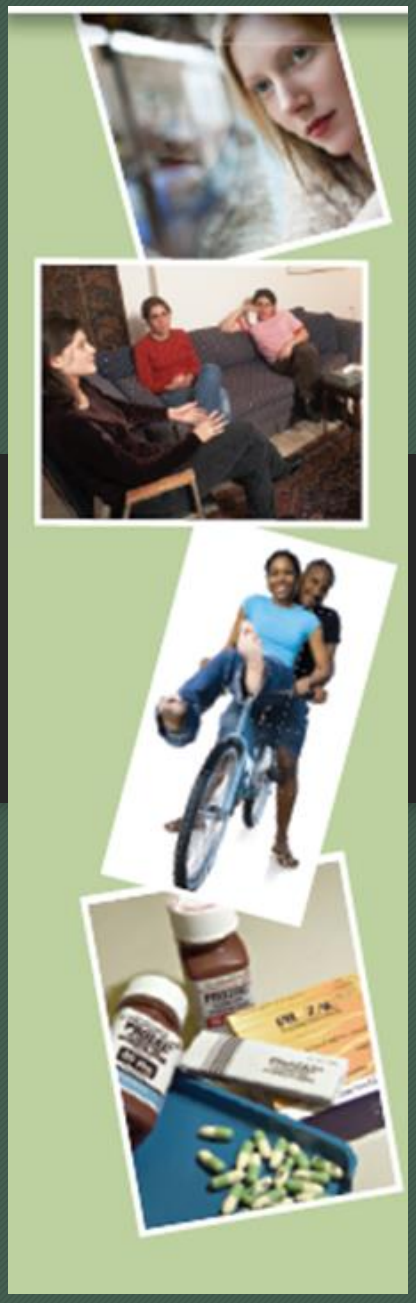


Unit XIII: Treatment of Abnormal Behavior

Module 73

The Biomedical Therapies

Module 73

The Biomedical Therapies

TANNEN MAURY/Landov

Module Learning Objectives

73-1 Identify and describe the drug therapies, and explain how double-blind studies help researchers evaluate a drug's effectiveness.

73-2 Describe the use of brain stimulation techniques and psychosurgery in treating specific disorders.

73-3 Describe how, by taking care of themselves with a healthy lifestyle, people might find some relief from depression, and explain how this reflects our being biopsychosocial systems.

Drug Therapies

73-1

Drug Therapies

73-1

- Psychopharmacology is the study of drug effects on mind and behavior.
- Double-blind studies show that many drugs (like antidepressants) have a modest effect when compared to placebos

Drug Therapies

- With the advent of drugs, hospitalization in mental institutions has rapidly declined.
- However, many patients are left homeless on the streets due to their ill-preparedness to cope independently outside in society.

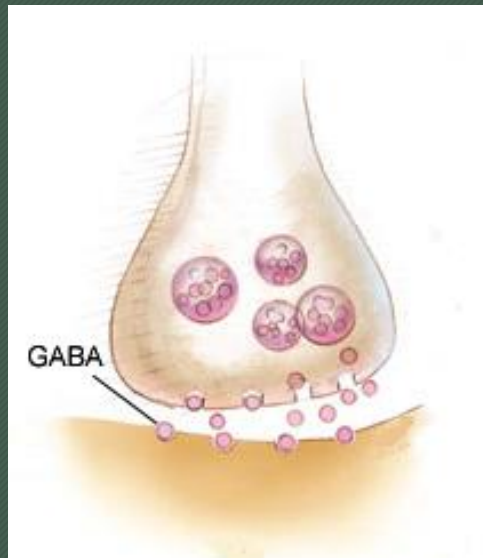
Antipsychotic Drugs

73-1

- Antipsychotics remove a number of positive symptoms associated with schizophrenia such as paranoia, delusions, and hallucinations
- Most are antagonists, which mimic dopamine, occupy its receptor sites, and block its activity
- Many have serious side effects: tremors, tics, and involuntary movements of facial muscles & limbs

