

GOOD

TABLE

GOOD

GOOD

GOOD

GOOD

GOOD

POWERPOINT

PRESENTATION GUIDE

GOOD TRIP — BAD TRIP

DISCUSSION GROUP ON SUBSTANCE USE

PowerPoint Presentation Guide

1st Edition

Institut universitaire en santé mentale de Montréal

Presentation contributors:

Mélanie Caouette, Pharmacist, M.Sc.

Julie Charbonneau, Pharmacist, M.Sc.

Julie Pelletier, Neuropsychologist

Revision:

Stéphane Potvin, Researcher, Ph.D.

Philippe Vincent, Pharmacist, M.Sc., BCPP

Graphic design and layout

Alibi Acapella Inc.

Illustrations

Sophie Leclerc

Printing

Alter Ego

Translation

Janssen Inc. Translation Service

 Institut universitaire
en santé mentale
de Montréal

 AFFILIÉ À
Université
de Montréal

INTRODUCTION

This PowerPoint Presentation Guide is intended as a support tool. It provides additional information to the slides, including useful tips for encouraging participation and improving interventions. Over the years, we have identified several recurring concerns and reactions from participants, and would like to share our clinical experience with you through this guide.



Legend:

This icon means that a video is available on the USB key to supplement the content of the slide.



« GOOD TRIP — BAD TRIP QUIZ

Slide 1



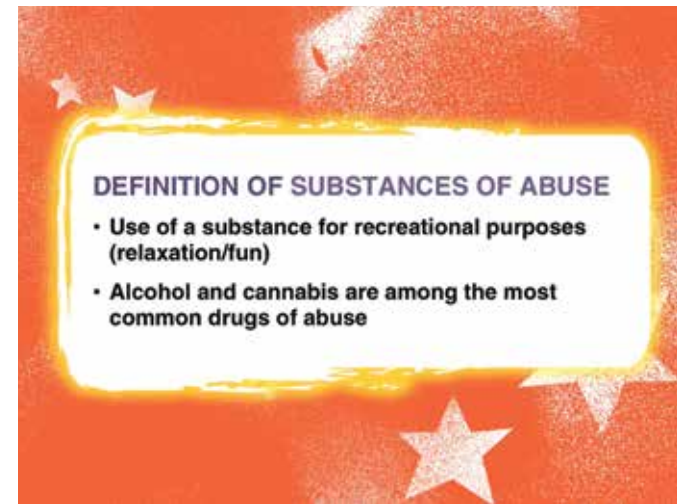
Facilitation tips

Divide the group into two or more teams, depending on the number of participants. The quiz has 18 questions, all dealing with the topic of drugs in general. Participants generally need 10 seconds to discuss each question with their team.

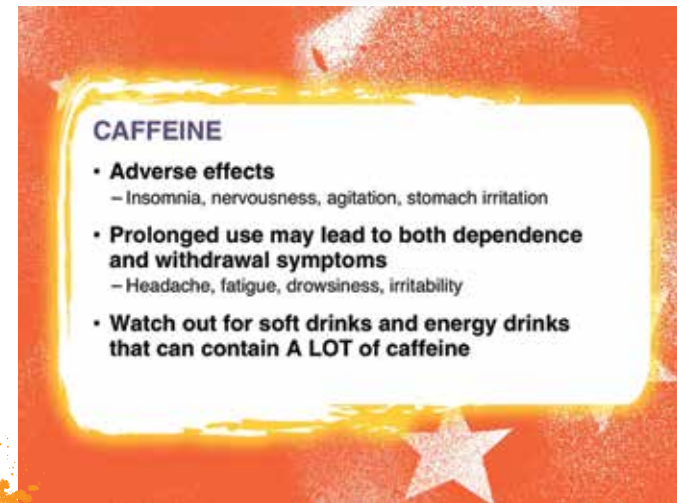
Slide 2



Slide 3



Slide 4



Useful to know

Our clinical experience has shown that participants are often surprised to learn that in addition to causing physical dependence and withdrawal symptoms, caffeine is also considered a substance of abuse.



Facilitation tips

This time can be used to hand out and discuss the pamphlet entitled "Alcohol and Energy Drinks: Don't Get Your Kicks from This Mix!" published by Educalcool (see Appendix – Additional Information from the facilitator's guide).

Slide 5



Slide 6

- Health Canada administers the Food and Drugs Act*. Manufacturing regulations are very strict, and companies that fail to comply can face substantial penalties.
 - * The term "drug" is used here based on the legal meaning and not as an illegal substance
- Clandestine laboratories have no product compliance and safety measures in place. Formulation recipes contain approximate quantities, jotted down on random pieces of paper.



Useful to know

Our clinical experience shows that participants are surprised to learn about the difference in the way prescription drugs and street drugs are manufactured. They were interested in learning more about Health Canada.

Slide 7

QUESTION 3

When a medication or drug interferes with the action of another medication, this is known as a(n) _____.

A Association **B** Interconnectivity
C Diversion **D** Interaction

Slide 8

An interaction occurs when two substances have an affect upon one another

- There may be three resulting consequences:
 - ↑ Effect caused by one on the other
 - ↓ Effect caused by one on the other
 - Combined effects from each drug

Slide 9

EXAMPLES OF INTERACTIONS

- Cannabis and antipsychotics
 - ↑ Drowsiness
 - ↑ Risk of psychosis
- Alcohol and antipsychotics
 - ↑ Drowsiness
- Interactions are also possible with food and natural products

Slide 10

QUESTION 4

What does cannabis contain?

A Nicotine **B** THC
C Endorphins **D** Placebo

Slide 11

- THC (tetrahydrocannabinol), which comes from the *Cannabis sativa* L plant, is the main psychoactive ingredient in cannabis.
- Cannabis contains over 460 identifiable chemical compounds, 10 times more toxic substances than tobacco, and it can also contain tobacco and/or tar.
- The levels and potency of THC in street cannabis vary greatly, depending on the part of the plant used.
 - oil > hashish > marijuana



Useful to know

Participants are always surprised to learn just how many chemicals are in cannabis.



Facilitation tips

You can elaborate more on this by discussing how the purity of cannabis has changed over the years (compare cannabis available today with that available in the 1970s). Explain that cannabis was much more pure in the '70s and that, nowadays, it is mixed and cut with so many harmful chemicals. Note, however, that today's cannabis has much higher levels of THC than plants from the 1970s.

Slide 12

QUESTION 5 BONUS

Which of the following superheroes was not created by Marvel?

A Wolverine **B** Batman

C Hulk **D** Spiderman

Slide 13

QUESTION 6

What do amphetamine tablets look like?

A White with a logo **B** Red with a bomb

C They change all the time **D** Pink with the inscription "TKO"

Slide 14

APPEARANCE OF TABLETS

<p>Health Canada</p> <ul style="list-style-type: none"> Pharmaceutical companies are required to produce identical tablets for each prescription drug they manufacture <p>Example: Companies must provide a detailed visual description of each tablet in the product information sheet</p>	<p>On the street</p> <ul style="list-style-type: none"> Pills vary depending on the laboratory and availability of logos There is no guarantee that the pill will contain the desired drug <p>Example: Pills sold as Ecstasy might contain amphetamines</p>
--	---

Facilitation tips

The Health Canada table entitled "Designer Drugs Seized in Quebec" can now be presented unknown by the participants (see the USB key). This table is used to initiate discussion on a few street drugs that contain products that are unknown by participants (such as lidocaine, which is an anaesthetic) or that contain five or more ingredients. Take this opportunity to compare two drugs that look the same and have the same name, but contain different ingredients (e.g., On Star or Shell V-Power).

Slide 15

QUESTION 7

Which of the following statements on the psychological effects of cannabis is false?

A Relaxing effect **B** Hallucinations

C Decreased physical and mental alertness **D** No impact on mental health

Slide 16

SOUGHT-AFTER EFFECTS OF CANNABIS

- Pleasure
- Feeling of well-being
- Feeling of calm and relaxation
- Being more sociable
- Feeling more creative
- Drowsiness

Facilitation tips

Sample question: What are the sought-after effects of cannabis?

Slide 17

ADVERSE EFFECTS OF CANNABIS

- Hallucinations, paranoia, depression
- Feeling down physically and mentally
- Impaired memory
- ↓ Attention and concentration

Facilitation tips

Sample question: What are the adverse effects of cannabis?

Slide 18

QUESTION 8

Which of the following statements regarding cocaine is false?

A First-time use gives an incredible high

B Creates no addiction

C Amount consumed increases constantly

D Causes hallucinations

Slide 19

- It is difficult to re-experience the intense pleasure of the first hit (euphoria). In an attempt to achieve that same effect, users tend to increase their intake of cocaine, but this also increases the risk of adverse effects (e.g., agitation, confusion).
- As a result, the risk of addiction is high and can develop rapidly.
- Like many other drugs, cocaine can cause hallucinations.



Useful to know

Participants who have used cocaine confirm that the initial high is difficult to recapture.

Slide 20

QUESTION 9

This drug is made from pseudoephedrine (decongestant) and can cause permanent brain damage when heavily abused.

A LSD

B Ketamine

C Methamphetamines

D Cannabis

Slide 21

- Pseudoephedrine is a decongestant that is available without a prescription. It is used to manufacture methamphetamines.
- In recent years, it has been mainly available in combination with acetaminophen (e.g., Tylenol® Cold) or ibuprofen (e.g., Advil® Cold & Sinus) to prevent abuse.
- Examples of substances used to manufacture street drugs
 - Drano®, cleaning products
 - Paint thinner
 - Rubbing alcohol



Useful to know

Our clinical experience shows that it is important to take time to talk about the substances used to manufacture drugs. Other products found in street drugs include solvent (acetone, methanol), aluminum foil, glass, insecticide, fertilizer, etc.



