

Drug Information

1. Allopurinol

Usual & Expected Dosages: Typically, 100-300 mg/day; treated based on uric acid level.

Mechanism of Action: Allopurinol is the inhibitor of xanthine oxidase where it interrupts the conversion process of xanthine and uric acid due to which this compound cannot accumulate within the body; usually, it is prescribed for gout (van der Pol et al., 2021).

Nursing Care Considerations: Check uric acid levels periodically and renal function before instituting therapy. Encourage hydration to enhance the excretion of uric acid and reduce the chance of developing kidney stones.

Contraindications: Hypersensitivity reaction to the drug; history of significant renal impairment.

Pre-existing Relevant Patient Characteristics: Repeat assessment of renal and liver functions, which can impair metabolism and excretion of drugs.

Pre-treatment Needs: Baseline liver and renal function studies should be performed.

Monitoring Needs: The patient should be monitored regularly on uric acid levels and the liver function (Luo et al., 2022).

Patient Instructions: The need for hydration and the administration of dose must be explained.

Storage Requirement: Store at room temperature, away from moisture.

Active Ingredients and Common Trade Names: Active ingredient is allopurinol; commonly sold under the name Zyloprim.

Advantages: Effective in decreasing uric acid and in preventing gout flare-up.

Do not use it during acute gout attack.

General Dosage: Use with food to reduce gastrointestinal side effects.

Interactions: Avoid co-administration with azathioprine or mercaptopurine.

Missed Doses: If a dose is forgotten, take immediately when remembered except if time to administer the next dose is almost due.

Usual Dosage Time: Given once daily.

Side Effects Common: Skin rash, nausea, diarrhoea.

Severe Side Effects: Stevens-Johnson syndrome, liver failure.

2. Salbutamol (oral inhalation)

Usual & Expected Dosages: Usually 100-200 mcg per inhalation as needed, up to 4 times daily.

Mechanism of Action: It is a beta2 agonist that relaxes the airway muscles, hence it is used for prompt relief from bronchoconstriction in asthma and COPD.

Nursing Care Considerations: Monitor respiratory rate and oxygen saturation, instruct on inhaler technique, and monitor for side effects such as tachycardia (Marques and Vale, 2022).

Contraindications: Hypersensitivity to salbutamol; caution in patients with heart disease.

Pre-existing Relevant Patient Attributes: Assess cardiac history and observe for signs of thyrotoxicity.

Pre-administration Prerequisites: The patient must know to use the inhaler

Monitoring Prerequisites: Must monitor for effectiveness and for tachycardia

Patient Education: Correct inhalation technique and how it is to be used only during asthma symptoms.

Refrigeration Needs : Store at room temperature away from direct sunlight.

Active Pharmacological Ingredients and Commercial/Trade Names: Salbutamol; Ventolin.

Advantages: It rapidly improves asthma symptoms and provides for smooth breathing.

How to Use It: It is to be avoided with an overdose; it is used when the symptoms appear.

Overall Guidelines: Give one puff when symptoms begin to develop.

Medicines to Be Avoided: Beta-blockers must not be used as they inhibit the drug's action

Missing a Dose: As it is taken only as required, missing is not possible.

When to Use It: It is used in case of wheezing or shortness of breath

Common Side Effects: It causes tremors, palpitations, slight headaches.

Major Adverse Reactions: Anaphylaxis, tachycardia.

3. Insulin Aspart

Common & Typical Preparations: Dose varies widely; generally injects before meals as needed based on blood glucose levels.

Mechanism of Action: A fast-onset form of insulin that decreases blood glucose levels through cellular glucose uptake.

Nursing Management Considerations: Monitor the patient's blood glucose levels frequently, especially at peak times, before and after meals (Sadiq et al., 2021).

Absolute Contraindications: Hypersensitivity to insulin aspart.

Pre-existing relevant patient features: Diabetes complication check and education on managing hypoglycemia.

