

BIOMEDICAL THERAPIES



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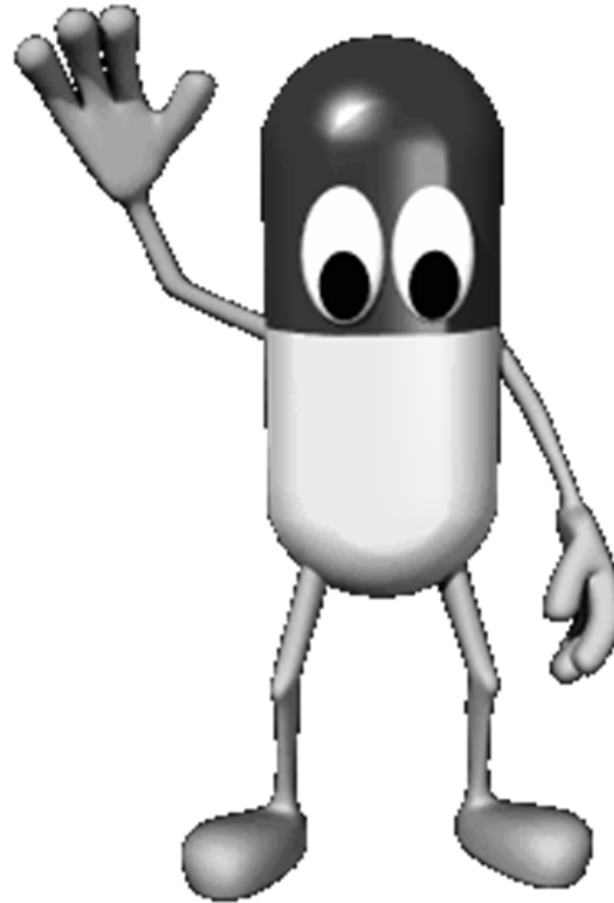
Therapies aimed at altering body chemistry



