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Psychopharmacology and Psychiatric Medications

Mental Health Nursing

Antipsychotics, antidepressants, mood stabilizers, anxiolytics, sedatives, hypnotics and drugs used in substance dependence; indications, adverse effects and nursing responsibilities.

For educational purposes only.

CHAPTER 18 / MENTAL HEALTH NURSING 18. Psychopharmacology and Psychiatric Medications

1. Principles

Psychotropic medicines influence neurotransmission and neural systems. Choice depends on diagnosis, symptom profile, prior response, comorbidity, reproductive considerations, interactions and patient preferences. Nurses verify orders, allergies, dose/route, baseline observations and required tests; explain expected effects and monitor adverse effects. Never independently initiate or abruptly stop psychiatric medicines beyond authorized scope.

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2. Major drug classes

Class and examples	Common indications/mechanism	Important adverse effects/monitoring
First-generation antipsychotics: haloperidol, chlorpromazine	D2 antagonism; psychosis, selected acute indications	EPS, dystonia, akathisia, tardive dyskinesia, sedation, QT prolongation, NMS.
Second-generation: risperidone, olanzapine, quetiapine, aripiprazole	Dopamine/serotonin receptor effects vary	Weight/metabolic changes, orthostasis, EPS/prolactin effects vary. Monitor weight, glucose, lipids and BP.
Clozapine	Selected treatment-resistant schizophrenia	Neutropenia, myocarditis, seizures, metabolic effects, severe constipation; required ANC and clinical monitoring.
SSRIs: sertraline, fluoxetine; SNRIs: venlafaxine, duloxetine	Serotonin or serotonin/noradrenaline reuptake inhibition; depression/anxiety/OCD depending drug	GI effects, sexual dysfunction, activation, hyponatraemia, withdrawal on abrupt cessation, serotonin toxicity.
TCAs: amitriptyline; MAOIs: specialist drugs	Monoamine-based actions; selected depression and other indications	Anticholinergic/orthostatic/cardiac toxicity for TCAs; important food/drug interactions with MAOIs. Overdose dangerous.
Lithium	Mood stabilization, especially bipolar disorder	Narrow therapeutic range: levels, renal/thyroid function, electrolytes; toxicity risk with dehydration and interacting drugs.
Valproate, carbamazepine, lamotrigine	Selected mood stabilization/antiepileptic therapy	Agent-specific liver/blood monitoring, interactions; serious rash with lamotrigine/carbamazepine. Valproate has major fetal risks and strict reproductive safeguards.

Benzodiazepines: lorazepam, diazepam	Enhance GABA-A signalling; selected anxiety, withdrawal, seizures/catatonia	Sedation, respiratory depression with other depressants, falls, dependence and withdrawal.
Hypnotics and other anxiolytics	Selected short-term insomnia/anxiety indications	Sedation, impairment, interactions; prefer evidence-based psychological approaches where appropriate.
Substance-use medicines	Methadone/buprenorphine for opioid disorder; naltrexone, acamprosate or selected others for alcohol disorder; naloxone for overdose	Specialist protocols, interactions, withdrawal/overdose risk, adherence and liver/renal monitoring as drug-specific.

3. Serious reactions and nursing response

EPS include acute dystonia, parkinsonism and akathisia; tardive dyskinesia is often persistent involuntary movement. NMS: fever, severe rigidity, altered mental state and autonomic changes; serotonin toxicity: neuromuscular hyperactivity (clonus/hyperreflexia), agitation and autonomic findings. Both require urgent medical review. Lithium toxicity may present with vomiting, coarse tremor, ataxia and confusion; hold further dose pending urgent authorized clinical advice and assess levels/renal function. Fever/sore throat on clozapine or severe constipation urgent. Monitor suicide risk and activation when starting/changing antidepressants.

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4. Patient education

Discuss expected time course, common effects, serious warning signs, missed-dose instructions from prescription, avoidance of alcohol/unsafe combinations, pregnancy planning, monitoring and follow-up. Encourage shared decisions and adherence without coercion. Document drug, dose, time, response, adverse effects and escalation. Use approved product information/local formulary for exact doses.

5. Important Examination Questions

Long Answer Questions

1. 1. Classify psychiatric medicines and discuss actions, adverse effects and nursing responsibilities.

Short Answer Questions

1. 1. Explain lithium monitoring
2. 2. distinguish NMS and serotonin toxicity
3. 3. describe clozapine precautions.

Very Short Answer Questions (with answers)

1. 1. What is EPS? - Extrapyramidal symptoms.
2. 2. Why monitor lithium levels? - Narrow therapeutic range.

6. Quick Revision

- Psychotropics need physical health monitoring.
- Do not stop medicines abruptly without advice.

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- Fever, rigidity or severe confusion are urgent.

7. Conclusion

Psychotropics need physical health monitoring. Do not stop medicines abruptly without advice. Fever, rigidity or severe confusion are urgent.

Practice questions

Choose one best answer. The answer key and explanations follow the questions.

1. Which medicine requires blood-level, renal and thyroid monitoring because of its narrow therapeutic range?

A. Sertraline
B. Lorazepam
C. Lithium
D. Olanzapine

2. Which monitoring requirement is particularly associated with clozapine in this chapter?

A. Only hearing testing before every dose
B. Only fasting blood glucose with no other monitoring
C. No monitoring after treatment starts
D. Absolute neutrophil count and clinical monitoring

3. Which finding is specifically highlighted as neuromuscular hyperactivity in serotonin toxicity?

A. Clonus or hyperreflexia
B. Reduced motivation alone
C. Isolated loss of interest
D. Gradual memory decline alone

4. A patient taking lithium develops vomiting, coarse tremor and an unsteady gait. Which response is appropriate?

A. Continue the next dose and reassess at the routine appointment
B. Increase the dose because the symptoms suggest relapse
C. Restrict all fluids to reduce urinary lithium loss
D. Urgently seek medical assessment for possible lithium toxicity and follow the medicine safety protocol

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Answer key and explanations

1. C - Lithium

Lithium has a narrow therapeutic range and requires levels and renal/thyroid monitoring.

2. D - Absolute neutrophil count and clinical monitoring

Clozapine can cause neutropenia and requires ANC plus clinical monitoring.

3. A - Clonus or hyperreflexia

Clonus and hyperreflexia are listed as neuromuscular features of serotonin toxicity.

4. D - Urgently seek medical assessment for possible lithium toxicity and follow the medicine safety protocol

Gastrointestinal symptoms with coarse tremor and ataxia are concerning for toxicity. Urgent review, medicine instructions and appropriate investigations are needed.

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