Purpose
The purpose of this course is to define bipolar disorder, explain the symptoms, co-morbid conditions, causes, and treatment.

Goal
Upon completion of this course, one should be able to:
- Define bipolar disorder and describe the main classifications.
- Differentiate symptoms of manic and depressive episodes and list at least 4 symptoms for each both.
- Explain diagnostic criteria for bipolar disorder.
- Discuss effects of bipolar disorder on children and adolescents.
- List at least 3 types of medications used for bipolar disorder.
- List at least 3 other types of treatments.
- Describe 3 types of potential causes of bipolar disorders.
- Discuss environmental triggers.
- Describe at least 3 co-morbid conditions.

Introduction
Imagine what it's like to live with your brain on fast-forward. You can't sleep and can't slow your mind down to concentrate on anything. You rush here and there, trying one thing and then another, sometimes filled with euphoria and other times irritation. You run up bills you can't pay and make promises you can't keep and lay waste to your life, and then you feel the world slowing down, crashing down, until you are moving through life in slow motion and can't do anything but lie in bed and cry, overwhelmed with feelings of hopelessness and helplessness. Sometimes you see frightening snakes or monsters or hear voices that terrify you. Sometimes, if you're lucky, you have periods when life seems normal, but then it starts speeding up again. This is what untreated bipolar disorder is like.

What is bipolar disorder?
Bipolar disorder (formerly manic-depressive disorder) is a psychiatric affective (mood) disorder characterized by mood swings between depression and mania. Bipolar disorder affects about 2.6% of adults over age 18 (6 million Americans annually). There are a number of different subtypes of bipolar disorder, and different researchers and sources utilize different classification systems,
depending upon the episodes of depression and mania and the degree and frequency of symptoms. The following are commonly identified subtypes:

- **Bipolar I**: This variant is characterized by at least one manic episode. In some cases, this is preceded by episodes of depression. This is a severe form of the disease, usually involving cycling between mania and depression with episodes of psychotic symptoms, such as hallucinations and paranoia.

- **Bipolar II**: This variant is characterized by at least one episode of depression and at least one episode of hypomania, which is similar to a manic episode but tends to be less severe and lasts only a few days. Depressive periods last longer than hypomanic episodes.

- **Cyclothymia (Bipolar III)**: This is a milder form of bipolar disorder in which mood swings occur but are much less pronounced.

- **Rapid-cycling**: This form of bipolar disorder is characterized by rapid cycling between depressive and manic episodes, usually ≥4 in a 12-month period with mood changes occurring rapidly, sometimes within a few hours.

- **Mixed state**: This is characterized by both depression and mania occurring simultaneously.

Regardless of how bipolar is classified, it is essentially characterized by some degree of depression and mania, but the episodes may vary in duration and the intensity may vary from one individual to another.

**What are the symptoms of bipolar disorder?**

Symptoms of bipolar disorder typically manifest in late adolescence or early adulthood although increasingly bipolar disorder is diagnosed in children as well. Symptoms cover a continuum from one extreme to the other:

- Severe mania
- Hypomania
- Normal mood
- Mild to moderate depression
- Severe depression

Because bipolar disorder is chronic, people experience symptoms of mania and depression throughout the course of their lives although they may have periods when they are free of symptoms. About 33% of people have residual symptoms even between manic and depressive episodes, and some people have persistent symptoms that don’t respond well to medications. The course of the disease tends to worsen over time with more rapid cycling if the person does not receive treatment.

The criteria for diagnosis depend upon the type and number of symptoms. Symptoms are different depending upon whether the person is in the manic stage or depressive stage:

- **Manic episode**: If the person has an elevated mood, there must be at least 3 additional symptoms most of the day, nearly every day for ≥1 week. However, if the mood is irritable, there must be at least 4 additional symptoms for ≥1 week. Symptoms include:
Markedly increased energy and restlessness
Euphoric mood and feeling of being “high.”
Extreme irritability
Thoughts racing, speech rapid, conversation jumping from one topic to another.
Difficulty concentrating and distracts easily.
Exhibits poor judgment.
Requires little sleep.
Feeling of being infallible in abilities and power.
Increased sexual drive.
Excessive spending without concern for expenses.
Drug abuse, especially cocaine, alcohol, and sleeping medications.
Provocative, intrusive, pushy, aggressive behavior.
Behavior that is unusual and persists.
Denial that behavior, reactions, or feelings are abnormal.

**Depressive episode:** The person must have ≥5 symptoms that persist most of the day, almost every day, for ≥2 weeks.

- Persistent feeling of sadness, anxiety, or emptiness
- Feeling of hopelessness or pessimism.
- Intense feelings of guilt, lack of worth, and helplessness.
- Marked decrease in energy and constant feeling of fatigue.
- Difficulty with concentration, forgetfulness, inability to make decisions.
- Sleeping excessively OR inability to sleep.
- Appetite change associated with unintended weight gain or loss.
- Somatic symptoms, such as chronic pain or other disorder not caused by physical illness or injury.
- Suicidal thoughts or attempts at suicide.

