

SOCI 270

Drugs, Society and Behavior

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Chapter 8

Medication for Mental Disorders



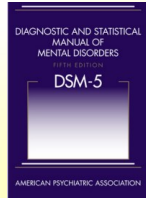
1. Mental Disorders: The Medical Model

- **Model:** symptoms ⇌ diagnosis ⇌ determination of cause ⇌ treatment ⇌ cure
- Criticisms of model:
 - Usually the only symptoms of mental disorders are behavioral
 - Behaviors are varied and can have many causes
- Model guides much of current thinking
 - Psychoactive drugs are used to control symptoms of mental illness
 - Researchers seek to identify chemical imbalances associated with specific mental disorders

2. Classification of Mental Disorders

- **APA Diagnostic and Statistical Manual of Mental Disorders (DSM-V)** provides criteria for classifying mental disorders

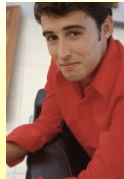
- Includes hundreds of specific diagnostic categories
- Widely used classification system



2. Mental Disorders

- a. **Anxiety disorders**—characterized by excessive worry, fears, or avoidance (formerly called “**neuroses**”)

- Panic disorder
- Specific **phobia**
- Social phobia
- Obsessive-compulsive disorder
- Posttraumatic stress disorder
- Generalized anxiety disorder



2. Mental Disorders

- b. **Psychosis**—a serious mental disorder involving loss of contact with reality

- c. **Schizophrenia**—chronic psychosis characterized by delusions, hallucinations, disorganized speech and behavior, and lack of emotional response; causes significant interference with social and/or occupational functioning



2. Mental Disorders

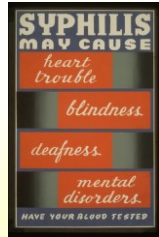
- d. Mood disorders** — characterized by depressed or manic symptoms
- Major depression
 - Manic episodes
 - Bipolar disorder
- Symptoms don't always fit neatly into diagnostic categories



3. Early Treatment of Mental Disorders

a. Syphilitic infection and malaria therapy

- In the early twentieth century, many psychotic patients were suffering from syphilitic infection of the nervous system (*general paresis*)
- Fever associated with malaria was thought to improve the condition
- Antibiotics were developed that cured syphilis



3. Early Treatment of Mental Disorders

b. Early drug therapy

- **Narcosis therapy:** depressants used to induce sleep
- **Intravenous thiopental sodium** ("truth serum") used during psychotherapy to help patients express themselves

c. Insulin-shock therapy

- d. Electroconvulsive therapy:** it was incorrectly believed that inducing convulsions with drugs or electric shocks would cure schizophrenia

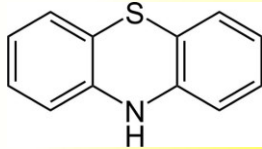


- e. Sedatives** used in severely disturbed patients

4. Antipsychotics:

a. Discovery of Phenothiazines

- Called **tranquilizers, neuroleptics, or antipsychotics**
- Reduce psychotic symptoms without causing sedation
- Following introduction of drug therapy, restraints and treatments like convulsive therapy were reduced or discontinued among hospitalized patient



4. Antipsychotics:

b. Treatment Considerations

- Treatment with **phenothiazines** found to be more effective than a placebo
 - Brand Names: *Atravet, Acezine, Tindal, Repoise, Tyrylen, Largactil, Thorazine*
- Patients **relapse** when therapy is discontinued
- Two groups of antipsychotics
 - **Conventional** (introduced before mid-1990s)
 - **Atypical** (introduced in the past 10 years)

4. Antipsychotics:

c. Mechanisms of Action

- Antipsychotics produce **pseudoparkinsonism**, indicating a link to **dopamine receptors**
- Time delay in drug effects indicates that the mechanism of action is **probably more complex**
 - Atypical antipsychotics block both D2 dopamine and 5HT2A serotonin receptors; produce less pseudoparkinsonism

4. Antipsychotics: d. Side Effects

- Safe in that they are not addictive and are difficult to use to commit suicide
- Side effects
 - Some allergic reactions (jaundice, skin rashes)
 - Photosensitivity (easily sunburned)
 - Agranulocytosis (low white blood cell count)
 - Movement disorders (tremors, muscle rigidity, shuffling walk, masklike face)
 - Tardive dyskinesia

4. Antipsychotics: e. Long-term Effectiveness (?)

- Even patients experiencing success tend to stop taking the drug
- Short-term efficacy exists, but long-term appears to be considerably lower
- No clear evidence that atypical antipsychotics work better than conventional
- When used in children there is a high risk of weight gain and metabolic changes
- Elderly patients with dementia have a significant increase in death risk from cardiovascular and other problems.

