

PSYCHIATRIC NURSING

Psychopharmacology

Specific outlines

- Discuss historical perspectives related to psychopharmacology.
- Describe indications, actions, contraindications, precautions, side effects, and nursing implications for the following classifications of drugs:
 - a. Antianxiety agents
 - b. Antidepressants
 - c. Mood stabilizers
 - Antipsychotics
 - Antiparkinsonian agents
 - Sedative-hypnotics
 - Agents for attention-deficit/hyperactivity disorder
- Apply the steps of the nursing process to the administration of psychotropic medications.

Psychopharmacology

Background information

- Prior to the 1950s psychopharmacology was not available – focus was on behavioural interventions and sedatives
- The advent of psychopharmacologic agents dramatically lowered the numbers of inpatients – thousands were released from hospital care
- Nowadays, psychopharmacology is a primary treatment mode of psychiatric illnesses
- - Nurses are required to understand and update their knowledge on current advances in psychopharmacologic interventions

Psychopharmacology

Background information (cont'd)

- Discoveries of new medications to treat mental illnesses occur almost monthly
- This new frontier of psychiatric thought, research and treatment greatly affects nursing practice
- Medications are combined to find the most suitable ones on an individual basis, which may require trying a number of alternatives before finding the right one/s

Psychopharmacology

Psychotropics and neuroleptics

- Although we still use classifications such as antipsychotic and antidepressant, the nomenclature ***neuroleptic*** and ***psychotropic*** is used to indicate that the medication can be used across diagnostic groups
- Many medications now have multiple indications
- For example, Antipsychotics are no more used solely for their original purpose
- Psychotropic medications are medications that affect cognitive function, emotion and behaviour.

Psychopharmacology

Psychotropics and neuroleptics (cont'd)

- Recently, there has been a significant change in the use of classes of medications for psychiatric symptomatology
- Despite this, you will still encounter the main classification of psychotropics into four groups:
 1. Antipsychotic
 2. Antidepressant
 3. Antianxiety/Anxiolytic
 4. Mood-stabilizing

Psychopharmacology

Antipsychotic medications

- Reducing as many of the psychotic symptoms as possible, enables patient to participate more effectively in other forms of treatment
- It may take 2-4 weeks to see improvement
- Some people respond better to one drug than to another – idiosyncrasy
- Choosing the medication also depends on its side-effects – again, idiosyncratic
- Half of the medicated people get side-effects because of which they discontinue the medication (loss of compliance or adherence)

Psychopharmacology

Antipsychotic medications (cont'd)

- There are conventional and new-generation or atypical antipsychotics
- Some patients respond better to conventional medication (e.g. Chlorpromazine), although atypical agents (e.g. Zyprexa, Risperdal) have been found to be more effective and safe in long-term treatment
- Conventional (as well as some atypical) agents can have very serious side-effects

Psychopharmacology

Antipsychotic medications

Side-effects

- The most common side-effects of conventional antipsychotic medications include:
 - **Anticholinergic effects** (an anticholinergic is a drug that inhibits the action of acetylcholine, the chemical transmitter by which the vagus nerve stimulates the stomach and intestines.)
 - **Photosensitivity**
 - **Extrapyramidal side-effects (EPS)**

Psychopharmacology

Antipsychotic medication

side-effects (cont'd)

- **Extrapyramidal side-effects (EPS)**
 - **Akathisia:** (Gk. Not being able to sit). Feeling restless or jittery, needing to fidget, pace around, be about
 - **Dystonia:** sudden muscle spasm characterized by torticollis (twisting of neck), opisthotonos (spasm of the neck and back forcing the head backwards), oculogyric crisis (a fixed gaze that cannot return to lateral)
 - **Parkinsonism:** tremor, stiffness, rigidity, stooped posture, shuffling gait, akinesia (feeling slowed down), pill-rolling movement of fingers, oscillations of distal parts of extremities
 - **Neuroleptic malignant syndrome:** muscle rigidity, hyperpyrexia, hypertension, confusion, delirium
 - **Tardive dyskinesia:** involuntary movements of face and body (lip smacking, tongue protrusion, rocking, foot tapping), impaired gait and posture

Psychopharmacology

Antipsychotic medication side-effects (cont'd)

- TARDIVE DYSKINESIA (cont'd)
 - Many of the cases are mild but the disorder can be socially disfiguring. The symptoms of frowning, blinking, grimacing, puckering, blowing, smacking, licking, chewing, tongue protrusion and spastic facial distortions are very troubling. Abnormal movements of the arms and legs also occur, including rapid, purposeless irregular movements; tremors and foot tapping. Body symptoms include dramatic movements of the neck and shoulders, rocking, twisting pelvic gyrations and thrusts.
 - Because tardive dyskinesia is often irreversible, the goal is prevention.
 - If symptoms begin to appear, the medication is reduced or the person is switched to a newer antipsychotic.

