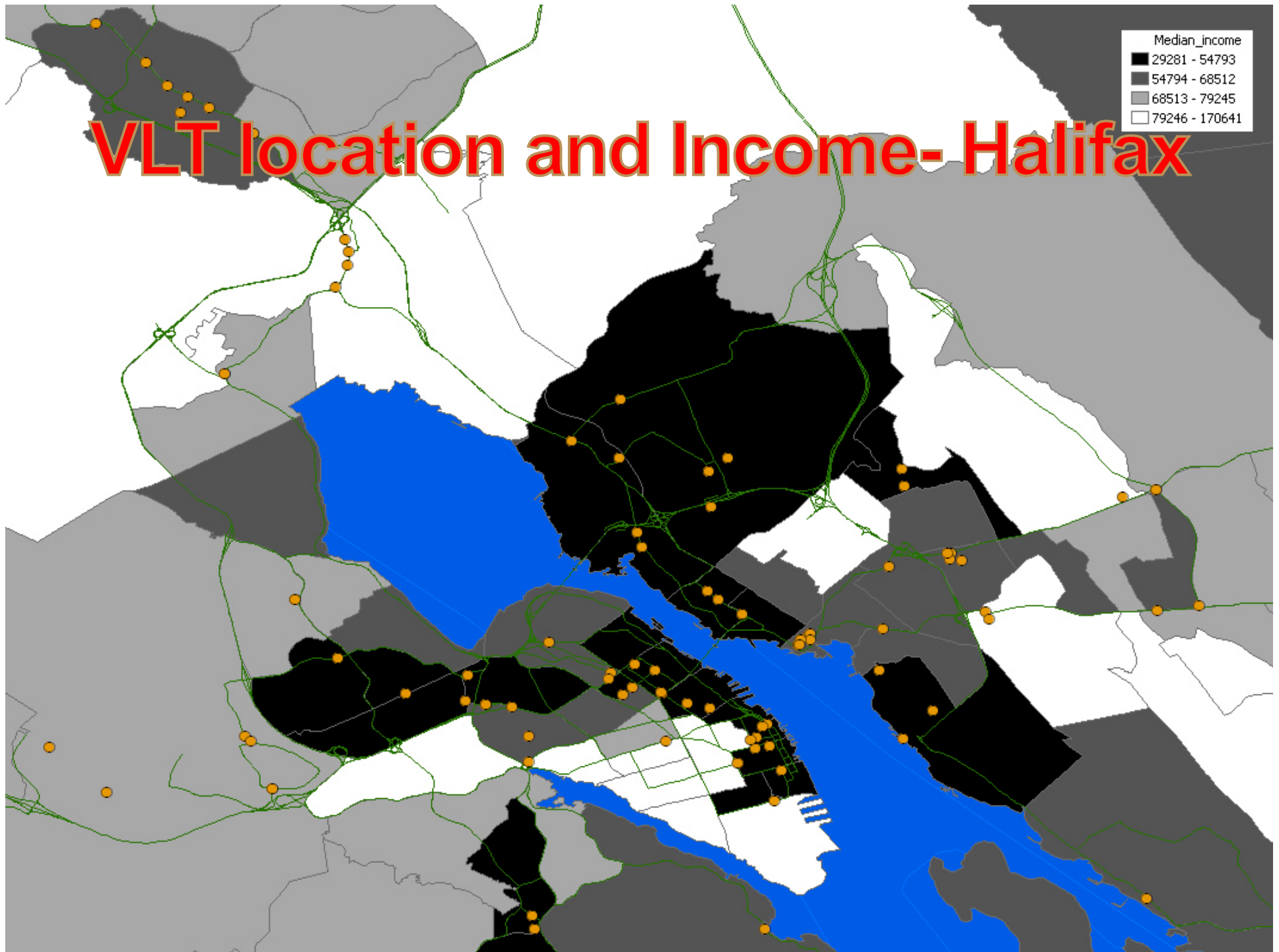


GAMBLING

Gambling Prevalence - Adults



VLT location and Income- Halifax

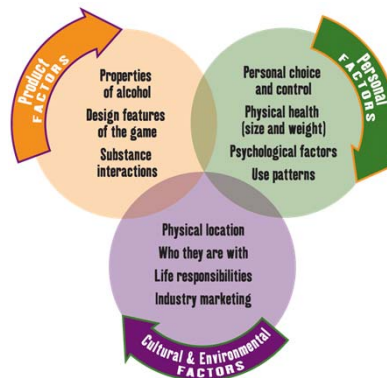
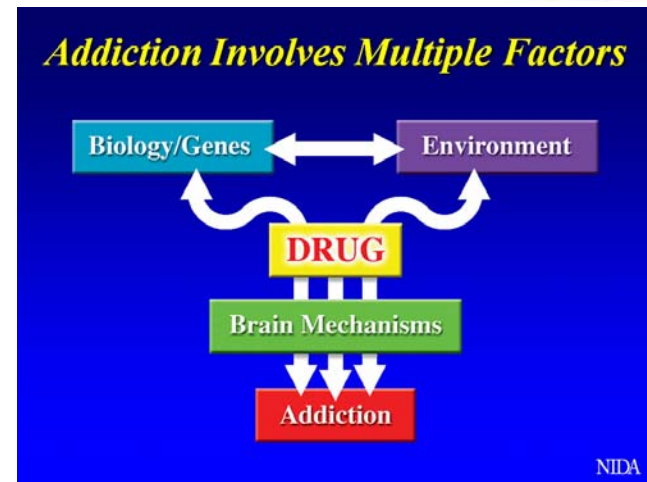