Notes for the facilitator

Choose your words carefully, particularly in relation to batteries. Don't talk about "lithium batteries" as participants may not make the distinction between the prescription drug lithium and the batteries.

Slide 22

QUESTION 10

The following are effects of cannabis. Which one is associated with long-term cannabis use?

A Pleasure

B Craving

C Relaxation

D Carcinogenic effect

Slide 23

- Pleasure, relaxation and craving are short-term effects which appear rapidly after cannabis use.
- The risk of cancer increases with prolonged use of cannabis.
- Inhaling the smoke can be carcinogenic since it involves breathing in for 10 to 20 seconds, causing the smoke to penetrate deep into the lungs.
- Cannabis contains more tar and carcinogens than tobacco.



Useful to know

Based on our clinical experience, participants don't think about the chronic impacts of cannabis use. A parallel can be drawn between tobacco and the long-term carcinogenic effects.

Slide 24

QUESTION 11 BONUS

What was the name of The Beatles' drummer?

A Paul McCartney **B** Ringo Starr

C John Lennon **D** George Harrison

Slide 27

QUESTION 13

All of the following statements regarding the effect of stimulants on health are false, except one, which one?

A Weight gain **B** Heart problems

C Muscle pain **D** Increased appetite

Slide 25

QUESTION 12

What impact does the use of cannabis, alcohol or another drug have on antipsychotics?

A Increases the risk of psychosis **B** Increases the adverse effects

C Creates a drug interaction **D** All of the above

Slide 28

- As its name indicates...
A stimulant stimulates the body!
- Risks associated with amphetamines/cocaine
 - ↑ Blood pressure and pulse
 - Insomnia
 - Excessive weight loss, nausea, vomiting
 - Sweating, headache
- High dose
 - Arrhythmia, stroke
 - Respiratory and cardiac arrest

Slide 26

IMPACTS OF DRUG USE

- ↑ Risk of psychosis
 - Possible loss of efficacy of antipsychotic medication
- ↑ Adverse effects of medication (e.g., drowsiness)
- Possibility that use will cause the person to forget to take his medication
- Interaction between smoke (cannabis, tobacco) and certain antipsychotics

Slide 29

QUESTION 14

Which of the following associations is true?

A Cannabis – Hallucinogen **B** Alcohol – Hallucinogen

C Mescaline – Depressant **D** GHB – Stimulant



Facilitation tips

Sample question: What are the effects of an interaction between illegal drugs and prescription drugs?



Notes for the facilitator

Antipsychotics that interact with cannabis and tobacco smoke are olanzapine (Zyprexa®) and clozapine (Clozaril®).

Slide 30

DRUG CATEGORIES

- **Depressants**
Decrease the level of alertness and brain activity (feeling calmer, drowsy)
E.g., Heroin, alcohol, GHB
- **Stimulants**
Increase the level of alertness and speed up brain activity (alertness, more energy, need to move)
E.g., Amphetamines, cocaine

Slide 33

- Amphetamines are used by both men and women to cope with problems, improve personal relationships, and improve concentration
- More women than men report using amphetamines to lose weight, however, although men are susceptible as well

Slide 31

DRUG CATEGORIES

- **Hallucinogens**
Have a significant effect on the brain, especially in terms of mood and sense perception
E.g., Cannabis, magic mushrooms, mescaline



Facilitation tips

This is a good time to hand out and discuss the pamphlet entitled “Taking amphetamines to lose weight... Not such a great idea!” published by the Ministère de la santé et des services sociaux (see Appendix – Additional Information from the facilitator’s guide).

Slide 34

- **Risks associated with not eating enough**
 - Fatigue, weakness
 - Hair loss
 - Mood swings
- **Possible consequences of losing weight too quickly**
 - Irregular periods
 - Constipation and other digestive problems
 - Loss of muscle mass

Slide 32

QUESTION 15

Why do women, in particular, use amphetamines?

- A** To lose weight
- B** To cope with problems
- C** To improve their interpersonal relationships
- D** To improve their concentration

Slide 35

QUESTION 16

What should an intoxicated user do if he has to take his prescription drug?

- A** Skip the dose
- B** Double the dose the next day
- C** Take the prescribed dose
- D** Take half the dose

Slide 36

- **Skipping a dose:** ↓ Medication in the bloodstream, therefore, ↑ risk of psychotic relapse
- **Doubling the dose:** ↑ Medication in the bloodstream, therefore, ↑ risk of adverse effects
- **Taking half the dose:** ↓ Medication in the bloodstream, therefore, ↑ risk of psychotic relapse

Slide 37

- **It is preferable to take the prescription drugs, even after having used other substances, since there are generally no contraindications**
 - Contact a health practitioner if needed
- **Risk of psychotic relapse in figures**
- **Number of days a dose was missed and risk of rehospitalization over one year**
 - No missed doses = about 5%
 - Doses missed (1-10 days) = twice the risk



Notes for the facilitator

Possible solutions: Have alcohol early in the evening and take the prescription drug before going to bed; take the prescription drug after a date to avoid the drowsiness, etc.

Slide 38

QUESTION 17 BONUS

What year was Céline Dion born?

A 1963 **B** 1968

C 1966 **D** 1969

Slide 39

QUESTION 18

Which substance is least likely to cause substance-induced psychosis?

A Alcohol **B** Cocaine

C Amphetamines **D** Cannabis

Slide 40

- **Drugs that frequently cause psychosis**
 - Amphetamines
 - Cannabis
 - Mescaline
 - Magic mushrooms
 - Cocaine
- **Alcohol rarely causes psychosis, and the risk is greater when there is**
 - Alcohol withdrawal
 - Bipolar affective disorder

Slide 41

18

End

SUBSTANCE USE HABITS

Slide 1



Slide 2

PRESENTATION OUTLINE

01	Different levels of substance use – Definitions – Relationship with pleasure
02	Illness, prescription medication and drugs
03	How to ensure compliance

Slide 3



Slide 4



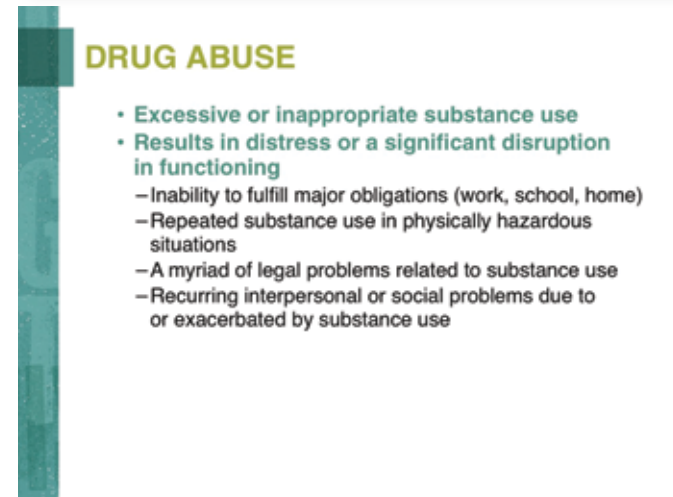
Facilitation tips

For each of the following definitions, first ask participants to provide their own definition and then complete the answers.

Slide 5



Slide 6



Slide 7

TOLERANCE

- Gradual adjustment of the body to a given substance

ASSOCIATED CONSEQUENCE



Facilitation tips

Use cocaine as an example, since cocaine users often need increasingly larger doses to experience the same effects as before. If any of the participants use cocaine, invite them to talk about their experiences. Ask participants to share their answers to Question 2 of the homework "My drug use and prescription medication."

Slide 8

WITHDRAWAL

- Range of physical and/or psychological symptoms
- Psychological withdrawal
 - Unpleasant sensation of discomfort or anxiety
 - Feeling irritable, anxious, agitated, depressed
 - Key element of drug addiction

Facilitation tips

Ask participants to share their answers to Question 3 of the homework "My drug use and prescription medication."

Did you know that...

During psychological withdrawal, users can miss the pleasure associated with the object of their addiction. Psychological dependence is the key element of drug addiction (compared to physical dependence). Someone can complete detox and still be very psychologically addicted. About half of people relapse within the first year.

Slide 9

WITHDRAWAL

- Physical withdrawal
 - Depends on substance
 - Pain
 - Sweating
 - Nausea, diarrhea
 - Tremors and sometimes seizures

Notes for the facilitator

Withdrawal symptoms generally last one week, but mild symptoms can persist for weeks, even months, depending on the substance.

Slide 10

CRAVING

- Irresistible need to use a drug; can be compared to an obsession
- User is prepared to do anything to get the substance
- Obsession that clouds the mind and distorts thoughts
- Can affect mood and behaviour

Slide 11

ADDICTION

- Compulsive and irresistible need for a substance
- Indications of dependence on a substance
 - Persistent craving
 - Inability to stop using
 - Development of tolerance to the drug
 - Withdrawal symptoms appear when the drug is stopped
 - A lot of time is spent on procuring the drug, using it and recovering from its effects
 - Inability to stop using or control how much is consumed, sometimes at the expense of the person's own values
 - The person continues using the drug despite recognizing that it's causing problems (e.g., physical, social)

Facilitation tips

Give examples of other types of addiction, such as compulsive gambling and addiction to sports.