With both severe manic and depressive episodes, psychotic symptoms, also common to schizophrenia may occur, frequently resulting in misdiagnosis. These psychotic symptoms include:

- Hallucinations.
- Manic delusions, sometimes of grandiosity, may cause the person to believe he/she is someone famous, like the President, or has special powers.
- Depressive delusions may cause the person to believe he/she is penniless, homeless, worthless, or has done some terrible deed.

Hypomania is an episode of elevated mood and/or irritability but is less pronounced than mania and people are usually able to continue with normal daily activities.

**How does bipolar disorder affect children and adolescents?**

For many years, it was believed that bipolar disorder did not affect children, but children are exhibiting signs of bipolar disorder and being diagnosed at much earlier ages, some younger than 6. Childhood/adolescent onset is most common
when there is a familial history of bipolar disorder, and usually the course of the disease is more severe than with adult onset. There are some characteristics that are common to childhood-onset dipolar disorder:

- Children have much more rapid cycling between manic and depressive episodes, sometimes numerous times within one day.
- Children are more likely to be irritable than euphoric during the manic episodes and may exhibit tantrums and destructive behavior. However, children who are euphoric may laugh hysterically or behave in a clownish manner.
- Children may have grandiose ideas about themselves, believing that they can control adults or don’t have to obey rules. They may believe that they are invincible and may, for example, just out of windows or put themselves in harm’s way.
- Speech patterns are often rapid and conversations disjointed.
- Poor sleeping (only 4-6 hours per night) is common.
- Some children exhibit hypersexuality by flirting, using sexually explicit language, and trying to touch the genitals of adults.

Adolescent onset and symptoms may more closely mirror those of adults, depending upon the age and maturity level of the child.

Diagnosis can be difficult in children as similar symptoms may relate to post-traumatic stress syndrome, attention deficit disorder, conduct disorder, oppositional defiant disorder, depression, and schizophrenia.

**What diagnostic procedures are used for bipolar disorder?**

There is no one test to determine if a person has bipolar disorder. Diagnosis is primarily on the basis of symptoms, but other tests may be done to rule out other disorders or complications:

- **Physical exam** to evaluate general health and rule out other disorders.
- **Psychological exam** to determine the type of symptoms. While the current criteria for bipolar disorder quantifies the number of manic and or depressive symptoms required for the diagnosis, many researchers feel that these limits are too strict because bipolar disease can present with such a wide variety of symptoms, resulting in people’s being misdiagnosed and without treatment. Thus, clinical judgment must be considered as well as symptom counts.
- **Laboratory testing** usually includes a complete blood count, thyroid tests, and urinary tests to ensure adequate kidney and thyroid function prior to beginning medications.

**What treatments are used for bipolar disorder?**

Treatment for bipolar disease almost always includes lifetime medications as well as psychotherapy to help people to cope with the disorder. Early and consistent treatment appears to prevent worsening of symptoms although it does not prevent bipolar disorder, so prompt diagnosis and treatment is important. It can be challenging to find the right medication or combination of medications to
control symptoms, and research has shown the most people with bipolar disorder stop their medications at least 9 different times in the course of their lives.

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<th>Type of Treatment</th>
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<td><strong>Mood stabilizers</strong></td>
<td>Lithium (Eskalith®, Lithobid®) is the most common treatment for bipolar disorder and helps to prevent mood swings. Once stabilized, the person usually takes lithium over the entire lifetime, but requires regular monitoring for toxicity and side effects, which can include urinary frequency, incontinence, and tremors. Lithium may harm a developing fetus.</td>
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<td><strong>Anti-convulsants</strong></td>
<td>Valproic acid (Depakene®), divalproex (Depakote®), lamotrigine (Lamictal®) and carbamazepine (Tegretol®) may be used to prevent mood swings, especially with rapid cycling bipolar disorder. However, suicide risk is higher with divalproex than lithium. Valproic acid is contraindicated in females &lt;age 20 without close monitoring because of hormonal changes.</td>
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<td><strong>Antidepressants</strong></td>
<td>These are usually now contraindicated although they are still frequently prescribed, but there is no evidence from research that they are more effective than placebos, and recent research has confirmed that they can contribute to rapid-cycling.</td>
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<td><strong>Atypical antipsychotics</strong></td>
<td>Olanzapine (Zyprexa®), Risperidone (Risperdal®) and quetiapine (Seroquel®) may help stabilize moods if anticonvulsants are ineffective. Seroquel® can be used to treat both manic and depressive episodes. Aripiprazole (Abilify®), which as fewer side effects than some other drugs, has been FDA approved for both adults and children (10-17). These drugs may cause weight gain, diabetes, and hypertension.</td>
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<td><strong>Anti-anxiety medications</strong></td>
<td>Benzodiazepines (Klonopin®, Ativan®) may be used to help people to sleep.</td>
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### Cognitive behavioral therapy (CBT)
CBT may be used once patients are stabilized with medications to help them learn strategies for managing stress and coping with the disorder. Patients may learn to recognize patterns in their disease and triggers for mood change so that they can seek prompt medical attention.

### Family therapy
Family members can learn about the disorder and how to solve problems and conflicts.

### Group therapy
Group support with others with bipolar disorder can help the patient feel less socially-isolated and can provide coping skills.

