

Treatment of Psychological Disorders

PSYC 112 - Lecture 20
Dr. J. Nicol

Psychological Treatment Today

- 20% of Canadians will experience a mental illness in their lifetime (CAMH, 2014)
- More than 20 million people in North America receive therapy for psychological problems in the course of a year (NAMI, 2011)
- Anxiety and depression dominate therapy (Langlois et al., 2011)
- Schizophrenia and people with substance-related disorders also make up a large percentage of clients in therapy today

Psychological Treatment Today

- Women once out-numbered men in therapy by 4:1, but currently more than 1/3 of today's therapy patients are male (CDC, 2010)
- Members of ethnic minority groups seek treatment for their psychological problems less often than members of the majority culture (Brown et al., 2014)
- Many wait more than two years after they first become aware that they have a problem, and about half never seek treatment (Ndumele & Trivedi, 2011)

Psychological Treatment Today

- Many people do not seek treatment because of the stigma associated with mental illness
- Since efforts began back in the 1950s, there has been a significant reduction in the stigma associated with mental illness in Canada
- But perceptions of stigma continue to play a role in people's decisions about whether or not to acknowledge their mental issues and whether or not to seek treatment

Psychological Treatment Today

- Therapy takes place in many kinds of settings
 - Most are treated as out-patients: live in the community and make regular visits to the therapist's office or hospital/clinic
 - Those who receive in-patient treatment have severe psychological problems (Craig & Power, 2010)
- Clinicians have become increasingly concerned about the negative effects of long-term institutionalization (Sealy & Whitehead, 2006)

Psychological Treatment Today

- Hospitalization usually lasts a few weeks
- Therapists try to treat first as out-patients, usually with medications along with other forms of therapy
- If not effective, patient may be admitted to a hospital for a short period
- 1/3 of Canadians released from hospital following treatment for mental illness are readmitted within a year

Comparison of Treatments

- More than 400 forms of therapy in the clinical field today (Karasu, 1992)
- Some clinicians view abnormality as an illness and so consider therapy a procedure that helps cure illness, others see it as a problem in living and therapists as teachers of more functional behaviour and thought
- Clinicians who see abnormality as an illness speak of the “patient” while those who view it as a problem in living refer to the “client”

Comparison of Treatments

- Biological approaches: goal is to improve structural or biochemical functioning and to relieve symptoms
- Psychodynamic approaches: goal is to discover source of conflicts and resolve them
- Behavioural approaches: goal is to learn more about functional behaviours
- Cognitive-behavioural approaches: goal is to change harmful thinking patterns to more useful ones
- Humanistic approaches: goal is to provide support for honest self-appraisal, self-acceptance, and self-actualization

TABLE 16-2 Commonly Prescribed Psychotropic Drugs

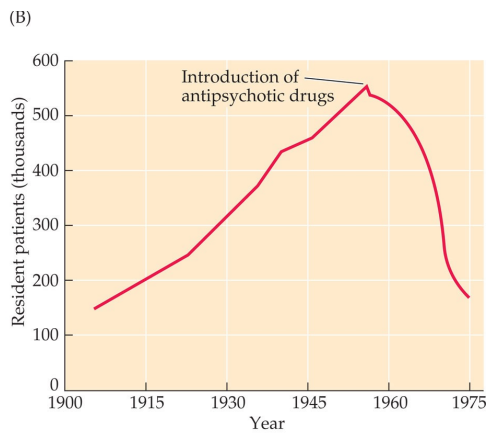
Symptom	Type of Medication	Examples
Psychosis (loss of touch with reality)	Antipsychotics Atypical antipsychotics	chlorpromazine (Thorazine) clozapine (Clozaril) risperidone (Risperdal)
Depression	Antidepressants	trazodone (Desyre) amitriptyline (Elavil) phenelzine (Nardil) fluoxetine (Prozac) paroxetine (Paxil) sertraline (Zoloft) venlafaxine (Effexor)
Mania	Mood stabilizers Antipsychotics	lithium (Lithonate) carbamazepine (Tegretol) valproate (Depakote) olanzapine (Zyprexa)
Anxiety	Anxiolytics Antidepressants	benzodiazepines (Valium, Xanax) fluoxetine (Prozac)

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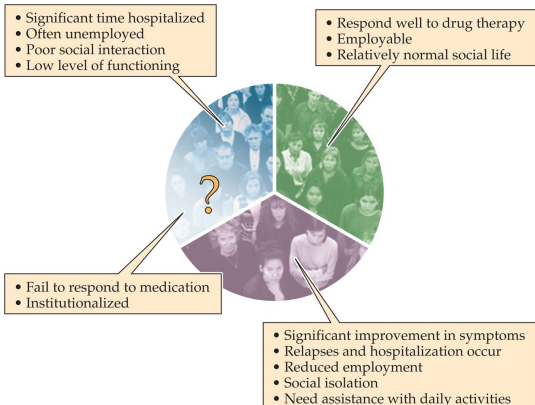
Antipsychotics