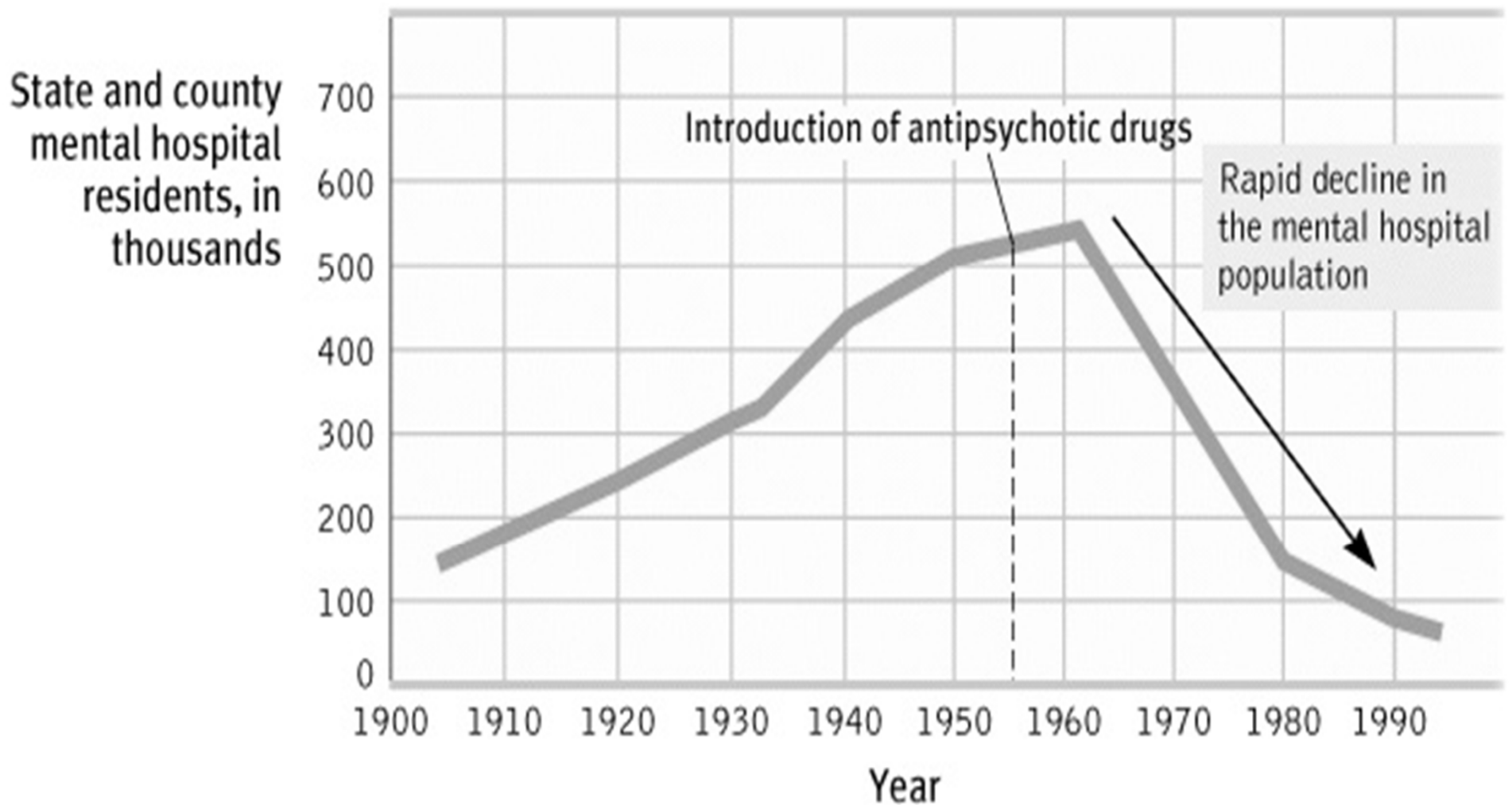
BIOMEDICAL THERAPIES

PSYCHOPHARMACOLOGY

**The study of
the effects of
drugs on mind
and behavior**



DRUGS AND HOSPITALIZATION

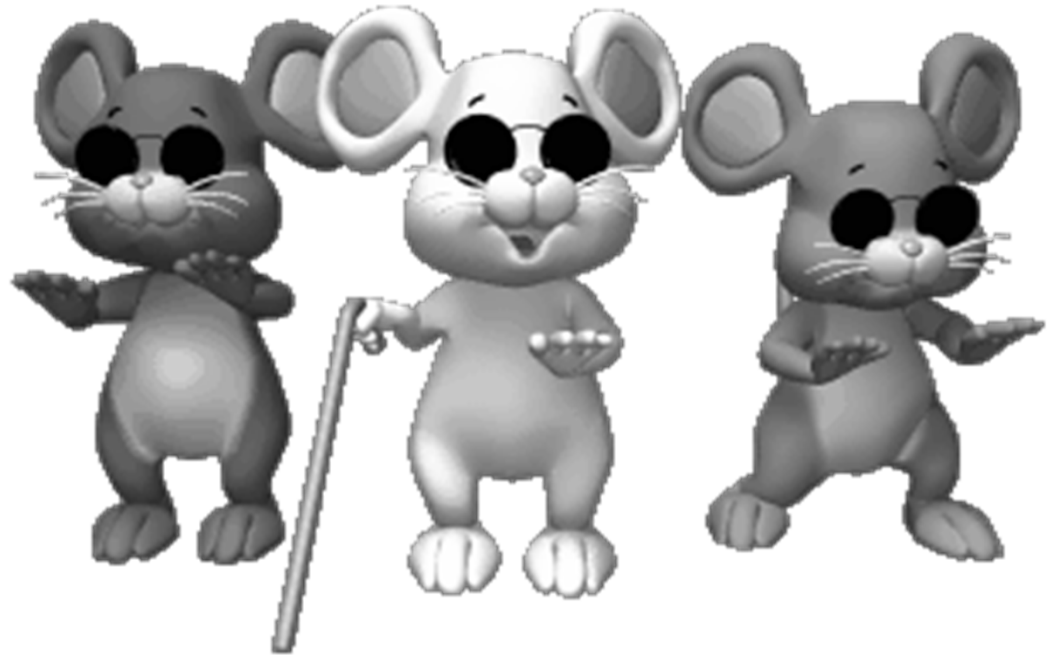


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TESTING NEW DRUGS

When a new drug is released, there is always too much enthusiasm

A double-blind procedure must be used to combat placebo and experimental effects



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ANTIPSYCHOTIC DRUGS

Medicines used to treat psychosis – typically in schizophrenia and bipolar psychosis patterns

Thorazine, although effective, has powerful side effects

Tardive dyskinesia – neurotoxic effect involving involuntary movements of facial muscles, tongue and limbs

When the patient

lashes out against "them"–

THORAZINE®

brand of chlorpromazine

quickly puts an end to his

violent outburst

Thorazine is especially effective when the psychotic episode is triggered by delusions or hallucinations.