Slide 12

TYPES OF ADDICTION

- **Physical dependence**
 - The body develops a tolerance to the substance
 - Physical discomfort appears when use is stopped abruptly
 - The person uses the drug to avoid the physical discomfort of withdrawal
- **Psychological dependence**
 - Intense and persistent need to use, which manifests during withdrawal (craving)
 - Fear of no longer being able to relax without using



Notes for the facilitator

Examples of physical discomfort: palpitations, sweating, headache, insomnia.

Examples of psychological addiction: sense of unease, anxiety and fear.

Slide 13

CAN PRESCRIPTION DRUGS CAUSE DEPENDENCE?

- **Certain categories of prescription drugs cause dependence**
 - Benzodiazepines
 - Examples: lorazepam (Ativan®), clonazepam (Rivotril®)
 - Often used to treat insomnia and anxiety
 - Psychological and physical dependence occur after prolonged use
 - Narcotics
 - Examples: morphine, hydromorphone (Dilaudid®)
 - Used to treat pain
 - Physical dependence, especially after prolonged use



Facilitation tips

Ask participants to answer the question and express their views on the topic.

Slide 14

CAN PRESCRIPTION DRUGS CAUSE DEPENDENCE?

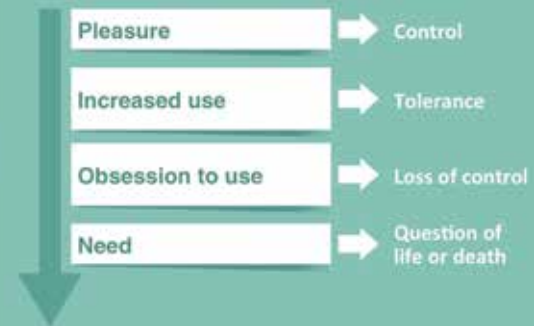
- **Do antipsychotics cause dependence?**
 - No.
 - However, there is a risk of psychotic relapse if the antipsychotic is stopped.

Slide 15

RELATIONSHIP WITH PLEASURE

Slide 16

MODIFYING THE RELATIONSHIP WITH DESIRE



Based on Cloutier R. 2011



Facilitation tips

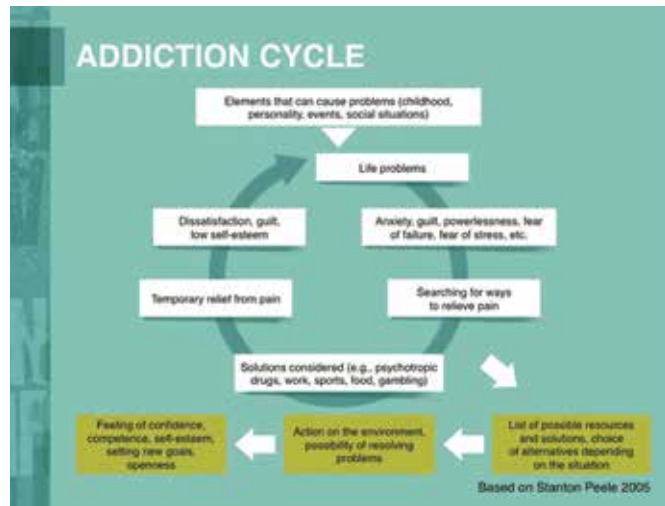
Example of a question: Ask participants to explain how strong the connection is between their desire and their drug of choice.



Notes for the facilitator

The purpose of this slide is to explain changes in a user's desire for drugs. Initially, the substance is used for the pleasure it provides, and users feel they are able to control their use. However, the body develops a tolerance to the substance, which can lead users to increase how much and how often they take the drug to achieve an effect. As physical and psychological dependence takes hold, using the drug becomes increasingly important to the person. Drug use then becomes an obsession and can lead to loss of control. Taking the drug becomes an essential need and can even become a question of life or death.

Slide 17



The following diagram presents the cycle of addiction.

Notes for the facilitator

Drug use can begin when a person is going through a difficult situation or stressful event, or is experiencing low self-esteem. This is known as “malaise.” Drug use is one of the possible solutions for reducing some of that suffering. It can help users to deal with difficult situations, manage their emotions and find some balance by relieving their pain. However, when the effect from the substance disappears, the feeling of “malaise” worsens and the person uses to once again achieve the sought-after effect. This vicious cycle is difficult to break after it has been established.

Note that sports, work and food become a problem only in the event of excess.

Slide 18



Notes for the facilitator

Examples of withdrawal symptoms: wanting to sleep and eat, problems concentrating.

Slide 19



Slide 20

**PSYCHOTIC DISORDER
E.G., SCHIZOPHRENIA**



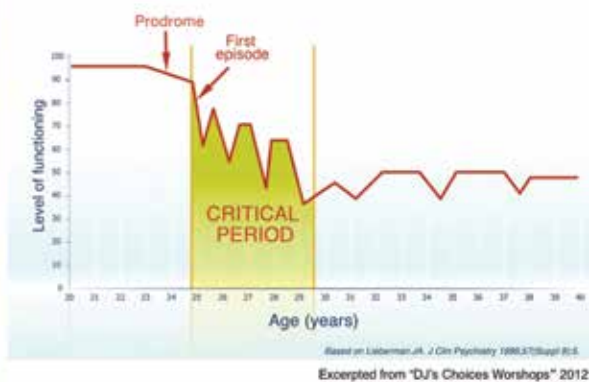
Facilitation tips

Recap the main clinical symptoms encountered in psychotic disorders, using the example of schizophrenia.

Sample question: What were your symptoms of psychosis?

Slide 21

**NATURAL HISTORY
OF SCHIZOPHRENIA**



Notes for the facilitator

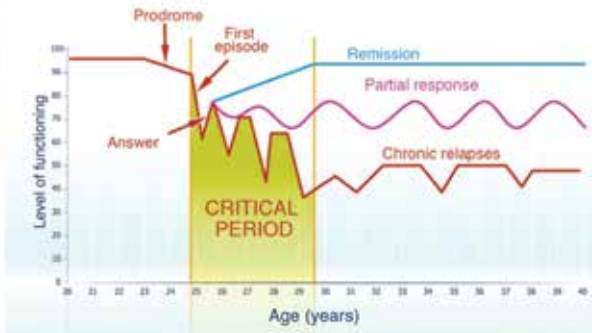
This slide shows the normal course of schizophrenia. After each psychotic episode, it becomes increasingly difficult to return to the same level of functioning.

Facilitation tips

Sample question: What could increase or maintain your level of functioning?

Slide 22

NATURAL HISTORY OF SCHIZOPHRENIA



Based on Liddleman JA. J Clin Psychiatry 1998;57(Suppl 8):6.
Excerpted from "DJ's Choices Workshops" 2012



Notes for the facilitator

In general, returning to an acceptable level of functioning is possible with the use of medication. However, in the event of chronic relapses and only a partial response to medication, level of functioning will further decrease.

Slide 23

WHICH NEUROTRANSMITTER IS MOST ACTIVELY INVOLVED IN PSYCHOSIS?

- A** Serotonin
- B** Endorphin
- C** GABA
- D** Dopamine

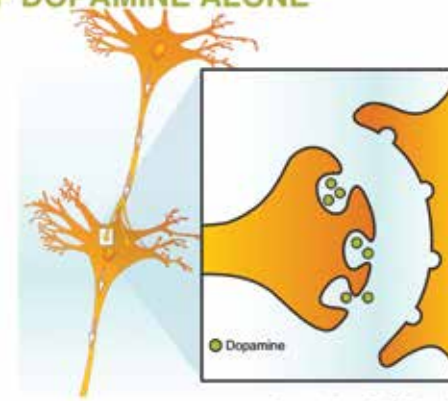
Slide 24

ROLE OF DOPAMINE

- Involved in
 - Psychotic disorders
 - Especially delusions and hallucinations
 - Attention, learning, problem-solving
 - Motivation
 - Reward (pleasure)
 - Mood
 - Movement

Slide 25

MECHANISM OF ACTION OF DOPAMINE ALONE



Excerpted from "DJ's Choices Workshops" 2012

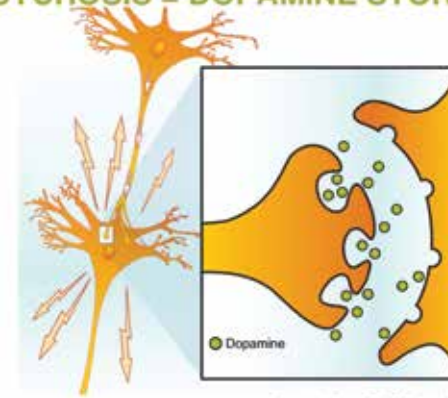


Notes for the facilitator

This image shows communication between two neurons, and represents the regular flow of dopamine in the brain.

Slide 26

MECHANISM OF ACTION OF PSYCHOSIS = DOPAMINE STORM



Excerpted from "DJ's Choices Workshops" 2012



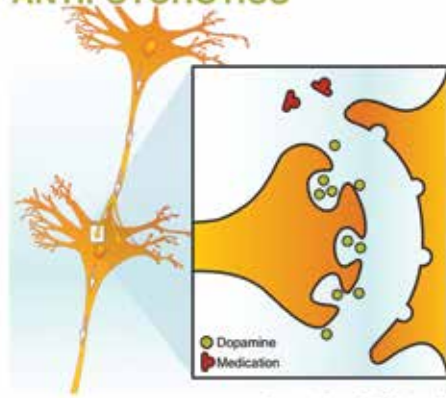
Notes for the facilitator

Psychosis is caused by excessive levels of dopamine, which in turn leads to positive symptoms such as visual and auditory hallucinations as well as delusions.



