

# HOW DO WE BEHAVE?

(document for students)

## WORK DYNAMIC

The final result of this session is the formulation of questions that, within the activities of the “Let’s talk about drugs” programme of the “la Caixa” Welfare Project, you will ask Dr. Rafael Maldonado (university chair of Pharmacology at the University Pompeu Fabra). To do this, we have prepared an introduction for you that you must read carefully (better individually) in order to later analyse a series of myths about the effects of drugs. This will open up a debate amongst yourselves that will make the question-making more productive regarding the subject *How do we behave?*, which you will ask Dr. Rafael Maldonado.

### 1. INTRODUCTION

The different types of drugs in existence have different effects on our nervous system: Some are stimulants and others depressants; some speed up our mental functioning, with the risk of increasing mistakes, and others slow it down or distort it; some create a sensation of euphoria, others produce hallucinations or changes in the perception of reality.

All of them interfere in the normal functioning of our nervous system and cause an alteration in our capacities; they modify our way of thinking, functioning, relating to others and facing up to the challenges of reality. In short, they make us less the central figure of our own lives.

The action of drugs according to the physiology of the brain explains their psychological effects.

These are their immediate effects:

- **Tobacco** produces relaxation, sensation of concentration, premature tiredness.
- The main effects of **alcohol** are: lack of inhibition, euphoria, relaxation, increase in sociability, but also difficult in speaking, difficulty in associating ideas and lack of physical coordination.

The lack of inhibition and false sense of security that alcohol causes are related to traffic and occupational accidents, and to unsafe sexual practices that may lead to sexually transmitted diseases and unwanted pregnancies.

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Moreover, the consumption of **alcohol** in adolescence, and particularly over-the-top binge drinking, can affect the central nervous system at distinct levels:

- It interferes in the development of the brain, which goes through a critical period of changes during this stage, limiting their future and individual potential. It affects, among others, the cerebral area relating to the memory, learning (hippocampus) and the planning of tasks.
- As a consequence, alterations occur in personal relationships and school performance, with violent behaviour and behaviour dangerous for the health.
- **Cannabis** produces euphoria, lack of inhibition, alterations in perception, slowing down of reflexes and attention, alteration of the memory, as well as difficulties to reason and solve problems.
- **Cocaine** produces euphoria, agitation and hyperactivity, an increase in sociability, feelings of grandeur, verbosity, mental acceleration and false sense of mental agility, decrease in tiredness and sleepiness, and aggressiveness.
- **Heroin** produce euphoria, feeling of wellbeing and pleasure, but also confusion.
- **Ecstasy** causes lack of inhibition, sociability, talkativeness and increase in self-esteem, but also confusion and anxiety.
- **LSD** produces hallucinations, alterations of perception and hypersensitivity.

These are the long-term effects:

- **Alcohol** causes sexual impotence.
- **Cannabis** is associated with disorders of the memory, concentration and learning (this effect is maintained for a long time after it is taken), which results in poor academic results, premature abandoning of studies and failure in professional training and university studies.

It also causes emotional disorders (anxiety, depression) and of the personality. In the case of people who may be predisposed, it can enhance the development of outbreaks of schizophrenia and other mental illnesses.

- **Cocaine** causes great dependency and important neurological and psychiatric disorders: states of paranoia, psychosis and depression, as well as insomnia and lack of sexual appetite.

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- **Heroin** causes lack of inhibition of sexual desire, depression, anxiety and alterations of the personality.
- **Ecstasy** produces, in the hours or days following its consumption, a reduction of certain mental abilities, particularly the memory and the capacity of the individual to process information, which increases the risk of traffic accidents. It also causes a crisis of anxiety, agitation and violent or risky behaviour, as well as depressive disorders and psychotic alterations (flashback with visual and aural hallucinations).
- **LSD** can cause psychotic reactions and of panic; what is popularly known as “a bad trip”, with the risk of suicide, and also flashback: the reappearance of hallucinations without having consumed the drug.

## 2. REFLECTION WORKSHOP

You analyse the following MYTHS and justify, from a scientific standpoint and taking into account that you are working on the subject *How do we behave?*, if they are true or not:

- 1) “Smoking a cigarette is relaxing and relieves stress”
- 2) “Whoever resists alcohol the most is the strongest”
- 3) “Cocaine livens you up”
- 4) “Cocaine improves relations with others, since it helps you lack inhibitions”

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5) "Sexual relations under the effect of cocaine are more satisfactory"

6) "All heroin takers are delinquents"

7) "Synthetic drugs are inoffensive"

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8) "The effects of crystal are different to those of ecstasy tablets"

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## 3. QUESTIONS TO ASK DR. RAFAEL MALDONADO

Having analysed the myths, and after a discussion between yourselves, think of 5 or more questions to ask Dr. Rafael Maldonado (remember that you have a scientific focus and that Dr. Maldonado is an expert in neurobiology of addiction):

1)

2)

3)

4)

5)