The Ultimate ATI Pharmacology Study Guide

Acamprosate

Prescribed for substance abuse disorders

The nurse should administer acamprosate to a client after he undergoes detoxification. This medication assists a client to maintain abstinence to alcohol by decreasing the tension, dysphoria, and anxiety that the client might have when abstaining from alcohol.

Acetaminophen

With acute acetaminophen toxicity, the client is at serious risk for hepatic necrosis. Early signs include nausea, vomiting, abdominal distress, diarrhea, and sweating.

Albuterol

Albuterol is a short acting beta-2 agonist that relieves bronchospasm rapidly for clients to use during an acute attack.

Alendronate

Prescribed for osteoporosis

Alendronate should be taken in the morning at least 30 min before other medicines, as these will decrease the amount of alendronate the body absorbs.

The nurse should instruct the client to sit or stand for 30 min after administration of the medication to reduce prolonged contact of the medication which can cause esophagitis.

The client should take alendronate with a full glass of water. Taking the medication with dairy products, such as milk, reduces absorption of alendronate.

The client should not lie down for 30 min after taking alendronate. This helps prevent esophageal irritation, a serious adverse effect.

The nurse should instruct the client to avoid chewing or sucking on the effervescent tablet to minimize the risk of esophagitis.

Bone density tests are required every 12 to 18 months for clients who are taking alendronate in order to monitor for a therapeutic response to the medication.

Allopurinol

Prescribed for gout

The nurse should instruct the client to take allopurinol after meals to reduce gastric distress.

The nurse should instruct the client to drink 3000 mL, or 3 quarts, of fluid each day to produce 2,000 mL of urine.

A rash or a fever can be a manifestation of toxicity syndrome, which can occur 2 to 4 weeks after the start of therapy. The nurse should instruct the client to report a rash immediately to the provider and the medication should be withheld.

Alprazolam

Prescribed for generalized anxiety disorder

Like all benzodiazepines, alprazolam has the potential for abuse and dependence.

Abrupt withdrawal of a benzodiazepine taken over time can cause a withdrawal syndrome, which can result in significant rebound psychosis, or seizures. GI effects are not expected when taking alprazolam and the client should be instructed to call the provider if unusual manifestations occur rather than abruptly stopping the medication.

Like all benzodiazepines, the ingestion of alcohol will potentiate the central nervous system depressant effects of alprazolam. Clients on any benzodiazepine are advised to avoid alcohol use.

Alprazolam is a benzodiazepine used to treat anxiety disorders. Like all benzodiazepines, the most common side effects reported for alprazolam are central nervous system depressant effects, such as drowsiness and dizziness.

Flumazenil, a benzodiazepine antagonist, reverses the sedative effects of benzodiazepines.

An adverse effect of alprazolam is tachycardia.

An adverse effect of alprazolam is blurred vision.

An adverse effect of alprazolam is hypotension.

Alteplase

Thrombolytic medications such as alteplase dissolve established clots.

Aluminum Hydroxide

Prescribed for heartburn

An adverse effect of aluminum hydroxide is constipation; therefore, the nurse should instruct the client consume an adequate amount of fluid and fiber and to maintain an exercise program.

Ampicillin

Antibiotic

Wheezing indicates constriction of the airway, which might occur as part of an anaphylactic reaction following administration of ampicillin and requires immediate intervention. The nurse should apply the ABC priority-setting framework. This framework emphasizes the basic core of human functioning—having an open airway, being able to breathe in adequate amounts of oxygen, and circulating oxygen to the body's organs via the blood. An alteration in any of these can indicate a threat to life, and is therefore the nurse's priority concern. When applying the ABC priority-setting framework, airway is always the highest priority because the airway must be clear and open for oxygen exchange to occur. Breathing is the second-highest priority in the ABC priority setting framework because adequate ventilator effort is essential in order for oxygen exchange to occur. Circulation is the third-highest priority in the ABC priority setting framework because delivery of oxygen to critical organs only occurs if the heart and blood vessels are capable of efficiently carrying oxygen to them.

Atropine

Atropine, an anticholinergic drug, treats bradycardia.

Atropine suppresses respiratory secretions.

Atenolol

Atenolol, a beta adrenergic blocker, is used to treat hypertension and stable angina pectoris. This medication slows the pulse rate due to blockage of cardiac beta 1 receptors. The nurse should monitor for bradycardia in clients who are prescribed atenolol and other beta adrenergic blockers.

Atenolol is a beta-adrenergic blocking agent, which slows the heart rate and can lead to bradycardia. The nurse should instruct the client to check his heart rate before each dose and to notify the provider if the rate is below his usual rate.