Slide 27

MECHANISM OF ACTION OF ANTIPSYCHOTICS



Excerpted from "DJ's Choices Workshops" 2012

Notes for the facilitator

Antipsychotics act by attaching themselves to the neurotransmitter's receptor sites, effectively decreasing the amount of dopamine released. The flow of dopamine in the brain thus returns to a regular level, which helps control the hallucinations and delusions. If the medication is stopped, the previously achieved balance is again disrupted and the dopamine storm returns. The pharmacological challenge consists in blocking excess dopamine in one part of the brain while preventing a drop in other areas of the brain.

Slide 28

EFFICACY OF ANTIPSYCHOTICS

- Possible improvements
 - ↓ Delusions and hallucinations
 - Clearer, more structured thinking
 - Improved sleep
 - ↓ Anxiety, feeling calm
 - Improved concentration
 - Help with overall recovery (e.g., going back to work or school)

Slide 29

DRUG-ILLNESS INTERACTIONS

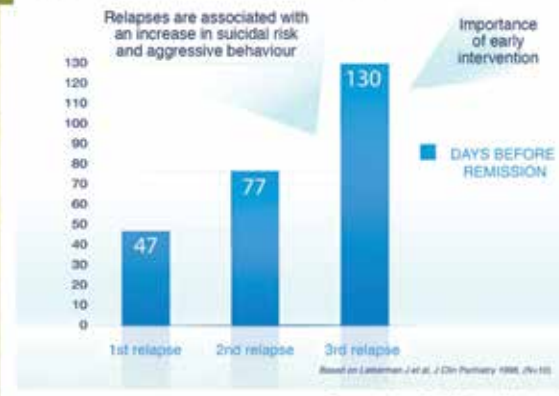
- Drugs can
 - Lead to concentration problems
 - Speed up disease onset
 - ↑ Positive symptoms (psychosis)
 - ↑ Number of psychotic episodes and rehospitalizations
 - ↑ Recovery time in the event of relapse
 - ↓ Quality of life and functioning

Facilitation tips

Sample question: What impact can drugs have on the illness?

Slide 30

IMPACT ON RECOVERY



Excerpted from "DJ's Choices Workshops" 2012

Notes for the facilitator

A study by researchers in Delaware showed that the greater the number of relapses, the longer the remission time, and the more difficult the illness is to treat with medication.

Slide 31

DRUG-PRESCRIPTION MEDICATION INTERACTIONS

- Drugs can
 - ↓ Treatment compliance
 - Cause the person to forget to take prescription medication
 - ↓ Protective effect of medication
 - Reduce efficacy
 - Increase the risk of psychotic relapse
 - ↑ Adverse effects of medication
 - E.g., drowsiness

Facilitation tips

Next, review answers 4 and 5 of the homework "My drug use and prescription medication."

Did you know that...

There is a significant risk of interaction with ecstasy and amphetamines when combined with antidepressants such as fluoxetine (Prozac®) and paroxetine (Paxil®) because of the effect of these drugs on serotonin. Caution is therefore required.

Slide 32

INTERACTIONS

- **Cannabis and cigarette smoke**
 - ↓ Efficacy of olanzapine (Zyprexa®) and clozapine (Clozaril®)
 - If amount consumed varies, it is important that the person discuss it with his/her doctor or pharmacist
- **Caffeine**
 - ↑ Toxicity of olanzapine (Zyprexa®) and clozapine (Clozaril®)
 - Found in large quantities in energy drinks



Notes for the facilitator

Participants must inform their care teams any time they increase, decrease or quit using tobacco, cannabis or caffeine. This allows the care team to adjust the dosage in order to avoid adverse effects or a deteriorating mental state.

Slide 33

QUIZ

- **What fruit or vegetable interacts with clozapine?**
 - Grapefruit juice
- **And quetiapine?**
 - Same fruit



Notes for the facilitator

Grapefruit juice increases the efficacy and toxicity of quetiapine (Seroquel®) and clozapine (Clozaril®).

Slide 34

QUIZ

- **What are the risks/consequences of combining alcohol with prescription medication?**
 - ↑ Adverse effects
 - E.g., drowsiness, drop in blood pressure
 - Can cause psychosis during withdrawal



Notes for the facilitator

Care has to be taken with over-the-counter medications and natural products. Suggest that participants always talk to a pharmacist if they have any questions or concerns.

Slide 35

PART 03

How to ensure compliance

Slide 36

WHAT TO DO IN THE EVENT OF DRUG USE

- **Alcohol**
 - "Moderation is always in good taste"
 - Plan alcohol use
 - Have a drink at dinner and take the prescription medication at bedtime
- **Caffeine**
 - Do not drink too many caffeinated drinks
 - Be aware of its excitatory effects
 - Be aware of the large amounts of caffeine found in energy drinks



Notes for the facilitator

Combining alcohol and prescription drugs is generally not recommended, but if participants want to drink, this slide provides a few suggestions.

Slide 37

WHAT TO DO WHEN A DRUG HAS BEEN USED

- Cannabis and other drugs
 - In general, it is better to take the prescription medication despite any drug use
 - Avoid making a choice between drugs and medication



Notes for the facilitator

It is important to play it safe: Even if drugs decrease the efficacy of the prescription medication, taking the medication may in fact reduce the risk of a psychotic relapse.

Slide 38

However... many people who use drugs struggle with taking their prescription medication...

What works for you?

Slide 39

TIPS TO ENSURE COMPLIANCE

- Reduce the number of doses to be taken daily
- Use a pill box/Dispill
- Associate taking prescription medication with a daily activity
 - E.g., after brushing your teeth
- Set an alarm
- Take a long-acting injection



Notes for the facilitator

These solutions could be discussed with the psychiatrist as required.

Slide 40

INJECTION?

- Benefits
 - As effective as oral form
 - Fewer adverse effects than oral medication
 - Avoids situations where the person forgets to take the medication, i.e., because of drug use, conflicts with family members
 - Avoids having to think about the illness daily
 - Could help decrease the risk of a psychotic relapse



Facilitation tips

Ask participants whether any of them have received injections and if so, take a few minutes to allow them to talk about their experience.



Notes for the facilitator

Possible drawbacks of injections: fear of needles, more costly, and any adverse effects will last longer as the medication takes longer to be eliminated.

Slide 41

TRUE OR FALSE?

"Injections are the price you pay when you don't take your pills"

- False
 - Many people choose long-acting injections
 - Experts recommend injections when it's the person's preference



Facilitation tips

Ask participants whether they think that injections are for more seriously ill people. The answer is no. It is a myth to believe that long-acting are reserved for people who are more ill.

Slide 42

CHOICE OF LONG-ACTING INJECTABLES

- Several criteria are evaluated by the psychiatrist and pharmacist
 - Person's symptoms
 - Adverse effects profile
 - Treatment compliance
 - Person's preferences
 - Cost

Slide 43

AVAILABLE LONG-ACTING INJECTABLE ANTIPSYCHOTICS

- 1st generation
 - Clopixol® Depot (zuclopenthixol decanoate)
 - Fluanxol® Depot (flupenthixol decanoate)
 - Haldol LA® (haloperidol decanoate)
 - Modecate® (fluphenazine decanoate)
 - Piportil L4® (pipotiazine palmitate)
- 2nd generation
 - Invega Sustenna® (paliperidone palmitate)
 - Risperdal Consta® (risperidone microspheres)
- 3rd generation
 - Abilify Maintena® (aripiprazole monohydrate)



Notes for the facilitator

List of long-acting injectable antipsychotics available in Canada, fall 2014.

The period between injections varies and can be every two to four weeks. If participants would like more information on injectable prescription drugs, they can refer to the Table of Long-acting Injectable Antipsychotics (see USB key).

Slide 44

CONCLUSION

- There are two types of dependence: psychological and physical.
- The vicious cycle of drug abuse is difficult to break once it is established, but anything is possible with a little persistence!
- Drug use can accelerate disease onset by increasing the symptoms as well as the risk of a psychotic relapse.
- Antipsychotic medication minimizes the risk of a psychotic relapse.

POWERPOINT

IMPACTS OF DRUGS – PART 1

Slide 1

GOOD TRIP – BAD TRIP
Illustration Group on Substance Use



IMPACTS OF DRUGS – PART 1

Slide 2

PRESENTATION OUTLINE

- Part 1: Session 3
- Cognitive impairment
 - Drug Categories
 - Reward circuit
 - Cannabis
 - Alcohol

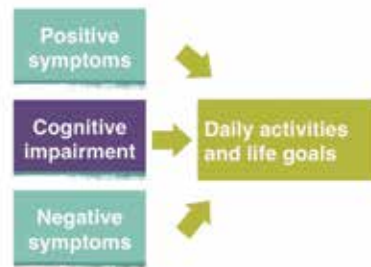
01

Slide 3

COGNITIVE IMPAIRMENT

Slide 4

PSYCHOTIC DISORDER E.g., SCHIZOPHRENIA



Notes for the facilitator

As mentioned in Session 2, schizophrenia is characterized by both positive and negative symptoms, and is strongly associated with cognitive deficits. All of these factors can have an impact on daily life activities, work performance, and life goals.

Facilitation tips

Review answer 1 to the homework "What are your plans/goals?"

Discuss the exercise objectives with the participants and ask them to elaborate on the factors that prevent them from reaching these goals or from regularly doing things they are interested in. After the discussion: Emphasize that cognitive impairment is the factor that has the greatest impact on independence, social functioning, work and education.