### Interpersonal and social rhythm therapy
Patients are taught to use a self-monitoring instrument to monitor their daily activities, including sleep patterns, and then helped to establish a consistent sleep schedule and physical activity. This has been shown to reduce manic and depressive episodes.

### Electroconvulsive therapy (ECT)
ECT is usually reserved for patients who have not responded to other treatments and suffer from severe depression and suicidal tendencies.

### Hospitalization
Admission to a psychiatric facility may be needed to help stabilize a patient’s mood swings, especially if there are psychotic symptoms.

In addition to these treatments, there are studies being conducted to determine other possible treatments. A recent 3-week trial with tamoxifen (a drug used to treat breast cancer) indicated that it was very successful in reducing manic episodes: however, its future role in treatment of bipolar disorder is unclear because of its anti-estrogen properties. It is hoped that the findings will provide new directions for research and development of treatment. Another study conducted with modafinil (a drug used for narcolepsy) showed that it treated the depressive symptoms of bipolar disorder.

Lithium is not yet FDA-approved for treatment in children < 13 years old, but a national study is now underway to evaluate lithium as a treatment for both children and adolescents. Other studies are ongoing to determine the best medications for children. Weight gain is a common problem for children taking anticonvulsants to manage mood swings. With all current drugs, children must be monitored very carefully for side effects.

### What are the causes of bipolar disorder?
There is no definitive cause for bipolar disorder. It appears to be a number of factors that can together contribute to development of the disorder:

- **Biochemical/brain abnormalities:** There are some physical differences in the brains of those with bipolar disorder as well as imbalances in neurotransmitters and hormones.

- **Genetics:** Because there are increased rates of bipolar disorder among family groupings, it appears that there may be genetic abnormalities similar to schizophrenia that can precipitate bipolar disorders. Researchers believe that many genes may be involved rather than just one.
• **Environmental influences:** There is some evidence that loss of self-esteem or high stress may combine with other factors to cause bipolar disorder. A number of "triggers" have been identified that may lead to bipolar disorder or to mood swings in those diagnosed. Triggers include:
  o Severe stress or trauma.
  o Major life events: Marriage, going to college, getting a new job.
  o Substance abuse: Alcohol and tranquilizers can trigger depression while cocaine, ecstasy, and amphetamines trigger mania.
  o Medications: Over the counter cold medicines, appetite suppressants, caffeine, corticosteroids, and thyroid medications may trigger mania.
  o Seasonal change: Mania is more common in summer and depression in other seasons.
  o Lack of sleep: Sleep loss can trigger manic episodes.

**What co-morbid conditions and complications are associated with bipolar disorder?**

Substance abuse, including drugs and alcohol, are common, possibly because of attempts to self-medicate. Anxiety disorders, such as post-traumatic stress disorder and obsessive-compulsive order may also occur. These conditions may respond to medications used to treat bipolar disorder, but some additional treatments may be indicated.

Thyroid disorders commonly occur with bipolar disorder related to rapid cycling; Additionally, lithium may decrease levels of thyroid hormones, so people with bipolar disorder should have thyroid testing regularly and may need to take thyroid supplementation.

Bipolar disorder can be difficult for people to cope with and depressive episodes may result in suicidal tendencies, especially early in the course of the disease. Indications that people are suicidal include:
  • Talking about committing suicide or wanting to die.
  • Feeling hopeless about the future.
  • Abusing alcohol or drugs.
  • Engaging in dangerous activities or putting themselves at risk.
  • Putting affairs in order, such as writing a will and giving away belongings.
  • Complaining about being a burden or being helpless to improve their situation.

Studies have shown that 19% of deaths in those with bipolar are caused by suicide, but about 30% attempt suicide, so healthcare providers and family members should observe the patient for indications of suicidal tendencies.

People with bipolar disorder frequently have serious financial and sometimes legal difficulties that contribute stress in their lives. They often are isolated and unable to establish close relationships with others because of the lability of the moods and inconsistent and disordered behavior. They may have difficulty keeping jobs or completing academic studies.

**Summary**
Bipolar disorder is a psychiatric affective disorder characterized by mood swings between depression and mania. Subtypes include bipolar I, bipolar II, cyclothymia, rapid cycling, and mixed state. Symptoms over a continuum and include severe mania, hypomania, normal mood, mild to moderate depression and severe depression. Diagnosis is based on the type and number of symptoms, as there is no specific test to diagnose. Bipolar disorder is increasingly found in very young children and adolescents. Treatments for bipolar disease include medications, such as mood stabilizers, anticonvulsants, and atypical antipsychotics. Antidepressants are contraindicated. Other treatments include psychotherapy, electroconvulsive therapy and hospitalization. A number of factors may combine to cause bipolar disorder: biochemical/brain abnormalities, genetics, or environmental factors. Environmental triggers may include stress, major life events, substance abuse, medications, seasonal change, and lack of sleep. Co-morbid conditions include substance abuse, thyroid disorders, suicidal tendencies, and other psychiatric disorders, such as obsessive-compulsive disorder and post-traumatic stress disorder. People may have many financial, legal, and social problems.

References