Pre-administration needs: Check blood glucose level with correct dose administration.

Monitoring needs: Blood glucose should be monitored frequently

Information to patients: Teach injection techniques and how to recognize hypoglycemia.

Storage needs: Refrigerate without freezing.

Active ingredients/ Common trade names: Insulin aspart; trade name NovoRapid.

Benefits: Quickly regulate blood glucose; most effective during meal

Do not use: Blood glucose is insufficient

Common Use: Use 5-10 minutes before a meal

Other Medications to Know About: Alcohol may impact blood glucose (Pal et al., 2021).

If a dose is missed, take the missed dose as soon as possible, but if it is almost time for the next dose, skip the missed dose and continue with the regular dosing schedule. Take this medication just before meals.

Major Side Effects: Severe hypoglycemia.

4. Prochlorperazine

Usual & Typical Dosages: Typically 5-10 mg 2-3 times a day to control nausea.

Action: Antagonizes dopamine receptors, thus reducing nausea impulses in the brain.

Nursing Care Implications: Monitor for drowsiness, hypotension, and extrapyramidal symptoms.

Contraindicated in: Parkinson's disease, hypersensitivity, or extensive CNS depression (Haahr and Heise, 2020).

Pretreatment Requirements for Patients with Pre-existing Relevant Conditions: Assess patients with neurological diseases such as Parkinson's.

Pre-administration Requirements: The patient should not be overly sedated before administration.

Monitoring Requirements: Be monitored for sedation and extrapyramidal effects.

Patient Education: Cautioned to avoid drowsiness, do not use machinery, or drive

Storage Requirement: Store it at room temperature.

Active Ingredients and Available Trade Names: Prochlorperazine; usual brand name is Stemetil

Benefits: Eases nausea and vomiting (Otręba and Kośmider, 2021).

Do Not Take If You Are: Sedated. Contraindicated to take if.

General Precautions: To alleviate stomach discomfort, take food with this drug.

Caution and Avoid: This drug with alcohol and those drugs used to induce sleeping.

Missed Doses: Taken as soon as remembered if not almost time for the next dose.

Time to Be Used: Onset of symptoms.

Common Side Effects: Drowsiness, dizziness.

Serious Side Effects: Extrapyrimal symptoms, seizures.

5. Levothyroxine

Usual & Expected Dosages: Typically 25-200 mcg once daily, depending on thyroid levels.

Mode of Action: Synthetic form of thyroxine that helps restore thyroid hormone levels.

Nursing Care Considerations: Monitor thyroid function tests and educate on lifelong therapy.

Absolute contraindications: Unrecognised adrenal insufficiency, recent myocardial infarction.

Pre-existing relevant patient characteristics: Cardiac status and thyroid status to be evaluated.

Requirements before administration: Thyroid function tests to be assured appropriately.

Monitoring requirements: Periodic thyroid function tests to be conducted (Hodgson et al., 2021).

Instructions to the patient: To be taken on an empty stomach preferably in the morning

Storage requirement: Store at room temperature.

Active Ingredients and Common Trade Names: Levothyroxine; Eltroxin

Advantages: Metabolic activity in hypothyroidism patients is regulated.

How and When to Avoid: Contraindicated in cases of acute myocardial infarction.

General Precautions: Take with a full glass of water.

Medications That Should Be Avoided: Avoid antacids and calcium supplements for at least 4 hours before taking the drug.

Missed Dose: Take as soon as remembered, but skip the missed dose if almost time for the next dose.

When to Take: Take in the morning just before breakfast.

More Common Side Effects: Weight gain, tachycardia.

6. Memantine

Usual & Expected Dosages: The starting dose is usually 5 mg once daily, and it may be titrated up to a maximum of 20 mg per day based on tolerance and clinical response.

Mechanism of Action: It is an NMDA receptor antagonist that decreases the abnormal activity of glutamate, which causes neuronal damage.