Slide 5

COGNITIVE IMPAIRMENT

- Cognitive functions affected in individuals with a psychotic disorder
 - Executive functions
 - Memory
 - Working memory
 - Attention
 - Processing speed
 - Social cognition
- Cognitive impairment is also associated with substance use and abuse

Slide 6

EXECUTIVE FUNCTIONS

- Also known as the brain's conductor
 - Used to achieve goals
 - Used to adapt to new situations
- Examples of executive functions
 - Organizing, planning, self-control
 - Finding a new solution to a complex problem
 - Checking a solution

Notes for the facilitator

Executive functions can be especially affected in psychotic disorders such as schizophrenia. To some extent, they are the brain's conductor, and they manage the other cognitive functions. Executive functions are generally associated with the frontal lobe and are used to achieve goals, adapt to new situations, solve problems and make decisions.

Concrete example illustrating the use of executive functions on a daily basis:

- Goal: Getting to a new place on time
- Strategies:
 1. Taking the time to think
 2. Figuring out how to get there
 3. Planning the different steps (e.g., figuring out the route and how to get there)
 4. Finding a new solution if the original plan doesn't work, being resourceful (e.g., the car won't start)
 5. Checking whether the goal has been achieved



Slide 7

OTHER COGNITIVE FUNCTIONS

- Memory
- Attention
- Processing speed
- Working memory
- Social cognition



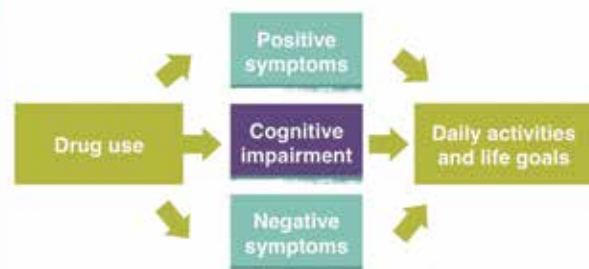
Notes for the facilitator

Schizophrenia often affects other cognitive functions, including:

- **Memory:** capacity to remember, learn (e.g., learning a new route, remembering what the facilitator said yesterday).
- **Attention:** required for performing a range of activities (e.g., reading, watching a movie, driving, having a discussion). Allows a person to concentrate for long periods of time and to ignore distractions.
- **Short-term memory / Working memory:** capacity to keep active information in your head, retaining information over a short period of time and processing the information (e.g., being able to remember the price of two items to be purchased and adding them up, being able to remember what the teacher said while writing at the same time).
- **Social cognition:** set of cognitive processes necessary to understand others and interact with them (e.g., being able to recognize that a friend is sad simply by looking at his face, recognizing from a person's body language that he wants to end the conversation, i.e., person picks up his keys).

Slide 8

PSYCHOTIC DISORDER E.g., SCHIZOPHRENIA



Notes for the facilitator

In addition to the impairments noted in psychotic disorders, patients may show effects associated with the use of drugs related to positive symptoms, negative symptoms or cognitive deficits. Thus, drug use may have an important impact on the functional level of patients and on their life-long projects.

Slide 9

DRUG CATEGORIES

Slide 10

DEPRESSANTS	STIMULANTS	HALLUCINOGENS
• Decrease alertness and brain activity	• Increase alertness and brain activity	• Have a significant effect on the brain, especially in terms of mood and sense perception
• Alcohol • Morphine and morphine derivatives • Methadone • Heroin • Benzodiazepines (e.g., Alivan®) • GHB • Solvents	• Cocaine • Amphetamines, methamphetamines • Ritalin® • Nicotine • Caffeine	• Cannabis • Magic mushrooms • PCP/inescaline • Ketamine • Ecstasy

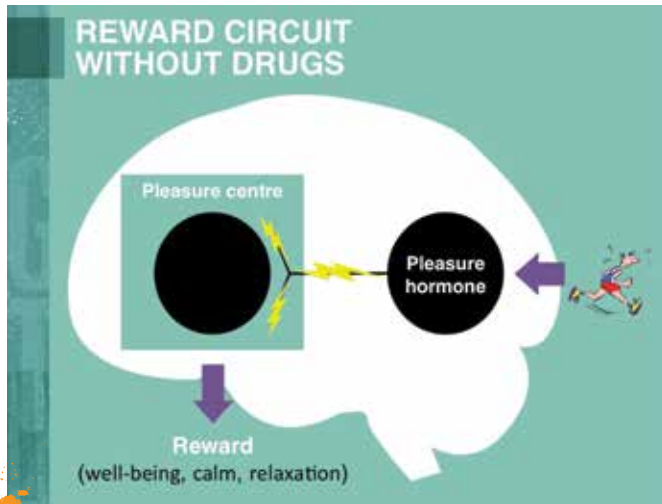
Notes for the facilitator

This list is not exhaustive and contains the main substances found in each drug category. For more details, see "Appendix – Drug Categories" in the facilitator's guide and the participant's workbook.

Slide 11

REWARD CIRCUIT

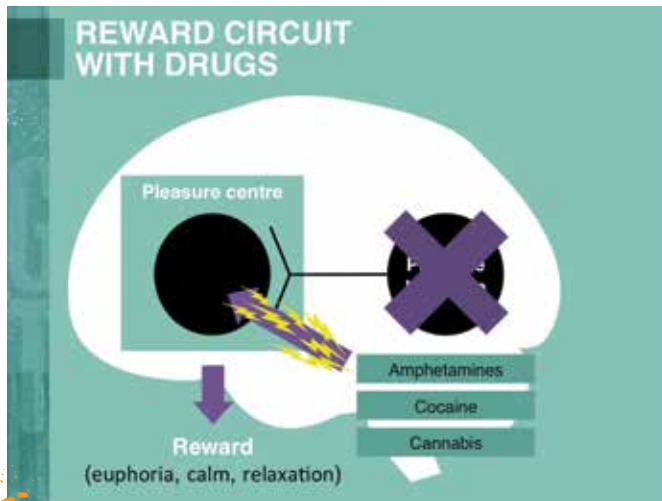
Slide 12



Notes for the facilitator

When a person runs, endorphins are released (the pleasure hormone) thus triggering the pleasure centre through dopamine (which results in a feeling of well-being, calm and relaxation associated with the pleasure of doing the activity). This system is also managed by basic needs (hunger, thirst) and is essential for living and experiencing pleasure on a daily basis.

Slide 13

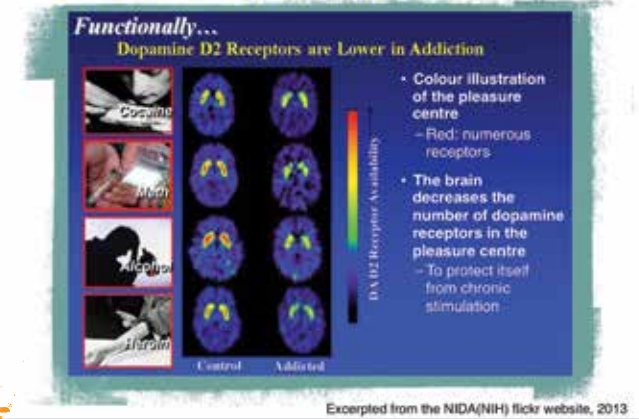


Notes for the facilitator

Drug use disrupts the fragile balance of the reward circuit. As a result, the reward circuit is no longer managed by meeting needs such as hunger and thirst. For instance, amphetamines directly and more powerfully stimulate the pleasure centre, without the action of endorphins. Since the drug is too powerful, the brain protects itself by decreasing its sensitivity, which can explain why users have trouble feeling pleasure during withdrawal. All drugs impact the reward circuit at different levels.

Slide 14

DISRUPTION OF REWARD CIRCUIT OVER THE LONG TERM



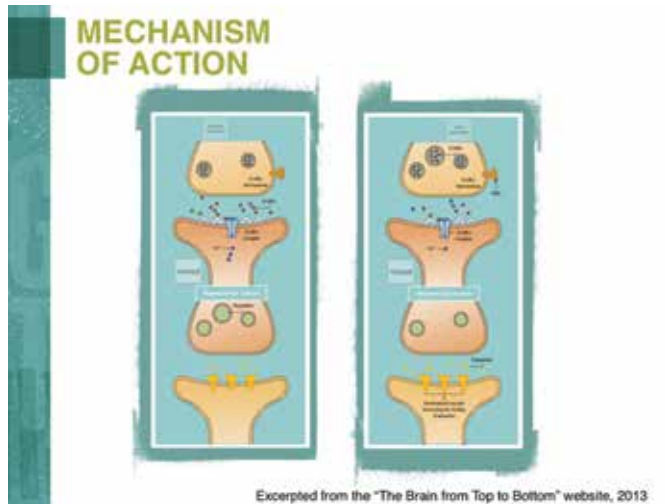
Notes for the facilitator

This image shows that over the long term, drug use ends up disrupting dopamine in the brain's pleasure centre.

Slide 15



Slide 16



The diagram shows communication between neurons in the pleasure centre first without the use of cannabis, then with the use of cannabis. See USB key for the animation of each drug.

Facilitation tips

First show the "without cannabis" animation to participants: GABA neurotransmitter prevents the release of dopamine.

Next, show the "with cannabis" animation: Cannabis blocks GABA neurotransmitter and triggers the release of dopamine in the pleasure centre. This rise in dopamine can increase the risk of psychosis and lead to drug addiction.

Did you know that...

Cannabinoid receptors are found throughout the brain. Cannabis interacts with these receptors and adjusts their effects to produce a state of euphoria, relaxation and amplified sense perception.