- Also called neuroleptics, are used primarily for the treatment of schizophrenia and other psychoses
- Commonly divided into two classes: traditional neuroleptics and the newer second-generation (“atypical”) antipsychotics
- Most antipsychotics are designed to block or reduce the sensitivity of brain receptors that respond to dopamine
- Some also increase levels of serotonin, which is a neurotransmitter that inhibits dopamine activity

Hospitalized schizophrenic patients increased in the US until the introduction of Thorazine in 1956

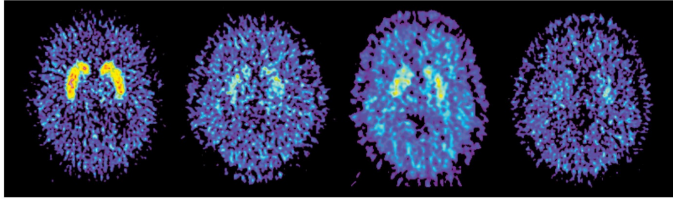


The law of thirds approximates the effectiveness of antipsychotic drug treatment



Dopamine receptor binding by antipsychotic drugs

Control Haloperidol Clozapine Risperidone

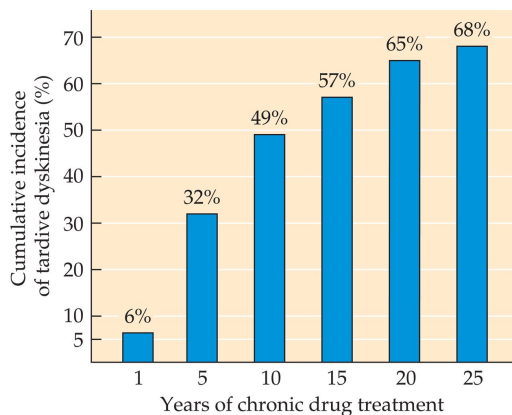


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Side Effects

- Most serious and troublesome side effects of classic antipsychotics are the movement disorders, referred to as extrapyramidal side effects (EPS)
- It is assumed that drug-induced Parkinsonism is due to dopamine blockade in Nigrostriatal pathway
- Tardive dyskinesia: a neurological disorder characterized by hand tremors and other involuntary muscle movements
- 1/4 of adults and 1/3 of the elderly, who take these drugs develop this disorder (Saltz et al., 1991)

Cumulative incidence of tardive dyskinesia (TD) in patients maintained on antipsychotic medication



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Atypical Antipsychotics

- “Atypical” or “second-generation” designation is reserved for antipsychotics that reduce positive symptoms of schizophrenia, but without causing significant extrapyramidal side effects like tardive dyskinesia
- Clozapine (the best-known atypical antipsychotic) has relatively weak affinities for dopamine receptors and a substantial affinity for serotonin receptors
- Clozapine improves negative and cognitive symptoms without motor side effects and is often effective for treatment-resistant patients with schizophrenia

TABLE 19.3 Major Classes of Antidepressants and Their Most Notable Side Effects

Class	Antidepressants	Side effects
Monoamine oxidase inhibitors	Phenelzine (Nardil)	Insomnia, weight gain, hypertension, drug interactions, tyramine effect
	Tranylcypromine (Parnate)	
	Isocarboxazid (Marplan)	
Classic tricyclics	Imipramine (Tofranil)	Sedation, anticholinergic effects, cardiovascular toxicity
	Amitriptyline (Elavil)	
	Desipramine (Norpramine)	
Second-generation:		
Selective serotonin reuptake inhibitors	Fluoxetine (Prozac)	Insomnia, gastrointestinal disturbances, sexual dysfunction, serotonin syndrome
	Sertraline (Zoloft)	
	Paroxetine (Paxil)	
Atypical antidepressants	Maprotiline (Ludiomil)	Varies with individual mechanism of action
	Bupropion (Wellbutrin)	
	Mirtazapine (Remeron)	
Electroconvulsive shock and transcranial magnetic stimulation		Memory impairment, confusion, amnesia