Psychopharmacology

Antipsychotic medication

side-effects (cont'd)

- Interference with sexual functioning is fairly common.
- Almost half report weight gain.
- Identifying and managing side effects is important.
- Some people stop taking their medication and relapse whereas others relapse first, and as a result, stop taking their medication.
- Monitoring white blood cells is essential with some medications as agranulocytosis is common with some drugs and can be fatal, since the patient can easily succumb to an overwhelming infection.

Psychopharmacology

Antipsychotic medication

Toxicity and overdose

- The primary symptom of overdose is CNS depression, which may extend to the point of coma.
- Other symptoms include agitation, restlessness, seizures, fever, EPS, arrhythmias, and hypotension.
- Caring for a client with overdose includes monitoring vital signs, especially of cardiac function; maintaining a patent airway and gastric lavage.
- Antiparkinsonian medications may be given for EPS.
- Valium (Diazepam) may be given for seizures.

Psychopharmacology

Antipsychotic medication

Administration

- Administration of antipsychotic medication is oral, in liquid or pill form, or by injection
- Long-acting injectable medications such as Prolixin (fluphenazine) decanoate and Haldol (haloperidol) decanoate are often used to treat clients with schizophrenia.
- These medications are administered IM once every 3-4 weeks. A helpful regimen for clients who have difficulty remembering to take medications daily or who would otherwise be noncompliant.

Psychopharmacology

Antidepressant medication

Physiological effects

- The neurotransmitters involved in depression are dopamine (DA), serotonin (5-HT), norepinephrine (NE) and acetylcholine (ACH).
- It is believed that during depressive episode, there is a functional deficiency of these neurotransmitters or hyposensitive receptors.
- Antidepressant medications increase the amount of available neurotransmitters by inhibiting neurotransmitter reuptake, by inhibiting monoamine oxidase (MAO) or by blocking certain receptors. (Thase and Howland, 1995)

Psychopharmacology

Antidepressant medication

Therapeutic effects

- Antidepressant medications can be classified as:
- Older generation agents: tricyclics and monoamine oxidase inhibitors (MAOIs)
- New generation agents: selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs).
- The new generation medications have dramatically changed the treatment of depression, with more effective action and fewer side effects.

Psychopharmacology

Antidepressant medication

Therapeutic effects (cont'd)

- Depressions are heterogenous in terms of which neurotransmitters are depleted, which is why different people respond differently to various antidepressants.
- Often, a period of trial and error is necessary to determine which medication is the most effective.
- Maintenance continues until clients are free of symptoms from 4 months to 1 year. Then the drugs are slowly discontinued.
- The therapeutic purpose of antidepressants is to decrease as many of the depressive symptoms as possible, THEREBY ENABLING THE CLIENT TO PARTICIPATE MORE EFFECTIVELY IN OTHER FORMS OF TREATMENT.

Psychopharmacology

Antidepressant medication

Therapeutic effects (cont'd)

- Antidepressants do not cause dependence, tolerance, addiction or withdrawal.
- It takes an average of 10-14 days for the beginning effect and full effect may not be apparent for 4-6 weeks.
- When a client does not respond at all after a trial period of 4-6 weeks, a different antidepressant is tried or a combination of other medications.
- A significant number of clients improve when 600mg of lithium is added to antidepressant treatment.
- Other clients improve when triiodothyronine (T3) is administered daily.
- For delusional or severely agitated clients antipsychotic medication may be indicated.

Psychopharmacology

Antidepressant medication

Side effects

- Both multicyclics and MAOIs may have anticholinergic effects such as dry mouth, blurred vision, urinary retention and constipation.
- CNS effects include drowsiness, lethargy, insomnia and restlessness.
- Orthostatic hypotension and tachycardia may occur in the early phases of treatment
- The best know side effects are sexual dysfunction and weight gain.
- Some medications cause great sexual impairment and excessive weight gain, e.g. Elavil (amitriptyline), Adapin (doxepin) and Anafranil (clomipramine).
- Least sexual side effects and weight gain is experienced with Norpramin (desipramine) and Pamelor (nortriptyline).
- Weight gain with latter is 0-10 pounds and with formerly mentioned medications 5-40 pounds.