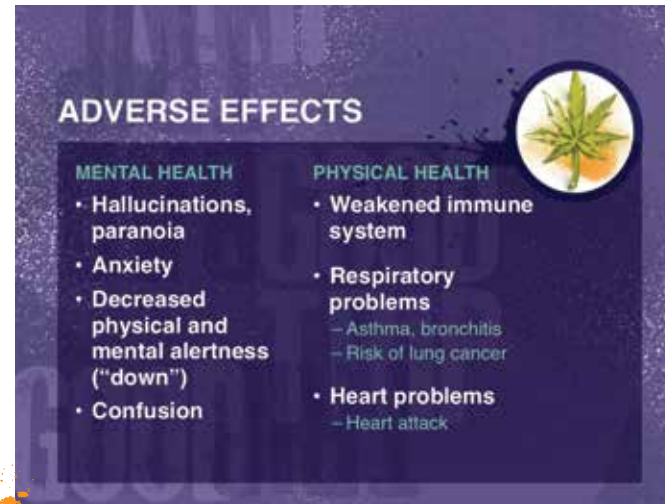
Slide 17



Facilitation tips

Using the homework "Which drug(s) do you use?" review the cannabis effects which are sought-after by participants. Do the same for the other substances that will be presented.

Slide 18



Facilitation tips

Using the homework "Which drug(s) do you use?" recap the adverse effects of cannabis use noted by participants. Do the same for the other substances that are presented.

Did you know that...

Cannabis can contribute to removing certain inhibitions, such as having unprotected sex and trying new drugs.

Synthetic cannabis is sold on the street as "Spice" or "Yucatan Fire." These chemicals are sprayed over a mixture of herbs, spices or plant material and can be sold as incense in some convenience stores. Synthetic cannabis, considered illegal by Health Canada, can have effects similar to marijuana when smoked or inhaled. Users need to be careful with these products: some ingredients can produce a powerful and unpredictable effect.

Slide 19



Notes for the facilitator

The duration of withdrawal is not mentioned in the scientific references. It is known that cannabis accumulates in the body; therefore, the withdrawal period could depend on the duration of use and the users' profile.

Slide 20

AMOTIVATIONAL SYNDROME

- Fatigue, passivity, indifference
- Loss of interest and ambition
- Lack of initiative



Notes for the facilitator

Amotivational syndrome is common among cannabis users and is mainly characterized by a lack of motivation and interest, as well as a lack of initiative.

This syndrome remains controversial. Some associate it to the effects of long-term marijuana use, while others associate it with the lifestyle of cannabis users. Amotivational syndrome disappears gradually after cannabis use stops.

Slide 21

COGNITIVE EFFECTS

- Short-term cognitive effects
 - ↓ Perception of time / Visual-motor coordination
 - Slower, delayed decision-making
 - ↓ Attention / Concentration
 - ↓ Judgment, ↑ Risk-taking behaviour
 - ↓ Learning / Memory
- Medium-term cognitive effects
 - Generally reversible after about one month



Notes for the facilitator

Long-term cannabis use can alter various cognitive functions, but its effect seems to be mild and less pronounced than that of alcohol and cocaine. It is important to note that these effects are in addition to the cognitive impairment often present in individuals with a psychotic disorder.

Some impairments can continue for some time after an acute intoxication (from a few hours to a few weeks), but are virtually undetectable and not clinically significant after one month.

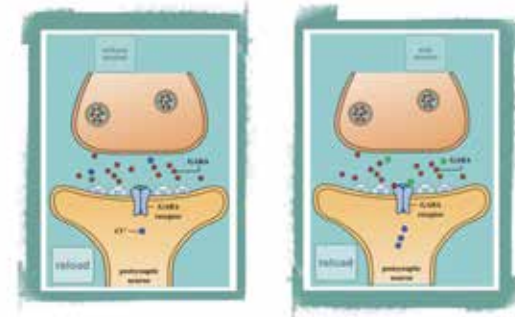
Some factors can influence the long-term effects of cannabis, including quantity and duration of cannabis use. The age of first use of marijuana is particularly important. In fact, cannabis use in adolescence could disrupt the brain's normal maturation, resulting in permanent neurocognitive impairment.

Slide 22



Slide 23

MECHANISM OF ACTION



Excerpted from the "The Brain from Top to Bottom" website, 2013



The diagram shows neuronal communication first without alcohol, and then with alcohol.

Facilitation tips

First show the "without alcohol" animation to participants: GABA decreases neuronal activity.

Next show the "with alcohol" animation: Alcohol enables greater action on the part of GABA. This action explains the drowsiness and relaxation effects (anxiolytic) associated with alcohol.

Slide 24

SOUGHT-AFTER EFFECTS

- Feeling of well-being
- Being more sociable
- Ease in talking
- ↓ Anxiety
- ↓ Inhibition



Slide 25

ADVERSE EFFECTS



MENTAL HEALTH	PHYSICAL HEALTH
<ul style="list-style-type: none"> • Aggressiveness, irritability • Anxiety, depression • Possible hallucinations during withdrawal 	<ul style="list-style-type: none"> • Headache • Dehydration • Nausea, vomiting • Deficiencies in <ul style="list-style-type: none"> – Folic acid – Vitamin B1 (thiamine) • Heart disease • Liver problems



Did you know that...

Undernutrition is primarily due to the lack of vitamins in alcoholic drinks. Appetite is also decreased as a result of the calories found in alcohol, further increasing the risk of undernutrition. Thiamine (in oral or intravenous form) and multivitamins are often prescribed to compensate for the lack of vitamin intake among individuals who abuse alcohol.

In severe cases, alcohol causes cirrhosis of the liver and increase the risk of liver cancer.

Alcohol has a depressant effect. It lowers inhibition, can increase impulsiveness and is associated with a high rate of suicide and homicide.

Slide 26

WITHDRAWAL

- Begins six to eight hours after the last drink and can last up to a few days
- Main physical symptoms
 - Sweating
 - ↑ Pulse rate
 - Nausea, vomiting, heart palpitations, insomnia, headache
 - Sensitivity to light, noise and pain
 - Tremors, risk of seizures (*delirium tremens*)
- Main psychological symptoms
 - Anxiety, irritability, agitation
 - Confusion, disorientation, hallucinations



Facilitation tips

It is important to mention to participants that going through withdrawal from alcohol alone, without any medical assistance, can be hazardous due to the risk of seizures. It is strongly recommended to talk to a healthcare practitioner before stopping alcohol use.



Did you know that...

Hallucinations and seizures are the most commonly reported alcohol withdrawal symptoms.

Here are a few statistics: Hallucinations (primarily visual, but also auditory and tactile) occur in 10-25% of cases; Seizures occur in 3-15% of cases.

Slide 27

COGNITIVE EFFECTS

- Acute
 - Slurred speech
 - Lack of coordination, unsteady gait
 - Reduced processing speed
 - ↓ Reflexes
 - ↓ Attention / Concentration
 - ↓ Judgement
 - ↑ Lack of inhibition / Risk-taking behaviour



Facilitation tips

Sample question: Have you ever experienced cognitive problems after drinking alcohol?

Slide 28

COGNITIVE EFFECTS

- Over the short and medium term (less than one year)
 - ↓ Executive functions (problem-solving, planning, organization)
 - ↓ Inhibition, ↑ Impulsivity
 - ↓ Memory / Learning
 - ↓ Processing speed
 - ↓ Attention / Working memory
 - ↓ Visual-spatial functions



Notes for the facilitator

The effects of alcohol are greater and longer lasting than those of cannabis. Alcohol is potentially neurotoxic; therefore, drinking large quantities of alcohol over an extended period of time can significantly affect a number of cognitive functions.

Example of a task that requires visual-spatial functioning: Assembling furniture purchased from Ikea™.

Slide 29

COGNITIVE EFFECTS

- Over the longer term (after at least one year of abstinence)
 - Cognitive recovery is possible
- The cognitive effects after a long period of abstinence are generally more subtle
- Examples of serious long-term complications
 - Wernicke-Korsakoff syndrome
 - Alcohol-related dementia



Notes for the facilitator

The effects can generally be reversed (at least in part), but this can take time (sometimes over a year). The effects of alcohol may also depend on other factors such as gender, age of first drink, current age, quantity consumed, and nutrition.

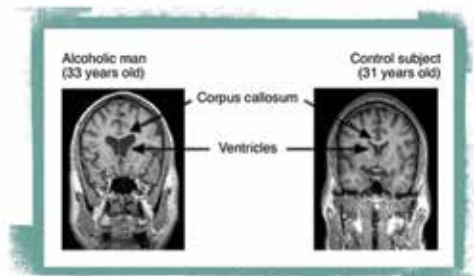
Alcohol also affects a number of other systems and could have a more permanent impact (e.g., decreased blood supply to the brain).

More serious complications include:

- A large proportion of people who abuse alcohol have a thiamine deficiency and some have a serious disorder known as Wernicke-Korsakoff syndrome. This is a confused state known as “Wernicke encephalopathy,” which is frequently followed by Wernicke-Korsakoff syndrome (mainly characterized by significant amnesia).
- In the elderly, chronic alcohol use can result in alcohol-related dementia.

Slide 30

EFFECTS ON THE BRAIN



Excerpted from Bühler M., Mann K. 2011



Notes for the facilitator

This image shows the effects of alcohol on the brain. It compares the damaged brain of an alcoholic to the brain of a healthy person. The image on the left shows diffuse cortical atrophy and enlarged ventricles.