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Antidepressants

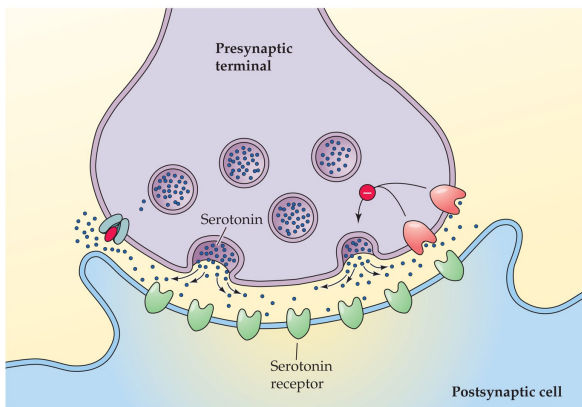
- Monoamine oxidase inhibitors (MAOIs): elevate the levels of norepinephrine and serotonin in the brain by blocking or inhibiting the enzyme that breaks these neurotransmitters down
- Tricyclic antidepressants: boost norepinephrine and serotonin levels by preventing re-uptake of these neurotransmitters by the neurons that released from
- Selective serotonin re-uptake inhibitors (SSRIs): specifically prevent re-uptake of serotonin

Antidepressants

- Most antidepressants increase serotonin by blocking re-uptake or inhibiting monoamine oxidase (MAO)
- Each drug is effective in reducing symptoms for about two-thirds of cases of clinical depression
- No one specific drug or type is more effective than the others, and there is no way to predict which patient will respond to a particular drug
- Reduce different symptoms and produce distinct side effects (i.e., weight gain and decreased sexual desire)
- Each one of the treatment methods requires chronic administration

Acute effects of antidepressants of serotonergic cells

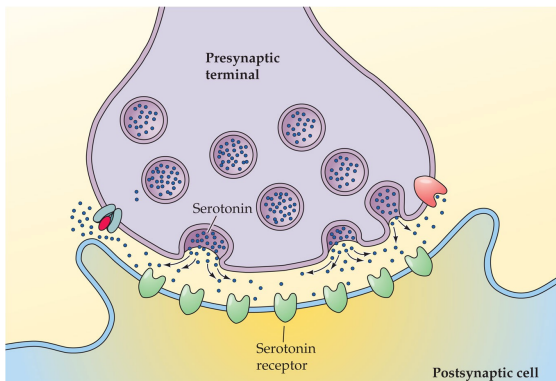
(A) Acute effects of antidepressants



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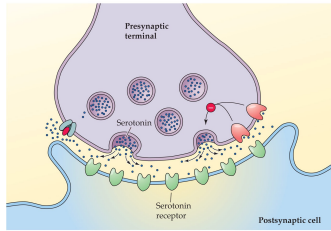
Chronic Effects of antidepressants of serotonergic cells

(B) Chronic effects of antidepressants



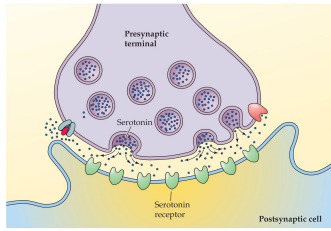
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(A) Acute effects of antidepressants



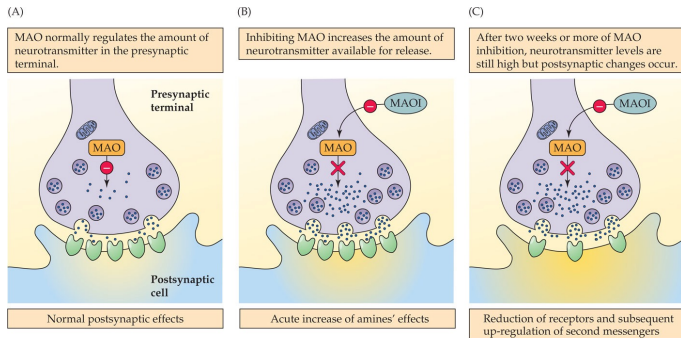
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(B) Chronic effects of antidepressants



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MAO increases dopamine (DA), NE, and 5-HT (the monoamine neurotransmitters) and thus increases the action of those transmitters at their receptors



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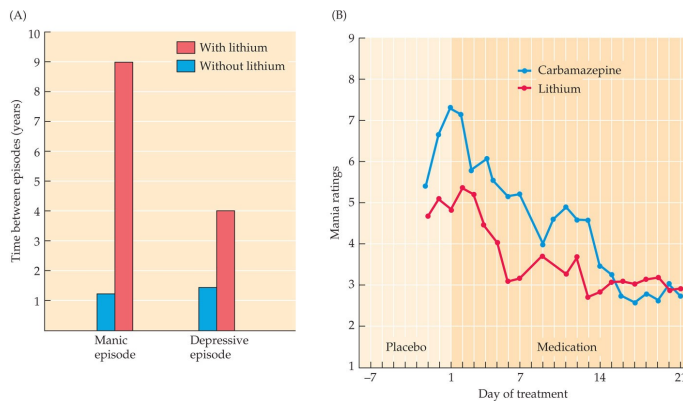
Mood Stabilizers