Psychopharmacology

Antidepressant medication

Side effects (cont'd)

- The SSRIs and SNRIs have fewer anticholinergic effects, fewer cardiac effects, fewer sexual problems, less sedation and less weight gain.
- MAOIs decrease the amount of monoamine oxidase in the liver, which breaks down the essential amino acids tyramine and tryptophan. If a person eats food that is rich in these substances he or she risks hypertensive crisis.
- The first sign of hypertensive crisis is a sudden and severe headache, followed by neck stiffness, nausea, vomiting and tachycardia. Death can result from circulatory collapse or intracranial bleeding.

Psychopharmacology

Antidepressant medication

Side effects (cont'd)

- FOOD TO AVOID WITH MAOIs
- Absolutely restricted:
 - Aged cheeses; aged and cured meats; improperly stored or spoiled meat, fish or poultry; banana peel; broad bean pods; sauerkraut; soy sauce and other dosy condiments; draft beer.
- Consume in moderation:
 - Red or white wine (no more than two 4-oz glasses per day); bottled or canned beer, including non-alcoholic (no more than two 12-oz servings per day).

(Gardner, 1996)

Psychopharmacology

Antidepressant medication

Side effects (cont'd)

- The SSRIs and SNRIs increase the availability of 5-HT, which relieves depression but can also cause the hyperserotonergic state known as the serotonin syndrome (SS).
- This syndrome is more likely to occur when these agents are used in combination with MAOIs.
- SS develops very quickly and must be attended to immediately. Characteristic symptoms are: high fever, confusion, hypomania, tachycardia, diaphoresis, disco-ordination and seizures.

Psychopharmacology

Antidepressant medication

Toxicity and overdose

- Symptoms of toxicity are varied and must be noticed immediately.
- If MAOIs and other antidepressants are administered together, serious reactions may occur.
- CAUTION! Seven to 14 days should elapse between the use of MAOIs and other antidepressants.

Psychopharmacology

Antidepressant medication

Administration

- Oral
- Usually takes 2-4 weeks to reach therapeutic levels
- Changes may be observed by others before client recognizes them



Psychopharmacology

Antianxiety medication

Physiological effects

- Benzodiazepine antianxiety medications act on the limbic system and the reticular activating system (RAS).
- They produce a calming effect by potentiating the effects of gamma aminobutyric acid (GABA), one of the inhibitory neurotransmitters.
- CNS depression can range from mild sedation to coma.
- Other physiological effects include skeletal muscle relaxation and anticonvulsant properties.

Psychopharmacology

Antianxiety medication

Therapeutic effects

- Different medications are effective in various anxiety disorders.
- Individual benzodiazepines differ in potency, speed in crossing the blood-brain barrier, and degree of receptor binding.
- High-potency and short-acting benzodiazepines include Xanax (alprazolam), Ativan (lorazepam), Paxipam (halazepam) and Serax (oxazepam).
- Low-potency and long-acting benzodiazepines include Tranxene (clorazepate), Valium (diazepam) and Librium (chlordiazepoxide).

Psychopharmacology

Antianxiety medication

Side effects

- Side effects of benzodiazepines are primarily related to the general sedative effects including drowsiness, fatigue, dizziness and psychomotor impairment.
- These medications potentiate the effects of alcohol and can lead to severe CNS depression.
- Intravenous administration can lead to cardiovascular collapse and respiratory depression.

Psychopharmacology

Antianxiety medication

Side effects (cont'd)

- There is a potential for abuse in vulnerable client populations.
- BuSpar (buspirone) has no potential for dependence and does not potentiate the effects of alcohol on the CNS.
- It is the drug of choice for clients who are prone to substance abuse or for those who require long-term treatment with antianxiety medications.

Psychopharmacology

Antianxiety medication

Toxicity and overdose

- Symptoms of toxicity include euphoria, slurred speech, disorientation, unsteady gait and impaired judgment.
- Symptoms of overdose include respiratory depression, cold and clammy skin, hypotension, weak and rapid pulse, dilated pupils and coma.
- These must be reported immediately!

Psychopharmacology

Antianxiety medication

Administration

- All antianxiety medications may be taken orally.
- Antacids interfere with the absorption of these medications and should not be taken until several hours later.
- Some medications may be administered IM or IV.
- Benzodiazepines should not be discontinued abruptly because of the risk of withdrawal symptoms. They should be gradually reduced very carefully.

Psychopharmacology

Mood-stabilizing medication

Physiological effects

- Mood stabilizers include a small group of diverse medications
- Lithium is the best known and most often prescribed mood stabilizer.
- In recent years, several anticonvulsant medications have been added to this category: Tegretol (carbamazepine), Depakene and Depakote (valproate) and Klonopin (clonazepam).
- Calcium channel blockers (Calan and Isoptin) are increasingly being used with success in manic disorders either alone or in combination with other mood stabilizers. They have been found to be effective in the treatment of bipolar disorder and seem to work best in people who also respond to lithium.