Antianxiety Drugs

- Antianxiety drugs depress the central nervous system, and reduce anxiety and tension by elevating the levels of neurotransmitters like GABA
- Shown to enhance the benefits of exposure therapy and help relieve symptoms of PTSD and OCD



Antidepressant Drugs

73-1

- Antidepressants like Prozac are Selective Serotonin Reuptake Inhibitors (SSRIs) that improve the mood by elevating levels of serotonin by inhibiting reuptake
- Best when used with severely depressed patients
- Antidepressants are now also used to treat anxiety, OCD, and PTSD

Mood-Stabilizing Medications

- Lithium Carbonate, a common salt, has been used to stabilize manic episodes in bipolar disorders.
- It moderates the levels of norepinephrine and glutamate neurotransmitters.

Brain Stimulation

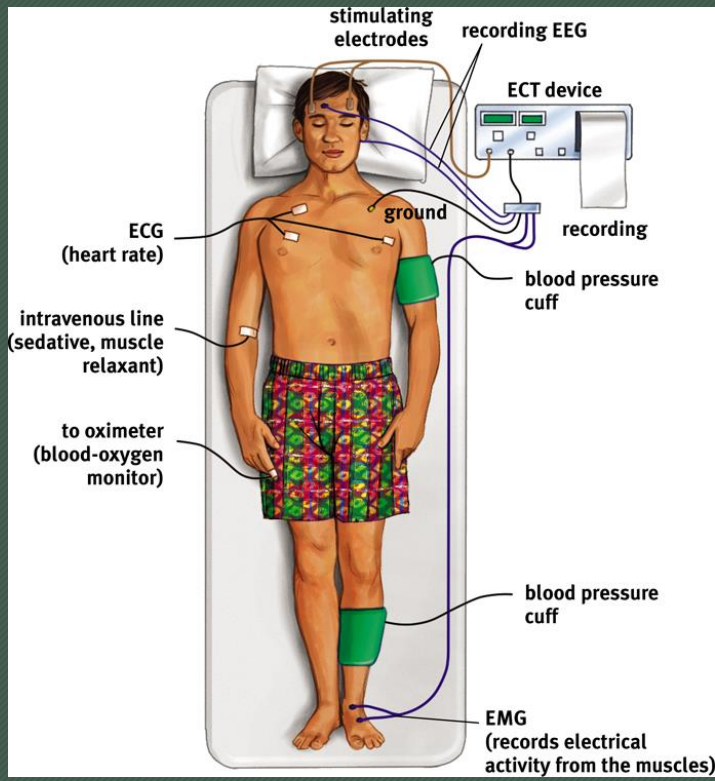
73-2

Electroconvulsive Therapy (ECT)

73-2

- ECT is used for severely depressed patients who do not respond to drugs.
- The patient is anesthetized & given a muscle relaxant.
- Patients usually get 30-60 seconds of electrical current that relieves them of depression.

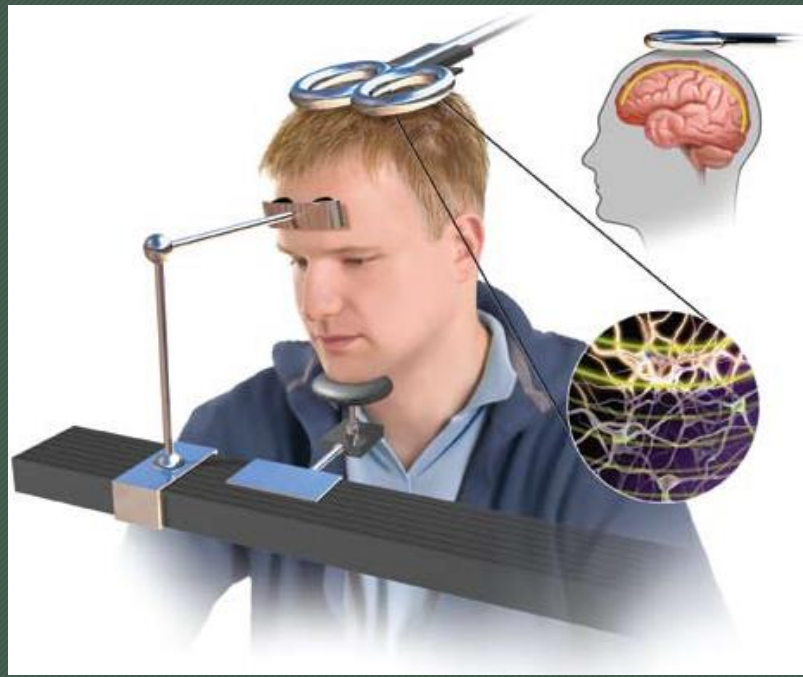
About 4 in 10 ECT-treated patients relapse into depression within 6 months



