Mood/Affective Disorders

Psychology 372
Physiological Psychology
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Overview
- Mood Disorders
  - Usually are related to sustained emotional states
  - Lasts weeks or more
  - Range of stimuli causing mood variability is more limited
- Affective Disorders
  - Usually relates to immediate or momentary states of emotion
  - Lasts a short period of time
  - Are more directly responsive to external stimuli

Mood Disorders
- Generally classified in two groups
- Unipolar disorders
  - Depression
  - Mania
- Bipolar Disorders

Unipolar Depression
- First described by Hippocrates
  - Thought depression was caused by an excess of Black Bile
  - Called Melancholia = Black Bile
  - First really to propose that a psychological problem was caused by a physiological problem.

Today
- Is described in approximately 5% of the world population
- 8 Million people in the U.S. suffer from the disorder.
- Most (70%) have more than one episode
- Average onset age = 28
- Women are affected 2-3 times more often than men
  - May be a diagnosis issue
  - Men may not seek out treatment
  - Occurs both in young children and the elderly
  - Most are not diagnosed
- Has several major subtypes
  - Melancholic Depression
  - Atypical Depression
  - Dysthymia

Some Symptoms
- Unpleasant mood
- Mental Anguish
- Inability to experience pleasure
- Loss of interest in the world
Requires Three of these Symptoms

- Disturbed sleep
- Loss of Appetite and weight loss
- Loss of energy
- Decreased sex drive
- Restlessness
- Psychomotor retardation
- Difficulty in concentrating
- Indecisiveness
- Feelings of worthlessness
- Guilt
- Pessimistic thoughts
- Thoughts of dying or suicide
- Can be others

Other Variables

- Depression needs to greater than the loss experienced
- Time of duration (days vs. weeks)
- No recent precipitating event
  - Death of a family member
- Is not pervasive or unrelenting
- No health disorder
  - Thyroid Problems
- Others

Diagnosis

- Should be done by a professional
- Many types of tests
  - Beck Depression Inventory

Subtypes of Unipolar Depression

- Mechancholic Depression
- Atypical
- Dysthymia

Mechancholic Depression

- Most frequent 40-60%
- Has no precipitation event
- Often occurs more than once
- May lead to motor retardation
- Responds well to
  - ECT
  - Tricycles
  - SSRI’s

Atypical

- Less common than melancholic depression
- Symptoms are opposite of melancholic depression
  - Appears earlier in life
  - Tends to be chronic
  - Can cheer up temporarily
  - Often overeat and sleep more
  - Depression is worse in the evening
- Respond better to MAOIs
Dysthymia

- Is a milder depression
- Lasts for at least two years
- Symptoms are milder than major depression

Causes

- Genetic Causes
  - Concordance rates in Bipolar Depression can reach 80% in monozygotic twins
  - Suicide rates higher as well
  - No one specific gene has been identified
  - Chromosome 18 (198q22-23) appears linked with depression

Biogenic Amine Hypothesis

- Developed from the Catecholamine Hypothesis
- Contends that depression occurs from a reduction of Norepinephrine, Serotonin, or both.

Support

- MAOIs, Tricycles, and SSRI’s increase the levels of Biogenic Amines and decrease depressive symptoms.
- ECT also increases serotonin levels

Problem

- Tricycles and SSRI’s rapidly block reuptake systems of NE and Serotonin
- Recovery from depression is often slow (weeks).
- Some patients with depression actually have an increase of serotonin

Neuroendocrine Function

- Severely depressive individuals also have excessive secretion of Adrenocorticotropic hormone (ACTH) secretion by the pituitary.
- Increases levels of cortisol from the adrenal cortex
- Follows a circadian rhythm
- Many depressive individuals also have a disruption of their circadian rhythms.
- Returns to normal levels following recovery from depression
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Conclusion

• Not as clear cut as before. May involve multiple systems.
• Regardless of cause, have effective treatments.