Psychopharmacology

Mood-stabilizing medication

Physiological effects (cont'd)

- The specific action of these medications is unclear.
- In the body, lithium substitutes for sodium, calcium, potassium and magnesium. It also interacts with neurotransmitters.
- Like antidepressants, lithium normalizes REM sleep abnormalities which are present in mood disorders.
- Mood stabilizers which increase GABA activity seem to have an antimanic, antipanic and antianxiety effect.

Psychopharmacology

Mood-stabilizing medication

Physiological effects (cont'd)

- Manic episodes may be triggered by persistent low-level stimulation of the brain referred to as "kindling".
- The anticonvulsants may be effective in that they block this persistent stimulation.
- Clients with acute manic episode have been found to have increased levels of intracellular calcium, which decrease when lithium is administered.

Psychopharmacology

Mood-stabilizing medication

Therapeutic effects

- For clients with problems such as bipolar disorder, major depression, schizoaffective disorder, treatment-resistant schizophrenia, alcohol-withdrawal, and other mood-regulation problems, mood-stabilizing medication has been found to be helpful.
- The antimanic effectiveness of lithium is 60-70%; some people seem to be resistant to it and others cannot tolerate the side effects.
- Because it takes 1-3 weeks to control symptoms, antipsychotic medication or benzodiazepines are given initially for more immediate relief.

Psychopharmacology

Mood-stabilizing medication

Side effects

- The early side effects of lithium often disappear after 4 weeks.
- These side effects include lack of spontaneity, memory problems, difficulty concentrating, nausea, vomiting, diarrhoea and hand tremors
- Weight gain and a worsening of acne often persist throughout treatment
- Women taking Tegretol (carbamazepine) may have menstrual cycle irregularities and experience false positive pregnancy tests.
- Weight gain is the side effect which causes most complaints and is the major cause of discontinuing mood stabilizers.

Psychopharmacology

Mood-stabilizing medication

Toxicity and overdose

- There is a fine line between therapeutic levels and toxic levels of lithium.
- Mild lithium toxicity: serum level about 1,5 mEq/L (apathy, decreased concentration, slight twitching, coarse tremors)
- Moderate lithium toxicity: serum level about 1.5-2.5 mEq/L (severe diarrhoea, vomiting, tinnitus, blurred vision, tremors)
- Severe lithium toxicity: serum level above 2.5 mEq/L (nystagmus, dysarthria – speech difficulty due to impairment of the tongue, visual or tactile hallucinations, oliguria or anuria, confusion, seizures, coma or death)

Psychopharmacology

Mood-stabilizing medication

Administration

- The administration of lithium is oral, in capsule or liquid form.
- Both carbamazepine and valproate are available in tablet and liquid forms. Initially low doses are increased gradually.
- The ultimate dosages are determined by reduction of symptoms, blood levels and side effects.
- Patients must continuously be monitored for hypotension and bradycardia.

ADHD Through The Life Cycle

Drugs Used For Treatment

- *Drugs most used are various forms of:*

- a) **Ritalin** (methylphenidate)(Various forms, **Concerta**)
- b) **Dextro-amphetamines** (Various forms)
- c) **Tricyclics** and/or antihypertensives
- d) **Wellbutrin, Clonidine, neuroleptics etc**
- e) **Monoamine oxidase inhibitors** (effective but very dangerous, particularly in children)
- f) **Focalin and Ritalin La**
- g) **Atomoxetine** (**Strattera**)

ADHD Through The Life Cycle

Drugs Used For Treatment

- ***Ritalin is classified as a psychostimulant drug***

Comes in several forms:

- a) Straight Ritalin (5, 10, and 15 mg) (3 ½ H)**
- b) SR Ritalin (Ciba 20 mg) (not recommended)**
- c) Metadate CD, ER, (Celltech 20 mg) (5-6 H)**
- d) Concerta(ER) (18, 27, 36 and 54 mg) (11- 12 H)**
- e) FocalinTM (2.5, 5, 10 mg) (Out recently)**
- f) Ritalin LA (20, 30, 40 mg) (7 hours ?)(Sprinkle)**

ADHD Through The Life Cycle

Drugs Used For Treatment

Dextro-amphetamines:

