

# Neurodegenerative Diseases Study Guide

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## I. BIPOLAR DISORDER

**Abstract**—Disease in which the patient has two different mental states: mania and depressive. Patient fluctuates in between the two. Diagnosis is difficult and the cause is not known, but could be related to inherited genetic traits, physiological abnormalities in the brain, chemical imbalance with neurological transmitters and initiated by environmental stressors.

**Keywords**—Mania, Depressive

### A. Causes

The direct cause of Bipolar Disorder is unknown, however, it can be related to inherited genetic traits, physiological differences in the brain, chemical imbalance with neurotransmitters and initiated by the environmental stressors.

Genetic causes:

- Familial: Half the people with bipolar disorder have a family member with it
- A person with one parent with it has a 15-25 percent chance of developing it
- A person with a fraternal twin with it has a 25 percent chance of developing, same risks as if both parents have it
- A person with an identical twin with bipolar disorder has eightfold chance

Neurochemical Causes:

- Dysfunction with neurotransmitters and their respective chemicals
- Norepinephrine
- Serotonin
- May lie dormant and can be activated on its own or triggered by external factors

Environmental Factors:

- Life event extremities
- Altered health habits such as alcohol or drug abuse
- Underdiagnosis in the past could explain the trend of BD at earlier ages
- Substance abuse may not be a cause, but it can worsen the depressive state

**Keywords**—Genetical/Familial, Neurochemical, Environmental

### B. Symptoms

Bipolar disorder is generally characterized by two episodes:

- Manic: Extreme Happiness/Giddiness
- Depressive: Extreme Sadness (Depression)

The patient will fluctuate between these two episodes in violent mood swings. They can be in one mood for the whole day than

switch to the other one spontaneously. It is dependent on the situation and the individual rather than anything concrete or genetically related. **Keywords**—Manic, Depressive

### C. Treatments

## II. DISEASE

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### A. Subsection of Disease

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