At the outset of treatment, Thorazine's combination of antipsychotic and sedative effects provides both emotional and physical calming. Assaultive or destructive behavior is rapidly controlled.

As therapy continues, the initial sedative effect gradually disappears. But the antipsychotic effect continues, helping to dispel or modify delusions, hallucinations and confusion, while keeping the patient calm and approachable.

SK SMITH KLINE & FRENCH LABORATORIES
leaders in psychopharmaceutical research



A reminder advertisement – For prescribing information, please see PCD or package literature.

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ANTI-ANXIETY DRUGS

Valium, Librium
and Xanax

Like alcohol,
they depress
the nervous
system activity

Most widely
abused drugs
today



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ANTIDEPRESSION DRUGS

Lift you out of depression

Must increase the availability of norepinephrine or serotonin



Prozac, Paxil and Zoloft are known as SSRIs – selective serotonin reuptake inhibitors

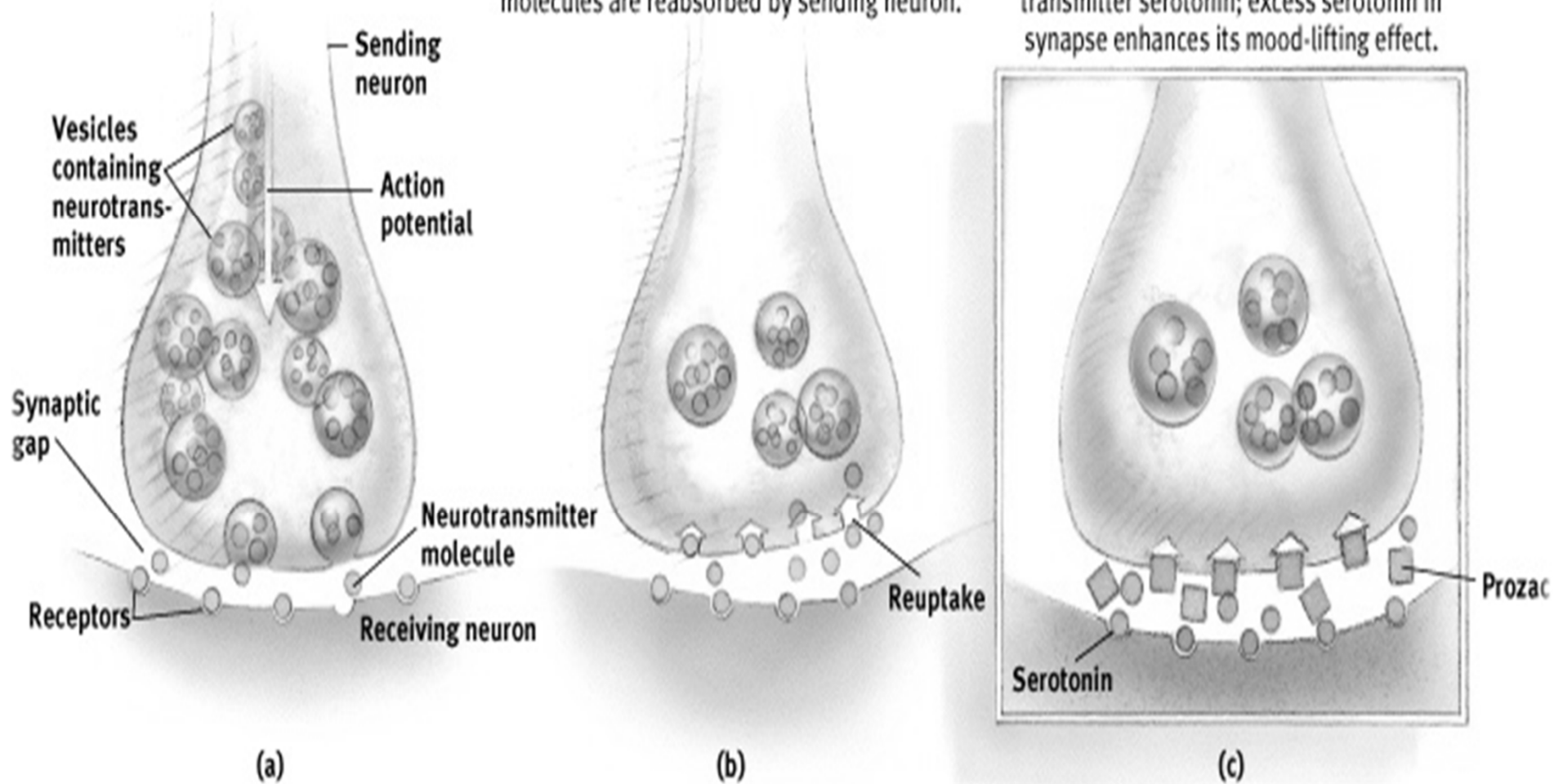
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PROZAC, PAXIL AND ZOLOFT