- 1) Most used straight release are:
 - a) Dexedrine (5mg), (4 ½ H)
 - b) Dextrostat (5 and 10 mg) (4 ½ H)
 - c) Adderall (5, 10, 20 mg) (4 ½ H)
- 2) Slow releases:
 - a) Dexedrine SR (5, 10 and 15 mg) (7-10 H)
 - b) Adderall XR (10, 20 and 30 mg capsules) (7-10 H)

ADHD Through The Life Cycle

Drugs Used For Treatment

Tricyclic antidepressants:

- 1) Longer duration of action (once daily dosing)
- 2) No rebound or insomnia problems
- 3) Can monitor plasma drug levels (for safety and compliance)
- 4) No risk of abuse, small doses of 10-25 mg
- 5) Some death reports in children with TCA's
(next)

Tricyclic Antidepressants (cont)

- Those more frequently used in the past were:
 - a) Norpramin (imipramine+desipramine)
 - Dirty, many side effects
 - b) Better to use Desipramine (less side effects, may respond by third day)
 - c) Nortriptiline (not generally used)
- Always monitor cardiovascular side effects

ADHD Through The Life Cycle

Drugs Used For Treatment

- **The Use of Catapres (Clonidine), and Tenex:**
- **1) Clonidine is an imidazoline derivative used as antihypertensive agent**
- **2) Reduce the activation or arousal of ADHD, Tourette's syndrome and aggression**
- **3) Used in highly irritable, impulsive and aggressive children (next)**

ADHD Through The Life Cycle

Drugs Used For Treatment

- **4) On occasion Clonidine is given with Ritalin or Dexedrine with optimal results**
- **5) Useful in motor tics, overactive ADHD, growth impairment**
- **6) Not useful to control distractability itself**
- **7) Helps sleep if taken in late afternoon**
(next)

ADHD Through The Life Cycle

Drugs Used For Treatment

- **8) Can be taken up to 3x q.d (6 hours interval) at doses of up to 0.1 mg (total of 0.3-0.3 ½ mg)**
- **9) Major side effect is sedation starting 30-60' after doses is taken**
- **10) Excretion half life 8-12 H but very variable**
- **11) May take 2 - 4 weeks to see response (beyond sedation) (next)**

ADHD Through The Life Cycle

Drugs Used For Treatment

- 12) Patches can be used delivering 0.1-0.3 mg q.d for a week according to size of patch
- 13) Guanfacine (Tenex) can be given in doses of 1-3 mg q.d (6 hours interval between doses)
- 14) Guanfacine (Tenex) has the same indications of Clonidine

New Drug on the Market

- **Atomoxetine (Strattera) is a re-uptake inhibitor of norepinephrine . It is not a psychostimulant.**
- **Best doses seems to be 1.2 mg/kg/day**
- **Now approved. Limited experience with it. Does not exacerbate tics. Covers patient 24 hours. No safety concerns as with tricyclics. Not controlled by FDA**
- **Side effects: Decreased appetite, nausea, loss of weight, somnolence, etc. Loss of libido (7%). Non-addictive.**

PSYCHOPHARMACOLOGY

Assessment

- Observe closely! For example:
- Pacing
- Mild diaphoresis
- Hypervigilance
- Escalating anxiety
- Increase or drop in blood pressure
- Note that symptoms may be psychological or due to caffeine or tobacco toxicity

Sedative-Hypnotics

What are Sedative-Hypnotics?

- Tranquilizers may be a more familiar term used to describe sedative-hypnotic agents (1)
 - “Downer drugs”
 - Drugs that take the edge off
 - Calm your mood when you are feeling anxious
 - Induce sleep (1)

Benzodiazepines

- Most frequent class of drugs that have a tranquilizing-type effect
- Prescription drugs (1)



http://www.drugfree.org/Portal/Drug_Guide/Prescription%20Sedatives%20Tranquilizers

Taking the Drugs

- This class of drugs is fairly safe when taken for their intended use and not used in excess (1)
- Most sedatives come in capsules or tablets
 - Multi-colored
- Liquid and injection forms are also available (2)

Taking the Drugs

- The use of benzodiazepines can lead to abuse, whether they are taken properly or for the wrong reasons



http://www.drugfree.org/Portal/DrugIssue/Features/Prescription_Medicine_Misuse Accessed May 2, 2006.