Repetitive Transcranial Magnetic Stimulation (rTMS)

- In rTMS, a pulsating magnetic coil is placed over prefrontal regions of the brain to treat depression with minimal side effects.

How does it work? One possible explanation is that the stimulation energizes depressed patients' relatively inactive left frontal lobe



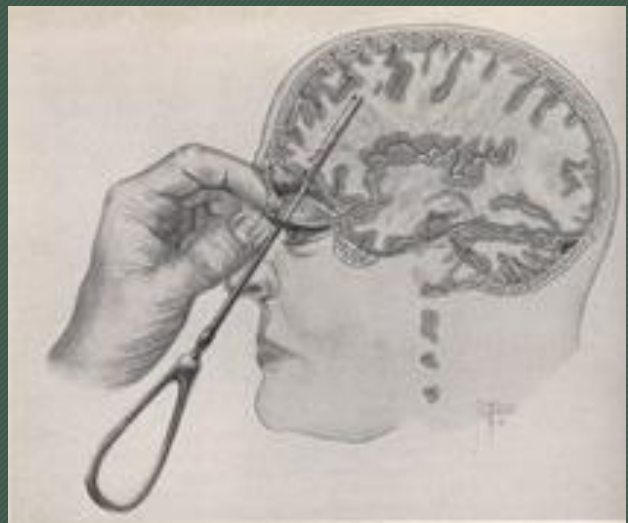
Psychosurgery

- Psychosurgery is surgery that removes or destroys brain tissue.
- Psychosurgery is used as a last resort in alleviating psychological disturbances.
- Removal or destruction of brain tissue changes the mind and is irreversible.

