

# Medication

STUDENT NAME: April W. Davis  
MEDICATION: Penicillamine  
CATEGORY CLASS: Class III antiarrhythmic agents

REVIEW MODULE CHAPTER

### PURPOSE OF MEDICATION

**Expected Pharmacological Action**  
Penicillamine is a zinc chelator that binds to heavy metal ions such as lead, copper, and cadmium, forming a complex that is excreted in the urine. It is used to treat Wilson's disease, lead poisoning, and rheumatoid arthritis.

**Therapeutic Use**  
The treatment of Wilson's disease and lead poisoning. It is also used in the treatment of rheumatoid arthritis.

### Complications

Common side effects include nausea, vomiting, and diarrhea. Other complications include bone marrow suppression, which can lead to leukopenia and thrombocytopenia. It can also cause kidney damage and liver toxicity.

### Contraindications/Precautions

Contraindicated in patients with severe renal impairment (creatinine clearance < 10 mL/min). It should be used with caution in patients with liver disease, bone marrow suppression, and in patients taking other drugs that may cause bone marrow suppression.

### Interactions

Penicillamine may interact with other drugs that affect the liver or bone marrow. It may also interact with zinc supplements, as it can bind to zinc and reduce its absorption.

### Role of Frequent Monitoring

Regular monitoring of liver function tests (ALT, AST, ALP, GGT) and complete blood count (CBC) is essential to detect early signs of toxicity. Monitoring of renal function is also important.

Evaluation of Medication Effectiveness  
Monitor for improvement in symptoms of Wilson's disease or lead poisoning. Regular monitoring of liver function tests and CBC is necessary to ensure safety.

Client Education  
Take as directed. Avoid alcohol and other drugs that may affect the liver or bone marrow. Report any side effects to the healthcare provider.

Nursing Interventions  
Monitor for signs of toxicity, including nausea, vomiting, and diarrhea. Monitor for changes in liver function tests and CBC.

Contraindications/Precautions  
Contraindicated in patients with severe renal impairment (creatinine clearance < 10 mL/min). Use with caution in patients with liver disease and bone marrow suppression.

Interactions  
Penicillamine may interact with other drugs that affect the liver or bone marrow. It may also interact with zinc supplements.

Role of Frequent Monitoring  
Regular monitoring of liver function tests and CBC is essential to detect early signs of toxicity.

Evaluation of Medication Effectiveness  
Monitor for improvement in symptoms of Wilson's disease or lead poisoning. Regular monitoring of liver function tests and CBC is necessary.

Client Education  
Take as directed. Avoid alcohol and other drugs that may affect the liver or bone marrow. Report any side effects.

Nursing Interventions  
Monitor for signs of toxicity, including nausea, vomiting, and diarrhea. Monitor for changes in liver function tests and CBC.

# Medication

STUDENT NAME: April W. Davis  
MEDICATION: Amiloride  
CATEGORY CLASS: Anti-hypertensive agents (Sympathomimetic agents)

REVIEW MODULE CHAPTER

### PURPOSE OF MEDICATION

**Expected Pharmacological Action**  
Amiloride is a mixed-action antihypertensive agent. It inhibits the release of norepinephrine from sympathetic nerve terminals and also blocks the alpha-1 adrenergic receptors, leading to vasodilation and a decrease in blood pressure.

**Therapeutic Use**  
The treatment of hypertension. It is used as an adjunct to other antihypertensive agents.

### Complications

Common side effects include dizziness, headache, and fatigue. It may also cause orthostatic hypotension and reflex tachycardia.

### Contraindications/Precautions

Contraindicated in patients with severe renal impairment (creatinine clearance < 10 mL/min). It should be used with caution in patients with liver disease and in patients taking other drugs that may affect the liver or bone marrow.

### Interactions

Amiloride may interact with other drugs that affect the liver or bone marrow. It may also interact with other antihypertensive agents.

### Role of Frequent Monitoring

Regular monitoring of blood pressure is essential to ensure effectiveness. Monitoring of liver function tests and CBC is also important.

Evaluation of Medication Effectiveness  
Monitor for improvement in blood pressure. Regular monitoring of blood pressure is necessary to ensure effectiveness.

Client Education  
Take as directed. Avoid alcohol and other drugs that may affect the liver or bone marrow. Report any side effects.

Nursing Interventions  
Monitor for signs of toxicity, including dizziness, headache, and fatigue. Monitor for changes in blood pressure.

Contraindications/Precautions  
Contraindicated in patients with severe renal impairment (creatinine clearance < 10 mL/min). Use with caution in patients with liver disease and bone marrow suppression.

Interactions  
Amiloride may interact with other drugs that affect the liver or bone marrow. It may also interact with other antihypertensive agents.

Role of Frequent Monitoring  
Regular monitoring of blood pressure is essential to ensure effectiveness.

Evaluation of Medication Effectiveness  
Monitor for improvement in blood pressure. Regular monitoring of blood pressure is necessary.

Client Education  
Take as directed. Avoid alcohol and other drugs that may affect the liver or bone marrow. Report any side effects.

Nursing Interventions  
Monitor for signs of toxicity, including dizziness, headache, and fatigue. Monitor for changes in blood pressure.

# Medication

STUDENT NAME: April W. Davis  
MEDICATION: Dobutamine  
CATEGORY CLASS: Inotropic beta agonists

REVIEW MODULE CHAPTER

### PURPOSE OF MEDICATION

**Expected Pharmacological Action**  
Dobutamine is a short-acting beta-1 adrenergic receptor agonist. It increases cardiac output by increasing heart rate and stroke volume. It is used to treat acute heart failure.