Message is sent across synaptic gap.

Message is received; excess neurotransmitter molecules are reabsorbed by sending neuron.

Prozac blocks normal reuptake of the neurotransmitter serotonin; excess serotonin in synapse enhances its mood-lifting effect.



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ELECTROCONVULSIVE THERAPY (ECT)

Biomedical therapy for severely depressed patients in which a brief electrical current is sent through the brain of an anesthetized patient, causing a mild seizure

Usually produces temporary memory loss

Proven to be temporarily effective of ridding people of suicidal thoughts



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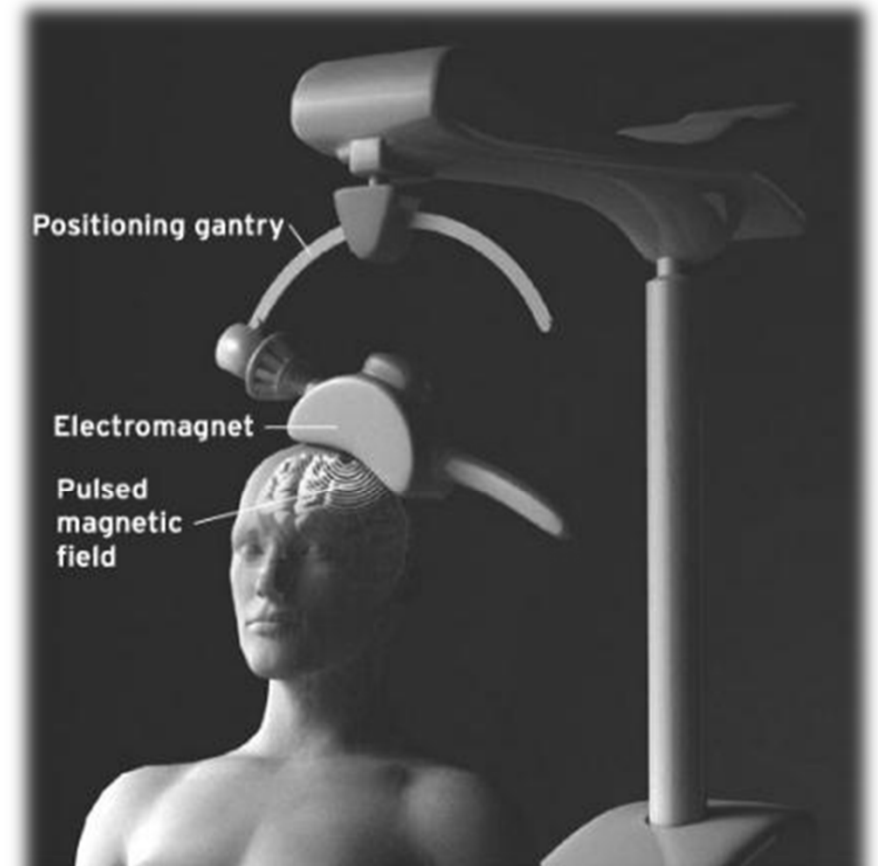
ALTERNATIVE TO ECT

Repetitive transcranial magnetic stimulation (rTMS)

Application of magnetic energy to the brain

Does not produce seizures or memory loss

Approved by the FDA in 2008, studies still pending



- + Few side effects. Could gain approval by U.S. government regulators this year.
- Long-term risks and long-term effectiveness are unknown.

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PSYCHOSURGERY

Egas Moniz developed the lobotomy which became very popular in the 1940s and 1950s

Surgery that destroys frontal lobe brain tissue in an effort to change behavior

Icepick-like instrument through the eye sockets cutting the links between the frontal lobes and emotional control centers