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Treatment for Unipolar Depression

• Tricyclic Antidepressants (TCA’s)
• Monoamine Oxidase Inhibitors
• Selective Serotonin Reuptake Inhibitors
• ECT

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Tricyclic Antidepressants (TCA’s)

• Block the reuptake of Norepinephrine
• Block the reuptake of Serotonin
• Block postsynaptic Histamine receptors
• Block postsynaptic Acetylcholine receptors

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Many Types

• Imipramine (Tofranil)
• Desiparmin (Norpramin)
• Amitriptyline (Elavil)
• Nortriptyline (Pamelor)

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Clinical Limitations

• Have slow onset of action
• Exert a wide variety of effects on the CSN causing side effects not shared by SSRIs.
• Are cardiotoxic and can be potentially fatal

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Other Issues

• Do not produce euphoria in normal individuals
• Are not reinforcing – low abuse potential
• Withdrawal is usually no problem.
• Have a long half-life
• Readily cross the placental barrier
Monoamine Oxidase (MAO)

- Are enzymes
- Break down NE and Serotonin after vesicular release
- Two types
  - MAO-A (Good MAO)
    - Found in NE and Serotonin synapses
  - MAO-B (Bad MAO)
    - Found in Dopamine Synapses

MAO A and B

- MAO-A
  - Blockage is responsible for antidepressant activity
- MAO-B
  - Blockage is responsible for side effects

Monoamine Oxidase Inhibitors (MAOIs)

- Have been around since the 1950’s
- Have serious side effects (especially with some foods)
- Can be as safe as TCAs or SSRIs
- Can work in patients who do not respond to other drugs.
- Are excellent for atypical depression

Types

- Phenelzine (Nardil)
- Tranylcypromine (Parnate)
- Isocarboxazid (Marplan)
- All block MAO-A and MAO-B

Side Effects

- Can be fatal
- Occurs with
  - Food
    - Cheese
    - Beer
    - Fermented foods
    - Other
  - Medicines
    - Nasal Sprays
    - Antihistamines
    - Cold Medicines
    - Cocaine

Overall

- Can be effective is used carefully
Serotonin-Specific Reuptake Inhibitors (SSRIs)

- Block the reuptake of Serotonin from the synaptic cleft.
- Don’t block other neurotransmitters
- Appear to be equally effective
- Are not interchangeable
- Used for a variety of other disorders as well (Bulimia, Anorexia, ADHD, Others)

Side Effects

- Can cause:
  - Alterations of cognition (e.g., confusion)
  - Fever/Chills
  - Agitation, restlessness
  - Others
- Usually occurs in combination with other drugs.
- 60% develop serotonin withdrawal syndrome

Types

- Fluoxetine (Prozac)
- Sertraline (Zoloft)
- Paroxetine (Paxil)
- Fluvoxamine (Luvox)
- Citalopram (Celexa)

Issues

- SSRIs have the same effectiveness as a placebo in double-blind studies.

Electroconvulsive Therapy (ECT)

- Can be very useful for Depression
- Produces full remission or marked improvement in 85% of patients with major depression.
- Not the same as old ECT
- Still causes a brain seizure
- Use about 6-8 treatments (Not 50-60)
- Usually get complete remission of symptoms.
- Why - Unknown
  - May still get some memory loss

Mania

- More than general hyperactivity
- Literally bouncing off the walls
- Treatment
  - Lithium Salts
  - Stops manic episodes
  - Is toxic to the liver
    - Good follow-up
Bipolar Disorder

- Alteration of Mania with Depression
- Often occurs following a depressive episode
- Usually take several weeks before drugs become effective in treating the disorder.

Seasonal Affective Disorder

- SAD is a form of depression evident in winter months (short days/long nights)
- SAD involves
  - Mood and sleep disturbances
  - Carbohydrate cravings and weight gain
- Phototherapy for SAD: increased exposure to light improves mood in SAD (and also for unipolar depression)