5. Antidepressants: a. Major Types

i. Monoamine oxidase (MAO) inhibitors

Examples: phenelzine (*Nardil*®), tranylcypromine (*Parnate*®)

ii. Tricyclic antidepressants

Examples: amitriptyline (*Elavil*®), doxepin (*Sinequan*®, *Adapin*®), nortriptyline (*Pamelor*®)

iii. Selective serotonin reuptake inhibitors (SSRIs)

Examples: fluoxetine (*Prozac*®), sertraline (*Zoloft*®), venlafaxine (*Effexor*®)



5.a.i. Monoamine Oxidase Inhibitors (MAOs)

- Discovered when a drug for tuberculosis was found to also elevate mood
- Work by increasing the availability of serotonin, norepinephrine, and dopamine**
- Limited use due to side effects and toxicity
 - Users must avoid certain foods (eg. aged cheeses) and other drugs (sympathomimetics) to prevent severe side effects



5.a.ii. Tricyclic Antidepressants

- Discovered when researchers were working to create a better phenothiazine antipsychotic and found a drug that improved mood
- May work by reducing the uptake (and thereby increasing the availability) of norepinephrine, dopamine, and serotonin**
- Not effective in all patients, but they reduce the severity and duration of depressive episodes in some



5.a.iii. Selective Serotonin Reuptake Inhibitors (SSRIs)

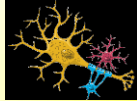
- SSRIs may work by reducing the uptake (and thereby increasing the availability) of serotonin**
- Safer than tricyclic antidepressants, less likely to lead to overdose deaths
- Only a little more effective than placebo
- Strong warning from FDA about an **increased risk of suicidal tendencies in children and adolescents**



5. Antidepressants:

b. Mechanism of Action

- Appear to work by **increasing** the availability of **norepinephrine or serotonin**
- A *lag period* before improvement in mood is seen
- We don't yet have the complete picture of how antidepressants work



5.c. Electroconvulsive Therapy

- Most effective treatment for relieving severe depression
- Works very rapidly, more quickly than antidepressant drugs
- Best treatment choice in cases with a risk of suicide
- Can be used in conjunction with drugs



5.d. Mood Stabilizers

- **Lithium**: Approved for U.S. sale in 1970
 - Early studies found it to be effective in manic patients
 - Acceptance slow in United States
 - Previous history of poisonings
 - Low perception of seriousness of mania
 - U.S. drug approval and sale process
 - Can be safe or toxic; blood levels must be monitored
 - High rate of patient noncompliance
- Other mood stabilizers are **anticonvulsant drugs** (valproic acid, carbamazepine, lamotrigine)

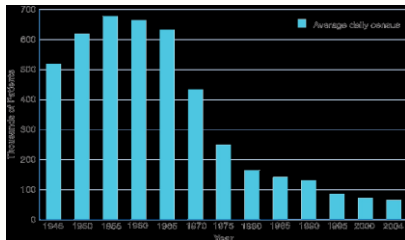


6. Consequences of Drug Treatment for Mental Illness

a. Number of people in mental hospitals declined dramatically following the introduction of drugs that control the symptoms of schizophrenia to a great degree

b. Outpatient community mental health programs were set up to treat patients closer to home in a more natural environment at less expense

Number of Patients in Nonfederal Psychiatric Hospitals



In 2008, the number of patients was 68,000, the same as 2004.

Data source: American Hospital Association

6. Consequences of Drug Treatment for Mental Illness

c. Changes for psychiatrists

- Less time spent doing psychotherapy
- Priority and emphasis on establishing an appropriate drug regimen



6. Consequences of Drug Treatment for Mental Illness

d. Civil rights issues relating to hospitalization

- Indefinite commitment to a hospital is unconstitutional
- Periodic review of a patient's status helps determine if patient presents a danger to self or others

e. Problems

- Patients may have well-controlled symptoms while on medication in a hospital but may stop taking medication upon release
- Unmedicated patients, although not overtly dangerous, may still be too ill to care for themselves

6. Consequences of Drug Treatment for Mental Illness

f. From hospital to jail or the street

- More mentally ill persons are jailed each year than are admitted to state mental hospitals
- About one-third of all homeless people have some form of serious mental illness