- Lithium carbonate is the most effective medication and is the usual drug of choice for the majority of patients with bipolar disorder
- One to two weeks of lithium use eliminates or reduces symptoms in about 60-80% of manic episodes without causing depression or producing sedation
- Often administered along with an antidepressant

Mood Stabilizers

- Produces its effects by moderating levels of norepinephrine or by protecting brain cells from being overstimulated by the excitatory neurotransmitter glutamate
- Therapeutic index of lithium is very low
- Lithium must be given in exactly the right dose, and blood levels of the drug must be monitored because too little will not help and too much is toxic
- Most important is that it is useful for reducing the occurrence of future episodes of mania and depression

Effectiveness of Lithium Carbonate for treating Bipolar disorder

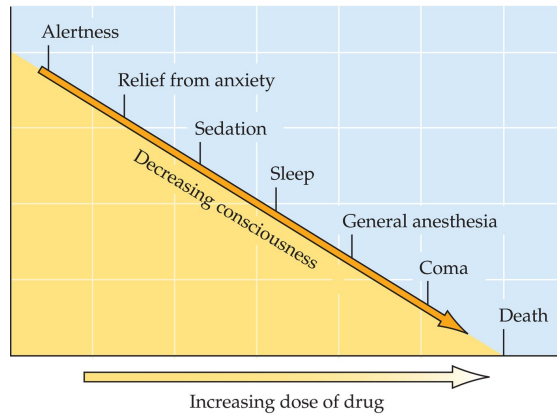


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Anxiolytics

- Anxiolytics increase the activity of the brain's primary inhibitory neurotransmitter called GABA
- Many belong to the class of sedative-hypnotics, which is part of a larger category called CNS depressants, which include the barbiturates, the benzodiazepines, and alcohol
- Anxiolytic: relieve the feelings of tension and worry and signs of stress that are typical of the anxious individual, with minimal side effects such as sedation
- Significant percentage of people that they are prescribed to overuse and become dependent on them

Dose-dependent effects of CNS depressants on levels of consciousness



Anxiolytics

- High therapeutic index: lethal overdose is extremely rare unless they are taken in combination with alcohol or other CNS depressants
- Reduced tolerance during repeated drug administration and also fewer drug interactions
- Lower probability of physical dependence and abuse
- Probability of abuse is almost always associated with poly-drug use

Cautions about Drug Treatments

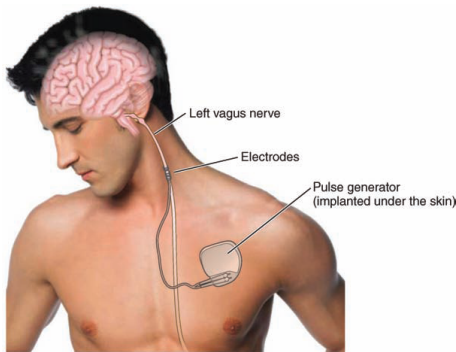
- Placebo effects are symptom improvements driven by the expectations and beliefs of the user, rather than the drug or treatment itself
- Some investigators maintain that much of the effectiveness of antidepressants is due to a placebo effect (Khan et al., 2003)
- Overall, only about half of all depressed patients respond positively to antidepressant medication, and of those, only about 40% are actually responding to the specific biological effects of the drugs (Hollon et al., 2002)

Electroconvulsive therapy (ECT) involves the use of an electric shock to trigger a brain seizure in hopes of relieving symptoms in people with severe depression



Will & Deni McInrya/Photo Researchers, Inc.

Vagus nerve stimulation: a procedure in which an implanted device sends electrical signals to the brain through the vagus nerve



Transcranial magnetic stimulation (TMS): procedure in which an electromagnetic coil is used to send a current into PFC



BonnieWeller/MCT/Landov

Psychodynamic Therapies

- 15% of today's clinical psychologists identify themselves as psychodynamic therapists (Scharf, 2012)
- Psychological disorder result from past emotional trauma
- Goal is to help clients to uncover past traumatic events and the inner conflicts that have resulted from them, and to resolve those conflicts

Psychodynamic Therapies

- Free association: allow clients to talk freely about whatever they want, no matter how unimportant
- Therapist interpretation (i.e., resistance, transference, dream interpretation)
- Catharsis: re-experiencing of past repressed feelings
- Working through: reexamining the same issue over and over to facilitate deep insight (Brenner, 1987)

Psychodynamic Therapies

- Research has failed to support the effectiveness of most psychodynamic therapies (Wampold et al., 2011)
- Only a few studies have found that psychodynamic therapy is more effective than no treatment of placebo treatment (Prochaska & Norcross, 2010)
- But short-term psychodynamic therapies are sometimes quite helpful (Wolitzky, 2011)

End of Lecture
