Medical Aspects of Chemical Dependency

THE NEUROBIOLOGY OF ADDICTION

FACILITATOR'S GUIDE

To the Facilitator

Before showing the video, take time to review this guide, which provides background information on the neurobiology of addiction, a suggested session outline (including questions for group discussion and ways to extend learning), and a client worksheet.

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Purpose of This Video

Medical Aspects of Chemical Dependency is a twenty-five-minute educational video that provides a basic understanding of the neurobiology of addiction, or how alcohol and other drugs affect the central nervous system, particularly the brain and its chemistry. Using the latest research on the neurobiology of addiction, this video is designed to help clients better understand how alcohol and other drugs affect their brains and bodies, and why, because of changes in brain chemistry, it is so difficult to overcome a chemical addiction. This video presents the neurobiology of addiction in the simplest terms for people to better understand their powerlessness when using alcohol or other drugs.

How Can This Video Be Used?

This video, along with a thirty-minute discussion of the enclosed questions, provides a dramatic and effective educational hour. The facilitator can choose to discuss the questions provided in this outline in a group session or to photocopy the worksheet and have clients answer the questions on their own. The facilitator may need to provide pens or pencils. This video can be used in a variety of settings, including

- individual and group sessions
- inpatient and outpatient services
- family counseling
- staff in-services

Learning Objectives for the Video

After viewing this video, clients will be able to

- describe what it means to have a brain disease
- understand how individual drugs produce different changes in brain chemistry
- identify five classes of drugs
- define what a neurotransmitter is and its role in the brain
- understand how drugs activate the brain's reward pathway, causing a person to repeat their chemical use until it becomes an addiction
- appreciate how continued abstinence from alcohol and other drugs allows one's brain chemistry to return to normal

Medical Aspects of Chemical Dependency
Suggested Session Outline

Here is a suggested outline for a sixty-minute client session, which includes the viewing of the *Medical Aspects of Chemical Dependency* video. Please adapt this outline to fit your group's needs and time frame.

Materials Needed

- Video
- DVD player/monitor or computer
- Pens or pencils
- Photocopies of worksheet

Preparation Needed

- Facilitator should first preview the video and outline some of the key messages to review with clients.
- Review this guide and its discussion questions, thinking about possible responses.
- If necessary, photocopy the discussion questions for each client.

Getting Started (5 minutes)

Ask clients: **What do you think *neurobiology of addiction* means?** or **What effect do you think alcohol and other drugs have on a person's brain?**

Allow several clients to respond.

Ask clients: **Why do you think it is important for us to talk about how a person's addiction affects his or her brain and its chemistry?**

Allow several clients to respond.

Explain: **Today, we're going to discuss the medical aspects of chemical dependency, particularly how a person's addiction can affect the brain and its chemistry (called the neurobiology of addiction). We're going to start by showing a video. As you watch the video, look for**

- **the characteristics of addiction**
- **the description of addiction as a brain disease**
- **the classes of drugs**
- **how different drugs affect a person's brain and body**
- **how brain chemistry affects the withdrawal from drugs**

- **how abstaining from chemical use can return the brain to normal functioning**
- **terms such as *neurons*, *reward pathway,* and *neurotransmitters***

Playing the Video (25 minutes)

Play the video. Make sure every client can easily see and hear the video.

Discussing the Video (30 minutes)

Ask clients questions from the accompanying worksheet. You may not have time for all the questions. Select those that seem most suited for your clients. Allow participants to respond in group or have them respond individually. In addition, feel free to copy and distribute the questions to clients to help them better process the video content.

Optional: If time permits, allow students to briefly share other ideas, concerns, or questions that were raised by the video. Then do a final review of the key concepts covered in the video.

Extending the Learning (Optional)

Here are some additional ideas, if you would like to spend more time on this topic with your clients:

Activity 1:

Invite someone from your community, such as a medical doctor or chemical dependency clinician, to talk with your clients about brain chemistry and addiction.

Activity 2:

Divide clients into five groups. Assign a class of drugs to each group. Ask clients to spend the following week doing research, identifying all the drugs in that class and how they affect the brain. Then have clients report on their research to the entire group.

Activity 3:

Explain to clients that neurotransmitters send chemical messages between neurons. This is how neurons "talk" to each other. Have your clients draw a picture or write a story, poem, or essay about what their drug of choice "said" to their brain.

Medical Aspects of Chemical Dependency Worksheet

1. The National Institute on Drug Abuse describes drug addiction as a brain disease. What does it mean to you that you have a brain disease?

2. What was the most interesting thing you learned about brain chemistry and addiction from this video?

3. Have you ever experienced withdrawal symptoms? If so, please describe them.

4. Neurotransmitters send chemical messages between the brain's neurons. This is how neurons "talk" to each other. When you used, what was your drug of choice "saying" to your brain?

5. A person is powerless to control the effects of alcohol or other drugs on his or her brain. Does this help you better appreciate Step One: "We admitted we were powerless over alcohol [and other drugs]—that our lives had become unmanageable"? Please explain.

6. What was your drug of choice: an opioid, sedative, stimulant, psychedelic, or cannabinoid? In your own words, please describe how your drug of choice may have affected your brain and body.

7. Step Two says, “Came to believe that a Power greater than ourselves could restore us to sanity.” How do you now understand the word *sanity* in relation to your brain chemistry?

8. What did you learn from the video that might explain why stopping smoking can be so difficult?

9. Addiction is characterized by compulsive use, loss of control, tolerance, continued use despite adverse consequences, and withdrawal. Which of these characteristics did you experience? Please describe them.

10. Craving is in part a physical, neurobiological response. Your brain wants what it was used to getting. In light of this, how can you better handle cravings?