Slide 31

END OF
FIRST PART

01



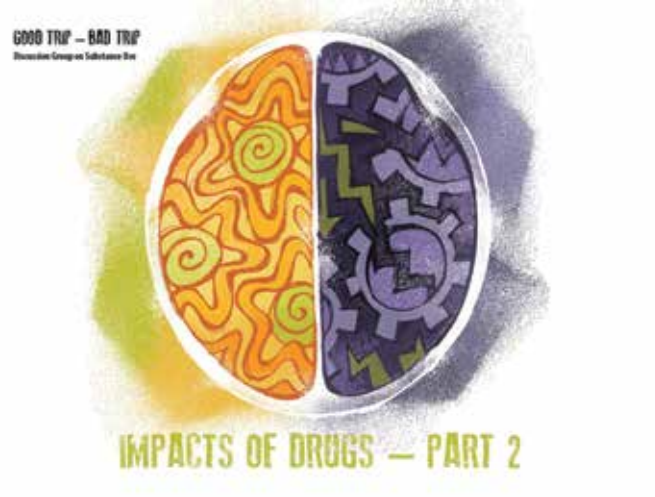
Notes for the facilitator

Remind participants to refer to “Appendix – Impacts of Drugs” in the facilitator’s guide and the participant’s workbook.



IMPACTS OF DRUGS — PART 2

Slide 1



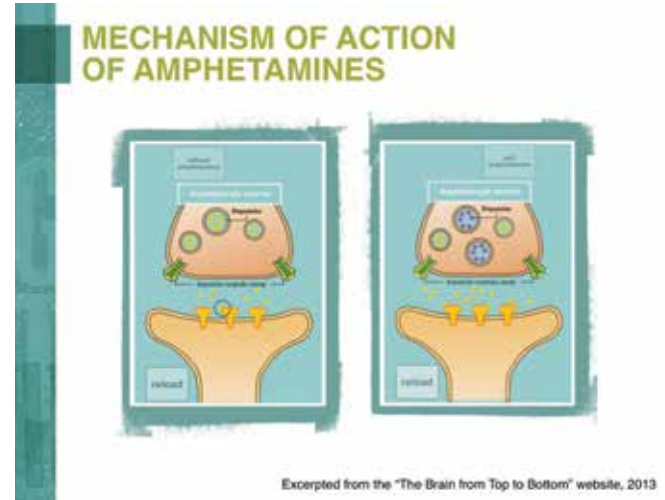
Slide 2



Slide 3



Slide 4



The diagram shows neuronal communication first without amphetamines, and then with amphetamines.

Facilitation tips

First show the “without amphetamines” animation: Dopamine flows freely in the neurons.

Next show the “with amphetamines” animation: Amphetamines increase dopamine levels by activating neurons to release dopamine, which increases the sensation of pleasure and provides a boost of energy.



Did you know that...

Cocaine’s mechanism of action is very similar to that of amphetamines. Cocaine increases dopamine levels in neurons and triggers a feeling of pleasure, even intense pleasure (rush).

Slide 5



Facilitation tips

Using the homework “Which drug(s) do you use?” review the sought-after effects of major stimulants reported by participants. Do the same for the other substances that will be presented.



Did you know that...

The sought-after effects are similar for major stimulants, but are greater with methamphetamines and cocaine than with amphetamines.

Slide 6

METHAMPHETAMINES

- Stimulants at least two times more powerful than amphetamines
- Higher risk of addiction if inhaled or injected
- Considerable psychosis at high doses
- Using becomes a constant preoccupation, to the point of obsession



Notes for the facilitator

If methamphetamines are inhaled or injected (crystal meth), the drug is absorbed more quickly and its effects are more intense. This significantly increases the risk of psychological and physical addiction. With methamphetamines, psychotic symptoms can persist for months, even years, after stopping the drug.

Slide 7

ADVERSE EFFECTS

MENTAL HEALTH

- Hallucinations, paranoia
- Depression, burnout
- Irritability, anxiety

PHYSICAL HEALTH

- Insomnia
- Headache
- Excessive weight loss, dehydration
- Skin problems ("coke bugs")
- ↑ Blood pressure and pulse
- Heart, lung and kidney problems



Facilitation tips

Using the homework "Which drugs do you use?" review the adverse effects of stimulant use noted by participants. Do the same for the other substances that will be presented.



Notes for the facilitator

The symptoms most commonly associated with chronic cocaine use are hallucinations and paranoia, although violent behaviour may also occur. In addition to its detrimental consequences on health, cocaine can even be fatal in cases of overdose.



Did you know that...

"Coke bugs" refer to the sensation of itching or of bugs crawling on or under your skin. "Coke bugs" are caused by the hallucinatory effects of cocaine and can also be present with amphetamines/methamphetamines.

Slide 8

COMPLICATIONS ASSOCIATED WITH ROUTES OF ADMINISTRATION

- **Intranasal (snorting): cocaine**
 - Nasal congestion, recurring infections
 - Runny nose, chapped nostrils
 - Perforation of the inside of the nose and loss of smell
- **Inhaling (smoking): crack or methamphetamines**
 - Asthma, lung irritation
- **Intravenous (injected): cocaine or methamphetamines**
 - HIV, Hepatitis B and C
 - Infections of the heart, injection site, or blood



Did you know that...

- Some users combine cocaine and heroin (known as a "speedball") to counteract the negative effects of each substance. Since the adverse effects of each drug are felt to a lesser degree, users tend to increase the doses, thus increasing the risk of an overdose.
- A new trend consists in using quetiapine (antipsychotic branded as Seroquel®) combined with cocaine, as a replacement for heroin. This combination is known as "Q-Ball" or "Baby Heroin." Quetiapine used alone is increasingly becoming a drug of choice. It can be taken orally, inhaled or injected. The street names for quetiapine are "Quell" and "Susie-Q."

Slide 9

WITHDRAWAL (E.g., COCAINE)

- **Phase 1:** Begins as soon as the pleasurable effect decreases and can last up to four days
 - Significant drowsiness
 - Mood swings
 - Craving
- **Phase 2:** Lasts 2-12 weeks
 - Anxiety, boredom, physical discomfort
 - The craving to use is tolerable
 - No source of pleasure
- **Phase 3:** Can last from months to years
 - Compulsive need to use
 - Desire to experience the euphoric effect of cocaine and because of boredom
 - When the user's environment (people, places) acts as a trigger



Notes for the facilitator

Complications of cocaine withdrawal can include depression and suicidal ideation. Amphetamine withdrawal does not last as long and is generally less difficult than withdrawal from cocaine.

Slide 10

COGNITIVE EFFECTS

- Effects of chronic use of methamphetamines/cocaine
 - ↓ Memory / Learning
 - ↓ Executive functions / Problem-solving
 - ↓ Inhibition, ↑ Impulsivity
 - ↓ Attention / Working memory
 - ↓ Processing speed

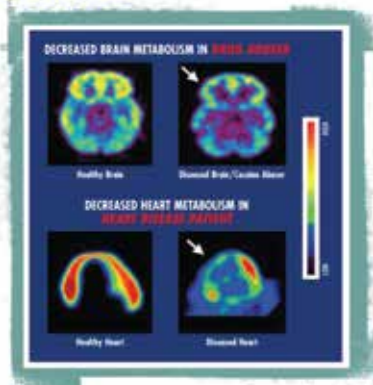


Notes for the facilitator

- Cocaine: According to the literature, cognitive impairment seems to improve significantly after five months of abstinence. However, given the small number of studies conducted for longer periods of abstinence, the possibility that some cognitive symptoms take longer to resolve cannot be entirely ruled out.
- Cocaine and methamphetamines: The effects can be permanent due to a weakening of the vascular system, for example, which increases the risk of stroke and its cognitive complications. Methamphetamines have a high neurotoxic potential.
- Amphetamines: Cause cognitive deficits similar to but not as severe as those seen in methamphetamines and cocaine users.

Slide 11

IMPACT OF COCAINE



Notes for the facilitator

This image shows that brain activity is generally decreased in long-term drug users. In the left-hand image, the yellow represents more intense brain activity (greater number of coloured areas in a healthy person). In the right-hand image, the purple represents less brain activity.

Slide 12

ALCOHOL + COCAINE

- Known as cocaethylene
- Active substance
- Sought-after effect
 - ↑ Intensity and duration of the effect of cocaine
- Adverse effects
 - More toxic to the heart and liver than either substance alone
 - ↑ Risk of seizures

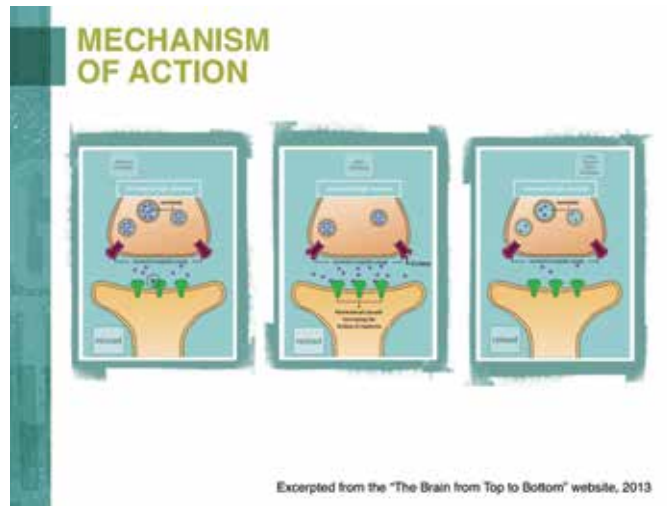
Slide 13



Useful to know

Our clinical experience shows that ecstasy was not our clients' drug of choice.