Nursing Care Considerations: Monitor cognitive function and daily living activities; monitor for side effects, especially in older adults.

Contraindications: History of hypersensitivity to memantine; severe renal impairment (creatinine clearance < 30 mL/min).

Pre-existing Relevant Patient Features: History of seizures, urinary incontinence, or other neurological disorders.

Pre-administration Requirements: Renal function tests and ongoing medications for potential interactions (Liu et al., 2023).

Monitoring Requirements: Cognitive function evaluations and monitoring for side effects.

Information For Patients: Educate about possible benefits in cognitive function and the need for adherence.

Storage Requirement: Store at room temperature, avoiding moisture and heat.

Active Ingredients and Common Trade Names: Memantine; also called Namenda

Benefits: This medication will slow down symptom progression of Alzheimer's condition and generally enhance function

Do Not Use When: Such a patient should not have this medicine when there exists severe impairment of renal capacity

General Guidance: Use a daily dose, and consume with or without food at consistent times every day.

Counter Interacting Medicines: Do not use along with other NMDA receptor antagonists or medicines, which have an impact on renal capacity.

Missed Doses: Take when remembered, but omit if already time for the next dose.

Time to Be Taken: Once daily preferably at the same time every day.

Common Side Effects: Dizziness, headache, confusion.

Serious Side Effects: Severe allergic reaction, seizures.

7. Prednisolone

Common & Typical Dosages: Dosage range from 5 to 60 mg a day depending on the conditions.

Mechanism of Action: Corticosteroid, inhibiting inflammation and the immune response, as a result of preventing the entry of leukocytes and preventing inflammatory mediator formation.

Care Nursing Considerations: Obtain vital signs, with attention to blood pressure; check for evidence of infection or hyperglycemia.

Contraindicated with: Systemic fungal infections; live vaccines; hypersensitivity to prednisolone

History of Relevant Pre-existing Patient Condition: Evaluate history for presence of diabetes mellitus, hypertension, peptic ulcer disease (Montemitro et al., 2021).

Pre-treatment Orders: Baseline weight; blood pressure; glucose levels.

Monitoring Needs: The patient's blood glucose, electrolytes, and signs of infection need to be monitored frequently.

Patient Education: Some potential side effects are the increased appetite and mood swings.

Storage Requirements: This medicine has to be kept at room temperature. To be kept away from the moisture.

Active Ingredients and Available Trade Names: Prednisolone; commonly referred as Prelone, Orapred.

Benefits: Very useful for a wide array of inflammatory and autoimmune diseases.

Do Not Use: Active infections, not be given on vaccinated patients who carry live vaccines.

General Precautions: Use with food to decrease the chance of gastrointestinal irritation.

Medications to be Cautioned: NSAIDs and other drugs that may increase the risk of gastrointestinal bleeding.

Missed Dose: Take as soon as possible unless almost time for the next dose.

Dosage Time: Can be taken once a day or in divided doses.

Common Side Effects: Increased appetite, weight gain, mood swings.

Serious Side Effects: Adrenal insufficiency, Cushing's syndrome, severe infections.

8. Promethazine

Usual & Expected Dosages: Usually 12.5 to 25 mg every 4 to 6 hours as needed, not to exceed 100 mg/day.

Action: An antihistamine that competes with histamine at H1 receptors, which decreases allergic responses and has a sedative effect.

Nursing Care Considerations: Monitor sedation level, especially in paediatric and geriatric patients; observe for signs of respiratory depression.

Contraindications: Hypersensitivity to promethazine; children under 2 years of age.

Pre-existing Relevant Patient Features: Check for a history of asthma or other respiratory conditions (Sweeney et al., 2021)

Pre-treatment Needs: Assess the patient's allergy history and medications.

Monitoring Needs: Monitor sedation and monitor for anaphylaxis.

Information For Patients: Advise patients that they may become drowsy and that they should not operate machinery.

Storage Needs: Store at room temperature. Protect from light.