Prescription Benzodiazepines

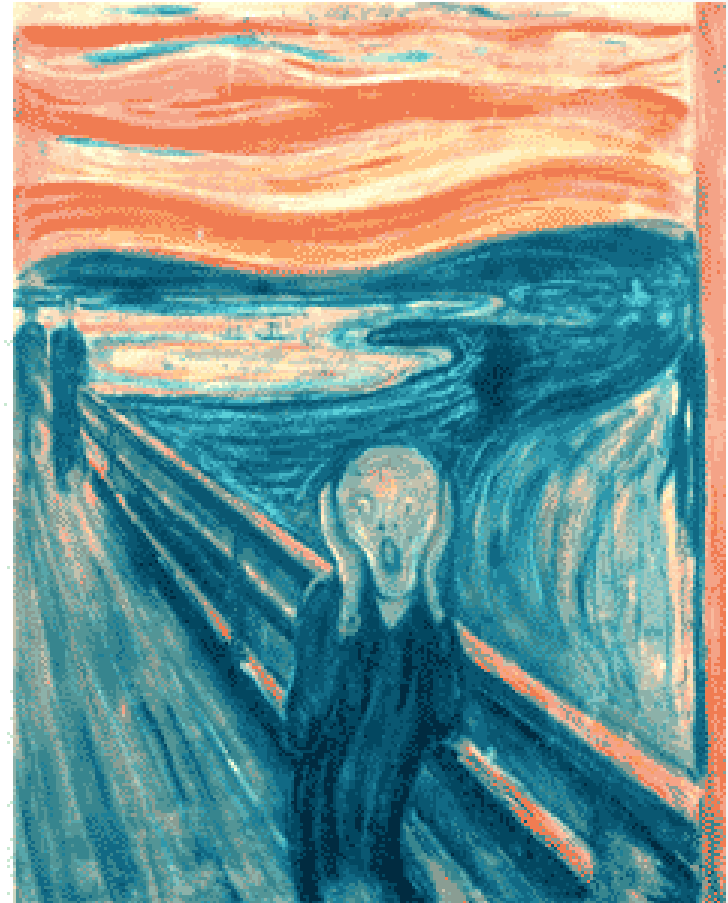
- Chlordiazepoxide (Librium)
- Diazepam (Valium)
- Temazepam (Restoril)
- Triazolam (Halcion)
- Clonazepam (Klonopin)
- Lorazepam (Ativan)
- Alprazolam (Xanax) (1,3)

Why Do People Use Benzodiazepines?

- Reduce anxiety levels
 - Helps people to cope with stress (1)
- Trouble sleeping
- In combination with amphetamine-like drugs
 - Many people use sedatives to calm themselves back down from the rush associated with amphetamine use

Why Do People Use Benzodiazepines?

- To get away from this!



Short-Term Effects (Low Doses)

- Euphoria
 - “Being in a happy world”
- Fatigue
 - Feeling drowsy
- Shallow breathing
 - Not being able to take full, deep, normal breaths (2)
- Trouble coordinating your movements

Short-Term Effects (High Doses)

- Paranoia
 - Having an unrealistic perception of something, someone, or some place in relationship to the world and you
- Aggression
- Easily agitated
- Difficulty remembering
- Irritability (2)

Effects in Overdose

- Unconsciousness
- Respiratory depression
- Collapse of heart and heart functions
- Walking difficulty
- CNS depression
- Shallow breathing
 - Not being able to take full, deep, normal breaths (1,2)

Long-term Effects

- “Rebound effects”
 - Over use of these drugs can cause a reversal effect
 - Seizures can occur; calm and relaxed feelings dissipate
- Tolerance develops, resulting in dependence
 - Must have more and more of the drug to feel an even minor effects
 - Higher risk of overdose
- Withdrawal
 - This leads to dependence as well
 - No one wants to feel the unpleasant withdrawal effects, so continues use (2)

Cognitive Effects

- Memory impairment/Amnesia
- Confusion
- Sleepiness (1)

<http://images.google.com/images?svnum=10&hl=en&lr=&q=cognitive> Accessed May 2, 2006.



<http://images.google.com/images?svnum=10&hl=en&lr=&q=sleeping+cartoon> Accessed May 2, 2006.