Lobotomy

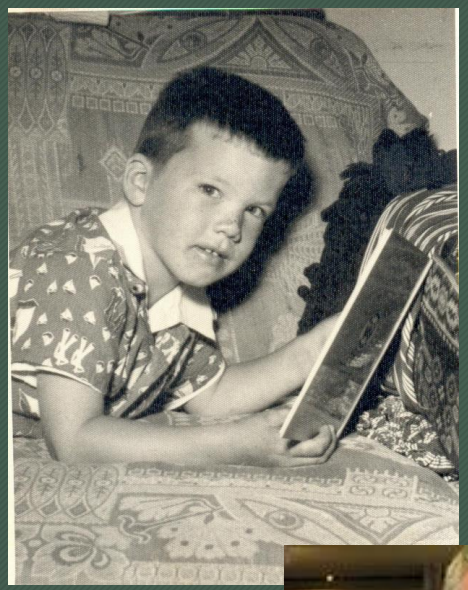
73-2

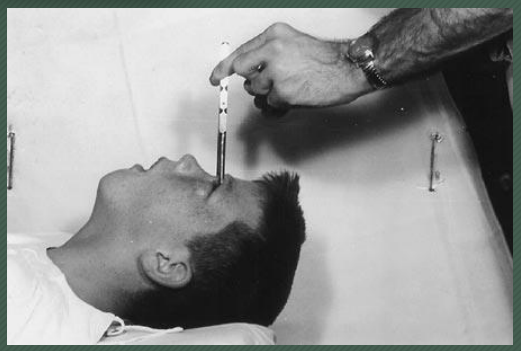
- Lobotomy is a procedure that cuts the nerves connecting the frontal lobes to the thalamus
- Portuguese neurologist Egas Moniz developed it in 1935 to help uncontrollably emotional and violent patients
- In 1945, American neurologist Walter Freeman developed the transorbital lobotomy, which used an ice pick through the eye socket to damage the neural connections.

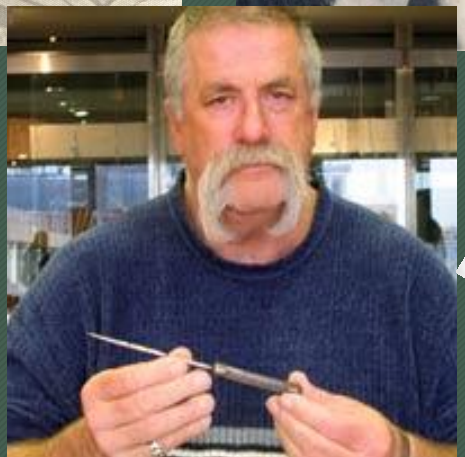


Howard Dully's story

73-2





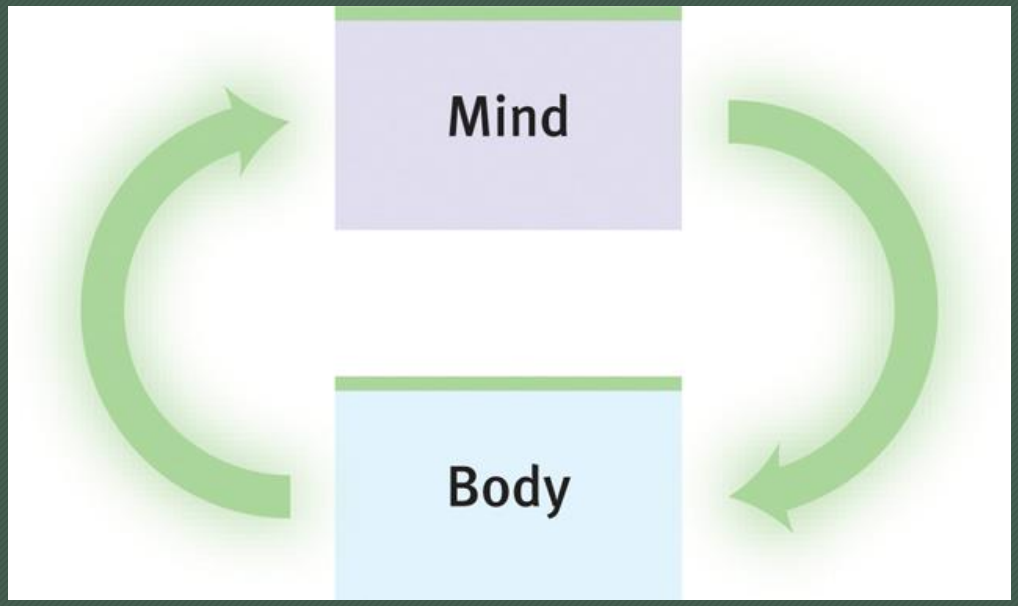


Therapeutic Lifestyle Changes

73-3

Mind-Body Interaction

- The biomedical therapies assume that mind and body are a unit: affect one and you will affect the other.



Therapeutic Lifestyle Change

- Humans were never designed for 21st century American life. Our ancestors exhibited little evidence of disabling depression.
- What can be done?

- ✓ Aerobic exercise
- ✓ Adequate sleep
- ✓ Light exposure
- ✓ Social connection
- ✓ Anti-rumination
- ✓ Proper nutrition