**Therapeutic Use**  
The treatment of acute heart failure. It is used as an inotropic agent to increase cardiac output.

### Complications

Common side effects include tachycardia, palpitations, and chest pain. It may also cause arrhythmias and increase myocardial oxygen demand.

### Contraindications/Precautions

Contraindicated in patients with severe aortic stenosis, uncontrolled hypertension, and severe coronary artery disease. It should be used with caution in patients with tachycardia and in patients taking other drugs that may affect the heart.

### Interactions

Dobutamine may interact with other drugs that affect the heart. It may also interact with other inotropic agents.

### Role of Frequent Monitoring

Regular monitoring of heart rate, blood pressure, and oxygen saturation is essential to ensure effectiveness. Monitoring of liver function tests and CBC is also important.

Evaluation of Medication Effectiveness  
Monitor for improvement in cardiac output and symptoms of heart failure. Regular monitoring of heart rate and blood pressure is necessary.

Client Education  
Take as directed. Avoid alcohol and other drugs that may affect the heart. Report any side effects.

Nursing Interventions  
Monitor for signs of toxicity, including tachycardia, palpitations, and chest pain. Monitor for changes in heart rate and blood pressure.

Contraindications/Precautions  
Contraindicated in patients with severe aortic stenosis, uncontrolled hypertension, and severe coronary artery disease. Use with caution in patients with tachycardia and bone marrow suppression.

Interactions  
Dobutamine may interact with other drugs that affect the heart. It may also interact with other inotropic agents.

Role of Frequent Monitoring  
Regular monitoring of heart rate, blood pressure, and oxygen saturation is essential to ensure effectiveness.

Evaluation of Medication Effectiveness  
Monitor for improvement in cardiac output and symptoms of heart failure. Regular monitoring of heart rate and blood pressure is necessary.

Client Education  
Take as directed. Avoid alcohol and other drugs that may affect the heart. Report any side effects.

Nursing Interventions  
Monitor for signs of toxicity, including tachycardia, palpitations, and chest pain. Monitor for changes in heart rate and blood pressure.





### ACTIVE LEARNING TEMPLATE Medication

STUDENT NAME: Ms. O. J. Sklar  
MEDICATION: Methylprednisolone  
CATEGORY CLASS: Corticosteroid

REVIEW MEDICAL CHAPTER

#### PURPOSE OF MEDICATION

**Expected Pharmacological Action**  
It is classified as a glucocorticoid and is used to reduce inflammation and suppress the immune system. It is used to treat various forms of arthritis, asthma, and other inflammatory conditions.

**Therapeutic Use**  
It is used to treat various forms of arthritis, asthma, and other inflammatory conditions. It is also used to suppress the immune system in certain autoimmune diseases.

#### Complications

Adverse effects include increased blood sugar, increased blood pressure, increased risk of infection, osteoporosis, and weight gain. Long-term use can lead to adrenal suppression and Cushing's syndrome.

#### Medication Administration

Oral administration: 16-32 mg daily in 1-2 divided doses. IV administration: 4-8 mg daily in 1-2 divided doses. Duration of therapy depends on the condition being treated.

#### Nursing Interventions

Monitor for signs of infection, osteoporosis, and weight gain. Educate the patient on the importance of taking the medication as prescribed and avoiding alcohol and live vaccines.

#### Client Education

Take the medication as prescribed. Do not stop taking abruptly. Report any signs of infection, osteoporosis, or weight gain to the healthcare provider.

### ACTIVE LEARNING TEMPLATE Medication

STUDENT NAME: Al. L. Collier  
MEDICATION: Alteplase  
CATEGORY CLASS: Thrombolytic

REVIEW MEDICAL CHAPTER

#### PURPOSE OF MEDICATION

**Expected Pharmacological Action**  
It is a fibrinolytic agent that dissolves blood clots by breaking down fibrin, the protein that holds clots together.

**Therapeutic Use**  
It is used to treat acute myocardial infarction (heart attack) and acute ischemic stroke. It is also used to treat pulmonary embolism.

#### Complications

Adverse effects include bleeding, including intracranial hemorrhage, and hypotension. It is contraindicated in patients with active bleeding, recent surgery, or recent trauma.

#### Medication Administration

IV administration: 100 mg over 1 hour, followed by 90 mg over the next 16 hours. Total dose is 100 mg. It is given as a bolus followed by an infusion.

#### Nursing Interventions

Monitor for signs of bleeding, including bruising, petechiae, and hematuria. Assess vital signs and level of consciousness frequently.

#### Client Education

Report any signs of bleeding, including bruising, petechiae, or hematuria, to the healthcare provider immediately.

### ACTIVE LEARNING TEMPLATE Medication

STUDENT NAME: Ms. O. J. Sklar  
MEDICATION: Propofol  
CATEGORY CLASS: Hypnotic

REVIEW MEDICAL CHAPTER

#### PURPOSE OF MEDICATION

**Expected Pharmacological Action**  
It is a short-acting intravenous anesthetic used for induction and maintenance of general anesthesia.

**Therapeutic Use**  
It is used for induction and maintenance of general anesthesia. It is also used for sedation in intensive care units.

#### Complications

Adverse effects include hypotension, bradycardia, and respiratory depression. It is contraindicated in patients with severe hypotension or respiratory depression.

#### Medication Administration

IV administration: 1-2 mg/kg for induction. Maintenance doses are 0.5-1 mg/kg/hour. It is given as a bolus followed by an infusion.

#### Nursing Interventions

Monitor vital signs and level of consciousness frequently. Assess for signs of hypotension, bradycardia, and respiratory depression.

#### Client Education

Report any signs of hypotension, bradycardia, or respiratory depression to the healthcare provider immediately.