Psychological Effects

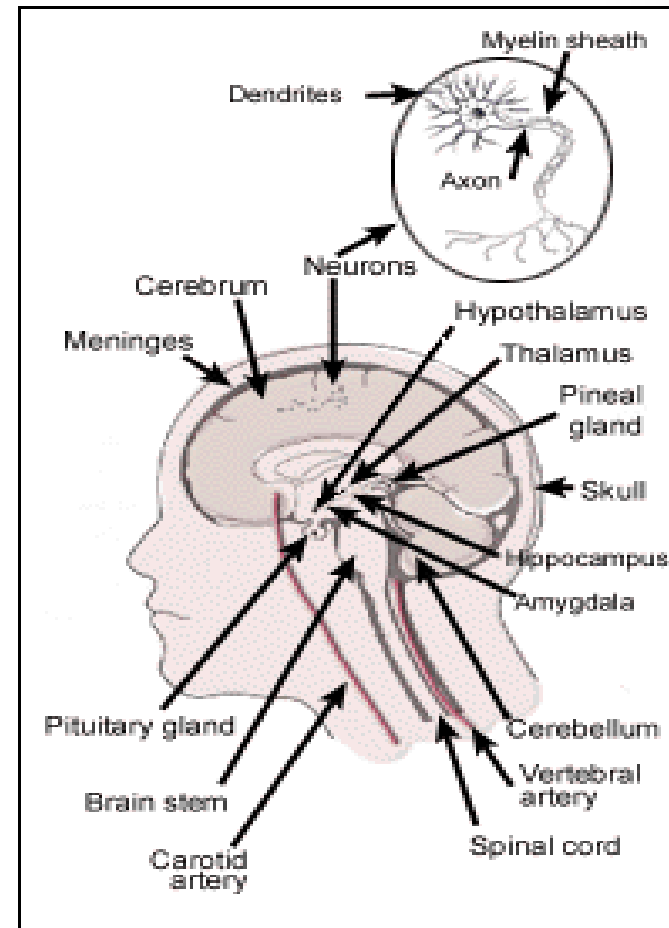
- Relaxation
 - Helps with the daily stresses of life/relieves tension
 - Anxiety from school and peer stresses
- Drowsy
 - Easier to sleep/induces sleep (1,2)
- Distracts you from other problems going on around you and in your own life
 - Just a temporary fix; the problem never goes away

Benzodiazepine Pharmacology

- CNS Depressant (1)
 - The major action of the benzodiazepine drug class is focused in the brain
 - Can cross the blood brain barrier (BBB)
 - Easy access to the brain where the drugs exert their effect
- Affects other body systems as well
 - Heart
 - Acts on different sites (receptors) of the heart (1)

Benzodiazepine Pharmacology

- Benzodiazepines act on the GABA system in the brain
 - Increase function (1)



Duration of Benzodiazepines

- These prescription drugs are long acting
- Even after the effects wear off, the drug is still in your system for a long period of time
 - Hours
 - Days
 - Weeks
 - During this lengthy period of time, these drugs will show up in blood tests and drug screens (1, 2)

Danger: Caution

- It is extremely dangerous to use these drugs in combination with alcohol
 - Since these drugs stay in your body for a long period of time, drinking can effect your body even when you are not feeling the effects of the sedative type drug.
 - Slowed breathing/decrease lung function
 - Decrease heart rate (1,2)



Caution: Overdosing

- Due to the tolerance that develops with benzodiazepines and the lengthy duration in the body, overdosing can have an “all of a sudden” effect
 - Overdose symptoms may not be felt until 12-36 hours after overdose has already occurred (1,2)



<http://images.google.com/images?svnum=10&hl=en&lr=&q=overdosing> Accessed May 2, 2006.

Withdrawal Symptoms

- Tachycardia – increase in heart rate
- Severe headaches
- Panic attacks can occur
- Tremors
- Changes in perception – not fully in tune with, or aware of, everything going on around you
- Weight loss
- Parasthesias
 - Pins and needles/tingling feeling (1)

Summary

- Benzodiazepines is a class of drugs that have an effect on the brain that, in turn, induces sleep and causes feelings of relief, relaxation and a state of euphoria.
- Benzodiazepines should only be taken as prescribed by your physician. Although this class of drugs is one of the safest classes of prescription drugs, consuming these drugs should not be taken lightly. If anything, greater caution should be taken.
- Although the initial and intended feelings from use are almost always addicting. Continuing and exceeding use for this reason can only lead to trouble. Respiratory, heart and psychological problems can occur, as well as withdrawal, overdosing and even death.

PSYCHOPHARMACOLOGY

Client education

- One of the aims of client education is to reduce **RECIDIVISM**: the tendency to relapse into a previous mode of behaviour requiring readmission to a treatment programme
- Assess learning capacity – especially with chronically ill patients – and use most relevant and appropriate teaching method
- Explore cognitive, psychological, cultural, personal and social factors affecting attitudes and beliefs concerning medication

What nurses need to know for Medication Teaching

PSYCHOSES

- Cognitive difficulties secondary to thought disorder
- Motivational problems secondary to negative symptoms
- Unpleasant side effects from medication
- Persistence of positive symptoms (delusions) mitigating against adherence

What nurses need to know (cont'd)

MOOD DISORDERS

- Persistent dysphoria leads to amotivation
- Self-destructiveness – lethality
- Manic irresponsibility
- Loss of manic or hypomanic egosyntonic (identity-related) excitement
- Unpleasant side effects from medications