Slide 14



The diagram shows neuronal communication first without ecstasy, then with ecstasy, followed by several hours post ecstasy use.

Facilitation tips

First show participants the "without ecstasy" animation: The release of serotonin is sufficient for optimal functioning.

Next show participants the "with ecstasy" animation: Ecstasy increases the release of serotonin, which leads to a boost in energy, a feeling of pleasure, and greater self-confidence.

Lastly, show the "several hours post use" animation: The serotonin levels have decreased, and the resulting effect can last longer than the pleasurable effect of ecstasy. Users can develop withdrawal symptoms and feel more depressed.

Did you know that...

Ecstasy falls under the category of hallucinogens, despite its stimulating effect. Like all drugs with a stimulating effect, ecstasy stimulates the pleasure centre and increases the release of dopamine.

Slide 15



Slide 16



Notes for the facilitator

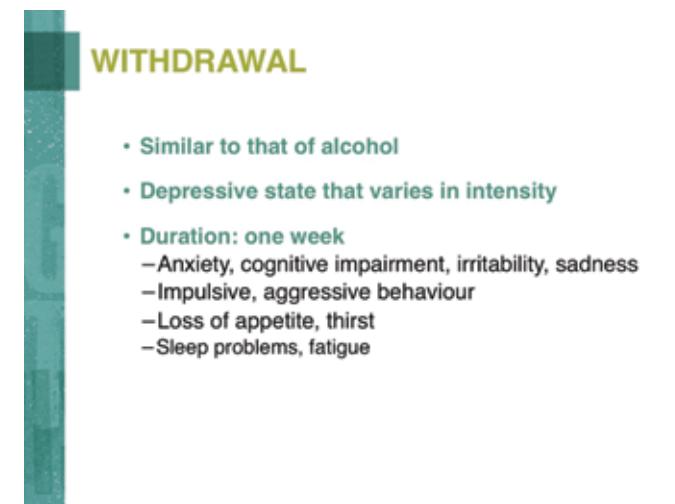
It is difficult to separate the cognitive effects associated with ecstasy from those of the other substances since ecstasy is often taken with other drugs and is rarely found alone in tablets.

Studies reveal that ecstasy not only has a significant impact on memory and learning, it also affects other functions such as processing speed, focus, concentration and executive functioning.

Did you know that...

Ecstasy could also lead users to engage in high-risk sexual behaviour due to its effect of heightening senses such as touch.

Slide 17

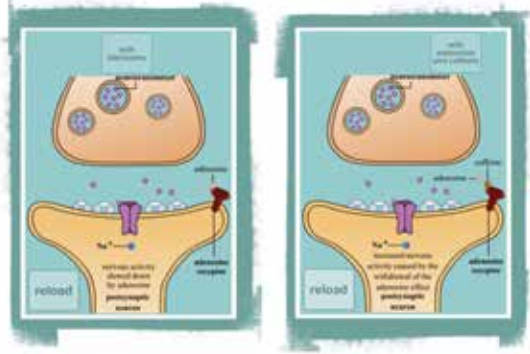


Slide 18



Slide 19

MECHANISM OF ACTION



Excerpted from the "The Brain from Top to Bottom" website, 2013



The diagram shows the effects of caffeine on adenosine receptors.

Facilitation tips

It is not necessary to show the "without adenosine" animation.

First show the "with adenosine" animation: Adenosine facilitates sleep, slows down neural activity and increases drowsiness.

Next show the "with adenosine and caffeine" animation: Caffeine blocks the action of adenosine, preventing the slowdown in neural activity, which results in the excitatory effect of caffeine.

Slide 20

SOUGHT-AFTER EFFECTS

- ↑ Concentration
- ↑ Energy
- Suppression of fatigue and sleep
- ↑ Intellectual capacity



Slide 21

ADVERSE EFFECTS

MENTAL HEALTH

- Anxiety
- Agitation, restlessness

PHYSICAL HEALTH

- Insomnia
- Headache (if stopped abruptly)
- Tremors
- Heartburn
- ↑ Blood pressure and pulse



Slide 22

WITHDRAWAL

- Headache
- Fatigue
- Drowsiness
- Irritability, anxiety
- Nausea, vomiting



Notes for the facilitator

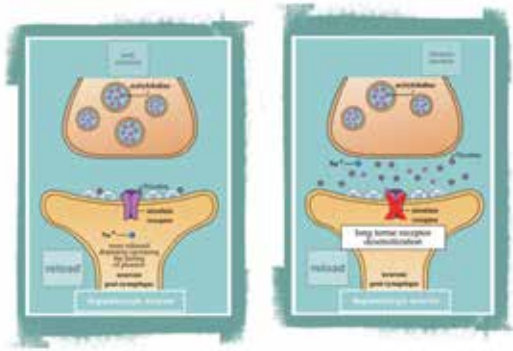
Caffeine withdrawal symptoms peak 20 to 48 hours after the last use and can last up to one week. The intensity level and duration depend on the doses of caffeine consumed.

Slide 23



Slide 24

MECHANISM OF ACTION



Excerpted from the "The Brain from Top to Bottom" website, 2013



The diagram shows neuronal communication first with nicotine, then in chronic smokers.

Facilitation tips

It is not necessary to show the "without nicotine" animation.

Show the "with nicotine" animation: Activation of the nicotinic receptors in the brain simulates the release of dopamine, which causes pleasure and creates dependence.

Next, show the "chronic smoker" animation: Over the long term, the nicotinic receptors become desensitized due to chronic exposure to nicotine. This slows down receptor renewal, which creates tolerance and decreases the pleasure felt.

Slide 25

SOUGHT-AFTER EFFECTS

- ↑ Concentration and memory
- Relaxation
- ↓ Appetite (associated weight loss)
- Feeling more sociable

Slide 26

ADVERSE EFFECTS

MENTAL HEALTH

- Irritability
- Anxiety
- Agitation

PHYSICAL HEALTH

- Headache
- ↑ Blood pressure and pulse
- Heartburn
- Respiratory problems (coughing, bronchitis)
- Over the long term
 - ↑ Risk of lung cancer and other types of cancer
 - ↑ Risk of heart disease



Notes for the facilitator

The many health problems associated with smoking cigarettes, such as inactivity, and weakening of the pulmonary, cardiovascular and cerebrovascular systems, could significantly impact cognition in the long term.

Slide 27

WITHDRAWAL

- Irritability, anxiety
- Hostility
- Agitation
- Dizziness, vertigo, headache
- Drowsiness, fatigue
- ↑ Appetite, weight gain
- Tremors
- Nausea

Notes for the facilitator

Withdrawal symptoms generally begin 24 hours after the last cigarette, but they could also appear when someone tries to cut down or quits suddenly. Withdrawal symptoms can last up to four weeks, although increased appetite and a craving for cigarettes can last for more than six months.

Slide 28

COGNITIVE EFFECTS

- During withdrawal
 - ↓ Attention / Concentration
 - ↓ Working memory
 - ↓ Memory
- Over the long term
 - Many factors affecting physical health can have a long-term effect on cognition.
 - Quitting can help to significantly reduce the risk for cognitive impairment.



Notes for the facilitator

The concentration problems experienced during withdrawal are severe enough to cause a person to start smoking again. Concentration problems appear 30 minutes to two hours after cutting out nicotine, but they usually peak several days later and can last a few weeks.

While nicotine may seem to slightly improve cognition in some cases, it is the factor that has the greatest impact on life expectancy.

Slide 29



Slide 30

ALCOHOL

- Poor risk assessment and impaired judgement
- Impulsivity
- Possible drowsiness
- ↓ Attention
- Longer response time in emergency situations
- Decreased capacity to stay "on track"
- Exceeding the legal blood alcohol level is punishable by law

Slide 31

COCAINE

- Poor risk assessment and impaired judgement
- Impulsivity
- Possible drowsiness in depressive state (crash)
- According to the Société de l'assurance automobile du Québec (SAAQ), cocaine used alone increases the risk of road accidents by 6.7 times.

Slide 32

CANNABIS

- Poor risk assessment and impaired judgement
- ↓ Attention
- Longer decision-making time
- Longer response time in emergency situations
- Decreased capacity to stay "on track"
- Distorted perception of time



Notes for the facilitator

The consequences of using cannabis are not trivial and, in fact, can be just as dangerous as alcohol. However, there are no established criteria as in the case with the blood alcohol test.

Slide 33

CONCLUSION

- Drugs can exacerbate cognitive problems associated with psychotic disorders.
- Most drugs increase dopamine levels in the brain, which increases the risk of a psychotic relapse.
- Drugs can disrupt the reward circuit: the "natural" pleasure achieved without substance use becomes more difficult to experience.
- Cutting down can improve physical, mental and cognitive health.

POWERPOINT

NOTES

A series of horizontal lines for writing notes, starting from the top of the page and extending downwards.

Legal deposit

Bibliothèque et archives
nationales du Québec, 2013

National Library of Canada and National
Archives of Canada, 2013

ISBN 2 – 978-2-923984-03-2

© Institut universitaire en santé
mentale de Montréal

All rights reserved

Distributed by
the Institut universitaire en santé
mentale de Montréal

Telephone: (514) 251-4000, ext. 2964

Fax: (514) 251-0270

E-mail:
centrededocumentation.hhl@ssss.gouv.qc.ca



Institut universitaire
en santé mentale
de Montréal

APPILIA

Université 
de Montréal