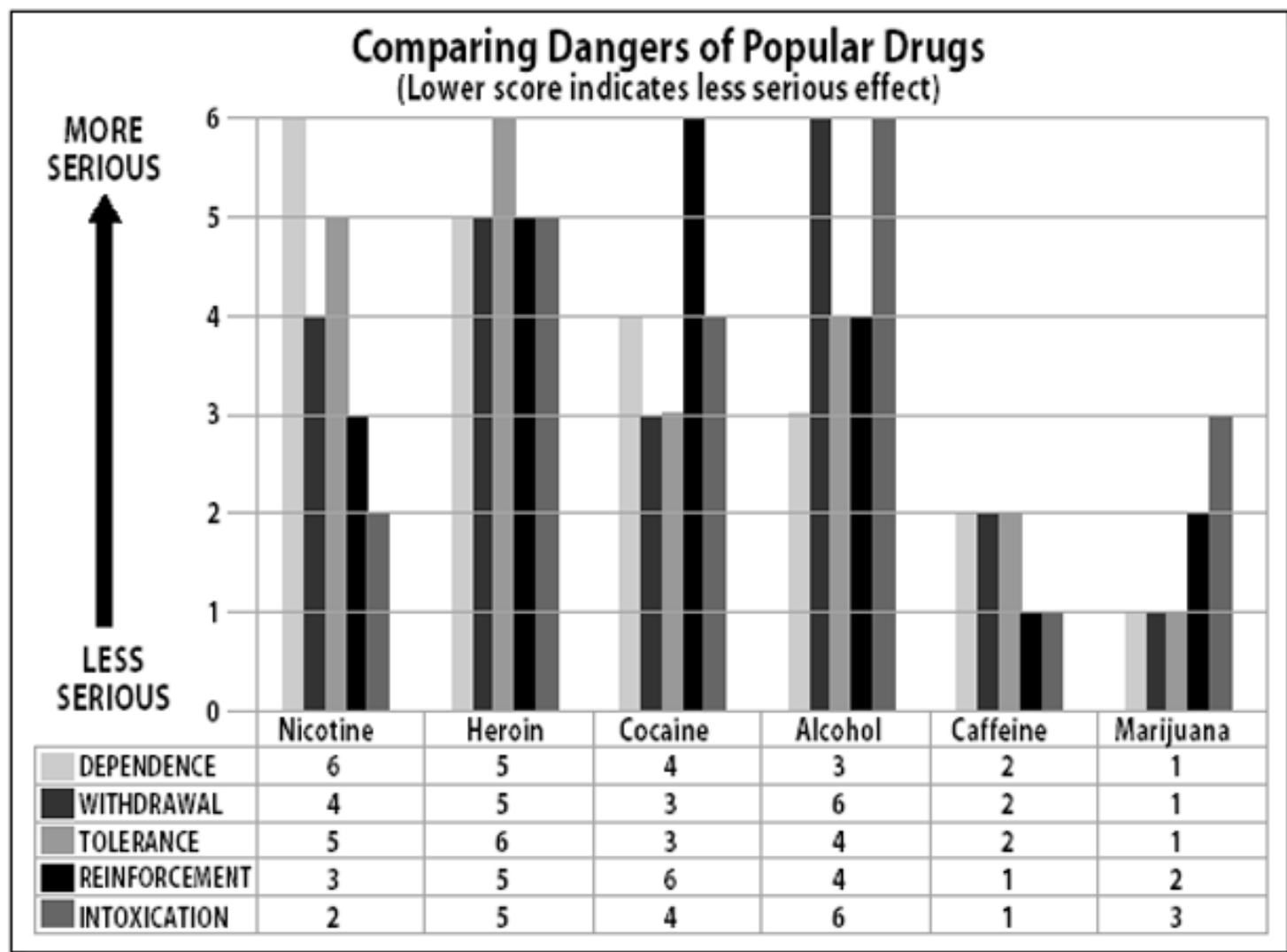
RISK AND RESILIENCE

Risk Factors

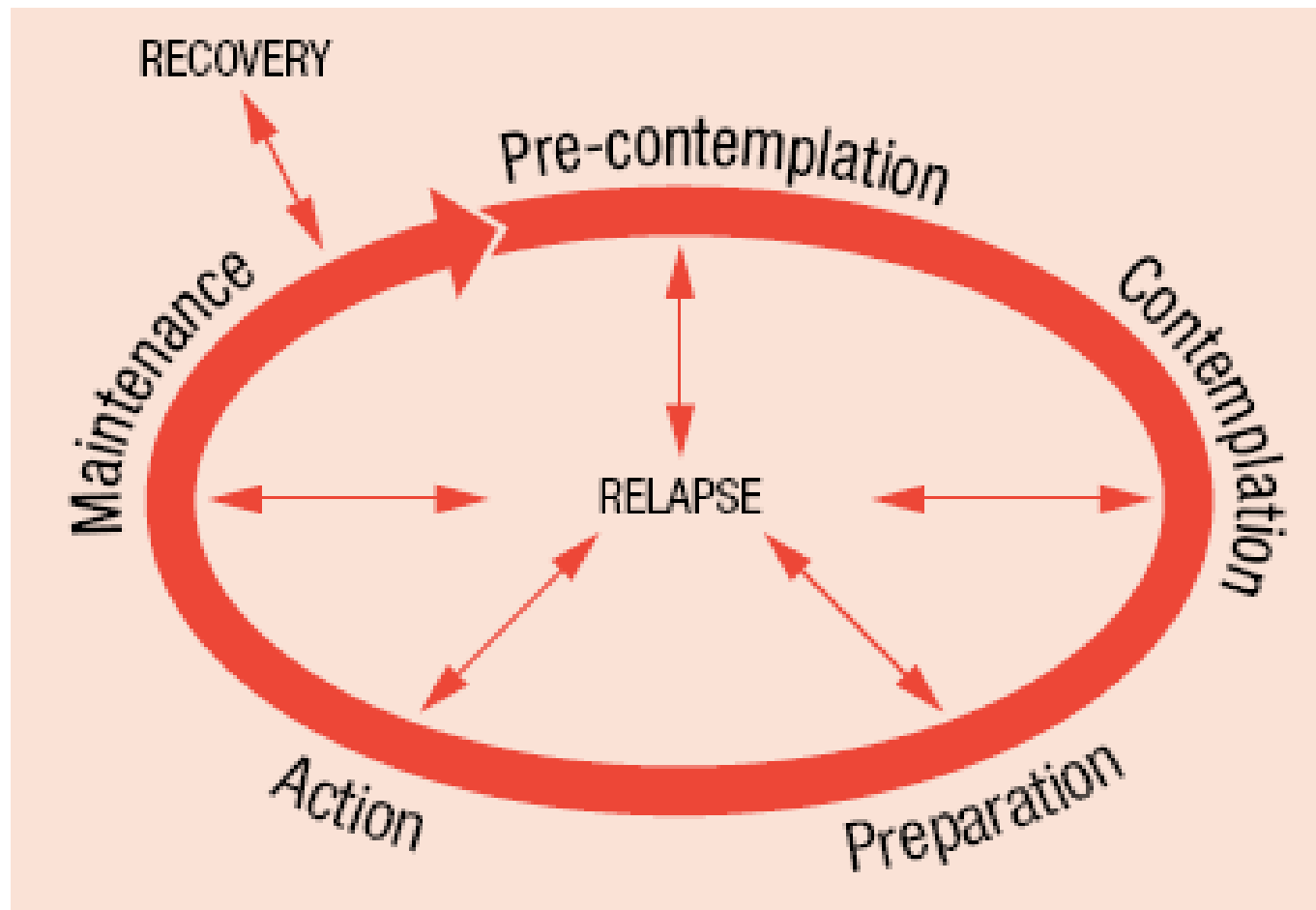
- Genetic predisposition
- Age
- Psychological stress
- Physical illness
- Social factors
- Alcohol sensitivity
- Dependence risk

Group Juggle





Stages of Change Model



Making Change

Specific

Measurable

Attainable

Realistic

Time frame

SMART

Table 6. CAGE Screen For Alcohol Abuse.

C = "Have you ever felt you should **Cut** down on your drinking?"

A = "Have people **Annoyed** you by criticizing your drinking?"

G = "Have you ever felt bad or **Guilty** about your drinking?"

E = "Have you ever had a drink as an **Eye-opener** first thing in the morning to steady your nerves or help a hangover?"

Discussion

1. Does your organization have alcohol and substance use policies? What are they?
2. How comfortable are you discussing substance use with your students
 - Individually
 - As a group or class?
3. What substances do you see impacting your student's learning?
4. What are ways that you currently support someone harmfully involved with substance use?

Resources

- [211](#)
- [Addiction Services](#)
- [Peer Support groups - Alcoholics Anonymous](#)
- Local Community Resources
 - Churches
 - CMHA
 - Non Profit organizations
- Family and friends
- Others?

Questions?

James Shedden

Health Promotion and Prevention

Mental Health & Addiction Services

902-890-2327

- www.cehha.ca