What nurses need to know (cont'd)

ANXIETY DISORDERS

- Addiction to antianxiety medication
- Quick action of many antianxiety agents leads to positive reinforcement of increasing dosages
- Lack of consistent provider knowledge of and expertise in application of effective nonmedication treatment strategies for anxiety problems

What nurses need to know (cont'd)

PERSONALITY DISORDERS

- Addictive or abusive use of medications
- Sensation seeking
- manipulation

Teaching methods

- Present material that is clear, beneficial and interesting
- Check the client's information
- Ask for verbal reiteration and demonstration of skills
- Develop a "pretest" and a "posttest" to evaluate level of knowledge and change in thinking/behaviour before and after learning experience

Teaching

- The nurse needs to be able to discuss the following questions with clients:
 1. What does this medication do?
 2. How should I take this medication?
 3. What if I miss a dose?
 4. What other medicine does not mix with this one?
 5. What side effects can I expect?
 6. Where can I keep my medication?
 7. What do I do if I have a problem?

Examples of the cross-diagnostic uses of medications

- Risperidone (Risperdal): Psychosis, Dementia, Mood Instability
- Olanzapine (Zyprexa): Psychosis, Mood Instability
- Quetiapine (Seroquel): Psychosis, Dementia
- Tricyclic antidepressants: Depression, Panic Disorder
- SSRIs: Depression, Panic Disorder
- Fluoxetine (Prozac, Sarafem): Depression, Obsession/Compulsions, PPMD (Premenstrual Dysphoria Disorder), Panic Disorder
- Sertraline (Zoloft): Depression, Obsessions/Compulsions
- Paroxetine (Paxil): Depression, Panic Disorder, Social Phobia
- Fluvoxamine (Luvox): Depression, Obsessions/Compulsions, Panic Disorder
- Bupropion (Wellbutrin, Zyban): Depression, Cigarette Smoking
- Divalproex (Depakote): Dementia, Mood Instability, Convulsions, Migraine
- Carbamazepine (Tegretol): Mood Instability, Convulsions

Potential side-effects of antipsychotic medications

REVISION

- Autonomic nervous system or anticholinergic side effects: orthostatic hypotension (measure lying and standing blood pressure frequently), dry mouth, blurred vision, constipation, urinary hesitance or retention, rarely also paralytic ileus
- Extrapyramidal (EPSEs): acute dystonic reactions (bizarre and severe muscular contractions), Parkinsonian syndrome or pseudo-parkinsonism, akathisia (lit: "not sitting" motor restlessness).
- Tardive Dyskinesia (TD): rapid, jerky, slow-writing involuntary of lip, tongue, eyeballs, facial muscles
- Most symptoms may be reversible if detected early enough.
- Must be CORRECTLY INTERPRETED AS STEMMING FROM MEDICATION!

Potential side-effects of antipsychotic medications

HIGHLIGHTS

- Other CNS Effects: sedation, seizures
- Allergic: cholestatic jaundice, dystonia and other symptoms may be termed as "allergic" reactions
- Blood: agranulocytosis
- Skin: eruptions, photosensitivity leading to severe sunburns, blue-grey metallic discolorations over the face and hands, pigmentation changes in eyes (such as the dangerous retinitis pigmentosa caused by over 800mg per day doses of thioridazine)
- Endocrine: lactation in females. Gynecomastia and impotence or perpetual erection in males. Many other libido related symptoms due to hyperprolactinemia. Sometimes, diabetes.
- Weight gain: affects self-esteem. May be the most devastating side-effect as experienced by the client.

ANTIDEPRESSANT MEDICATION

- Tricyclic antidepressants (TCIs)
- Monoamine oxidase inhibitors (MAOIs)
- Selective Serotonin Reuptake Inhibitors (SSRIs)
- Phenethylamine antidepressants

MORE ON THIS AND FOLLOWING TOPICS IN HANDOUT.

SECTIONS OF HANDOUT TO FOCUS ON:

- Low-Tyramine diet
- Mood stabilizers
- Lithium
- Anxiolytics
- Treatment of Insomnia

HANDOUT REFERENCE: Contemporary Psychiatric-Mental Health Nursing, Kneisl et al, Pearson Education Inc. 2004, Ch. 13, pp. 745-761

PSYCHOPHARMACOLOGY

Names and actions of drugs

- Familiarize yourself with the 35 medication cards handed out in class.
- ALWAYS LOOK UP INFORMATION ON DRUGS YOU ARE ADMINISTERING TO PATIENTS IN PHARMACA FENNICA!!!

