Behind the Addiction: The Brain and Body Response to Opioid Use
Dr. Laura Stewart

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We will be discussing:

1. Not just the severity of the current opioid epidemic but the “why” behind it
2. Emotional and physical aspects of opioid addiction
   - Reward
   - Avoidance
3. Traditional Vs. Integrated Treatment Approach
4. What is a Biopsychosocial Healthcare Model?
Dopamine D2 Receptors are Lower in Addiction

Control  Addicted
D2 Receptors:

Trigger (cake)

Surge/Stimulation of Reward
  “this cake is delicious”

Satisfaction
  “that was great, I feel satisfied”

Return to Baseline
  “now I go on with my day”
Recovia | Functional Flex-care Program

Mind and Body One-Two Punch

- D-2 Receptors are less effective
- Individual is less able to manage cravings/urges
- Increased frustration, depression, decreased self esteem
- Emotions and ineffective behavior patterns now compound the problem

- Brain is incredibly efficient - synthetic opioids, over time, trick the brain
- “Good” neurochemicals cease production in response to the “fake” or synthetic boost
- Brain is no longer naturally creating dopamine and serotonin between dosage

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Physical Impact (Hyperalgesia)

- Nerves within the central nervous system respond appropriately short term with acute injury
- Mechanism of “blocking” the pain signal (wet blanket)
- Tolerance/Dependence
- Removal of “wet blanket” results in exaggerated pain (not true pain, but opiate induced pain)
- May result in ER visits, or worse (heroin)
- Vulnerable window post detox

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Traditional Treatment Models vs. Integrated Approach Models

**Traditional - Inpatient**

- Short Term Inpatient
- Usually primary emphasis on Medical and Behavioral components only (typically in a group setting)
- Lack of integration of physical therapy, life skills, social initiation in a

**Integrated - Outpatient**

- Typically more individualized and specialized approach
- Includes physical therapy, medication management and behavioral health as 3 primary disciplines
- Increased coordination of care among providers and disciplines
- Emphasis on biopsychosocial approach (mind, body, social supports, connectedness, life skills) and real time life skills

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What Happens When Treatment Fails?

- Patient Feels Defeated
- Social Supports may go away
- Isolation increases
- Endless Treatment Cycle initiates
What Works?

- Thought Experiment
  - Genetics
  - Environment/Upbringing
  - Is there something else?

- 2 Researchers Rat Cage Experiment
  - Reported addiction is a choice and from weakness

- PET Scan Imaging
  - Determined addiction was a medical disease

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Dr. Bruce Alexander
Vancouver University
Repeated the Experiment with the exception of one thing....
- Loss of job
- Loss of co-worker connection
- Loss of purpose
- Interpersonal Conflict
- Isolation
- Reduced Activity and Weight Gain
- Increased Depression
Ron’ Story
A BIOPSYCHOSOCIAL ISSUE AND A BIOPSYCHOSOCIAL RESPONSE

- Physical Therapy
- Behavioral Medicine
- Ultrasound
- Tens Therapy
- Massage Therapy
- Acupuncture
- Nutrition Counseling
- Yoga
- Coping Resources
- Lifestyle Assessments
- Vocational Resources

- Detox Program
- Prescription Management (Suboxone and Subutex)
- Medical Treatment
- Medication
- Passive Treatments
- Vocational & Life Skills

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Thank you.

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Cigna Behavioral Health Awareness

• If you are a Cigna customer and have questions about Substance Use treatment or about your benefits and how to use them, please contact:

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