Active Ingredients and Common Trade Names: Promethazine; also referred to as Phenergan.

Indications: Useful in nausea, vomiting, and allergic reactions.

Avoid in the event of respiratory depression or obstructive sleep apnea.

General Precautions: Administer medication with food to reduce potential for gastrointestinal irritation (Chiappini et al., 2021).

Medications to Avoid: Use with other central nervous system depressants, including alcohol or other sedatives.

Missed Doses: Take if remembered before the next dose due.

To Be Used: As needed based on signs and symptoms.

Common Adverse Reactions: Drowsiness, dizziness, dry mouth.

Serious Adverse Reactions: Anaphylactic shock, neuroleptic malignant syndrome.

9. Amoxicillin

Usual & Expected Dosages: Usually 250 to 500 mg every 8 hours or 500 to 875 mg every 12 hours depending on the infection.

Mechanism of Action: A penicillin antibiotic that acts by inhibiting bacterial cell wall synthesis, which leads to cell lysis and death.

Nursing Care Considerations: Monitor for allergic reactions; monitor for signs of superinfection.

Contraindications: Hypersensitivity to amoxicillin or other penicillins (Huttner et al., 2020).

Pre-existing Relevant Patient Characteristics : Look for history of hypersensitivity to penicillins or renal impairment.

Pre-administration Needs : Culture and sensitivity if required; review renal function.

Monitoring Need : Monitor for therapeutic drug effect and any signs or symptoms of adverse reactions to the drug.

Information to Patient : Advise on the potential significance of completing the recommended course of antibiotics (Sodhi et al., 2021).

Storage Conditions : Keep in the refrigerator if it has been reconstituted; otherwise keep at room temperature.

Active Ingredients and Other Common Trade Names : Amoxicillin; commonly known by the brand name Amoxil.

Benefits Good for several types of bacterial infections.

Do Not Take If: Condition exists Known sensitivity to penicillins.

Side Effects General Use with or without food Shake liquid well just before use.

Other drugs that may interact: Certain antibiotics.

Dosing information If you miss a dose Take as soon as remembered except if near time to take the next dose.

Use generally every 8 to 12 hours as directed by your doctor.

Precautions Common Side Effects Nausea Diarrhoea Rash.

Severe Adverse Reactions: Anaphylaxis, Clostridium difficile-associated diarrhoea.

10. Atenolol

Usual & Expected Dosages: Usually 25 to 100 mg once daily.

Action: A selective beta-1 adrenergic blocker that decreases the heart rate, decreases the contractility of myocardial, and decreases the blood pressure by decreasing the output of the heart.

Nursing Care Considerations: Monitor blood pressure and heart rate; monitor for heart failure.

Contraindicated in: Severe bradycardia, cardiogenic shock and some types of heart blocks.

Pre-existing Relevant Patient Features: Look for a history of asthma or chronic obstructive pulmonary disease (COPD) (Liu et al., 2020).

Pre-administration Requirements: Record baseline heart rate and blood pressure.

Monitoring Requirements: Continuously check blood pressure and heart rate.

Information For Patients: Counselling on the need for compliance and not to stop it abruptly.

Storage Requirements: Store at room temperature and away from moisture.

Active Ingredients and Common Trade Names: Atenolol; Known by the trade name, Tenormin.

Benefits: It is indicated for hypertension and angina, and for prevention of myocardial infarction.

Do not give. Contraindicated in significant bradycardia or heart block.

Give at the same time of day so that serum levels are constant.

Interacts closely with other antihypertensives and cardiac glycosides. drugs that affect heart rate, including beta-blockers

If a dose is missed, take as soon as remembered, unless it would be close to the time for the next dose; skip the missed dose; do not double the dose of this medication.

Dosing Time: Once a day, at the same time.

Common Side Effects: Dizziness, fatigue, coolness of extremities

Severe Side Effects: Extreme hypotension; signs of heart failure.

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