Atenolol is a beta-blocker and is used to treat hypertension. This medication will decrease BP and HR but does not affect the respiratory rate.

Atorvastatin

Antilipidemic agent

Statins such as atorvastatin can cause liver damage and liver disease is a contraindication for taking the medication. The client should have baseline liver function testing before beginning therapy, then every 1 to 2 months, at 6 and 12 weeks, and then periodically throughout therapy.

Atorvastatin is an HMG-CoA reductase inhibitor. It is in a class of medications more commonly known as statins, which are the most effective medications in lowering LDL and total cholesterol. Two serious adverse effects of statins are hepatotoxicity and myopathy. The nurse should instruct the client to report any onset of muscle weakness or aches to the provider due to the possibility of myopathy.

The client should have periodic eye exams while taking atorvastatin to monitor for blurred vision and opacities.

Aspirin

Aspirin inhibits platelet aggregation and should not be taken by clients who have bleeding disorders, such as a history of vitamin K deficiency. Vitamin K must be present in order to synthesize several clotting factors and a deficiency of the vitamin causes bleeding tendencies. The nurse should report a history of vitamin K deficiency to the provider.

Aspirin can cause diarrhea.

Aspirin can cause bleeding, tinnitus, gastric ulceration, nausea, and heartburn. Aspirin inhibits platelet aggregation and prolongs bleeding time. The client should be instructed to report blood in the stool, urine, or in emesis, and should also report unusual bruising or bleeding gums.

Aspirin can cause tinnitus and hearing loss.

Aspirin can cause dizziness and drowsiness.

Azithromycin

Azithromycin is an anti-infective used for many mild to moderate infections. A potentially serious adverse effect of azithromycin is superinfection, which has manifestations such as sore throat, fever, fatigue, and diarrhea. These symptoms should be reported to the provider immediately.

Baclofen

Prescribed for multiple sclerosis.

The nurse should explain that baclofen is a skeletal muscle relaxant and can reduce the spasticity of the muscles associated with multiple sclerosis by suppressing resistance to passive movement.

Several CNS-related effects are common, including drowsiness, dizziness, headache, and confusion. Therefore, until the client knows how the medication will affect her, she should not drive a vehicle.

The medication causes nausea and gastrointestinal distress, so the client should take it with milk or meals.

Abrupt withdrawal of baclofen, a centrally acting muscle relaxant, might cause seizures, fever, and hypotension. The client should notify the provider if headache persists.

Constipation is an adverse effect of this medication.

The nurse should instruct the client that baclofen can cause urinary frequency.The nurse should instruct the client that baclofen might require 1-2 months for full response.

Beclomethasone

Prescribed for asthma.

Beclomethasone, an inhaled glucocorticoid, might cause oropharyngeal candidiasis. The client should gargle after each use, use a spacer to reduce the amount of the medication in the mouth and throat, and report any white patches inside the mouth or on the tongue.

Benztropine

Prescribed for Parkinson's disease.

The nurse should instruct the client to report difficulty voiding as an adverse effect of benztropine, which may indicate urinary retention. Benztropine is an anticholinergic medication that helps decrease the rigidity and tremors of Parkinson's disease.

The nurse should instruct the client that an adverse effect of the medication is dry mouth, due to the anticholinergic response of the medication.

The nurse should instruct the client to report constipation, which is due to the anticholinergic response of the medication that slows peristalsis.

The nurse should instruct the client to report tachycardia, which is due to the anticholinergic response of the medication.

Bethanechol is used to treat postpartum and postoperative urinary retention.

Bethanechol acts on the muscarinic receptors of the urinary tract. It is used for postoperative and postpartum clients who have urinary retention.

Bisacodyl

Chronic use of laxatives can lead to fluid and electrolyte imbalance.

Bumetanide

Bumetanide is a high-ceiling loop diuretic that promotes diuresis by inhibiting sodium and chloride reabsorption in the loop of Henle. An adverse effect of high-ceiling loop diuretics is ototoxicity; therefore, the nurse should instruct clients to notify the prescriber if they develop ear discomfort, ringing or buzzing in the ears or a hearing deficit.

Bumetanide promotes secretion of potassium in the distal nephron; therefore, the client should consume foods in high in potassium, such as raisins, tomato juice, bananas, and potatoes to minimize the risk for hypokalemia. The nurse should instruct the client to monitor and report signs and symptoms of hypokalemia, such as irregular heart rate, muscle weakness, diarrhea, irritability, confusion, paresthesias, and numbness in extremities.

Bumetanide is a high-ceiling loop diuretic. Clients should take bumetanide once daily in the morning because the medication increases urine volume and frequency of voiding.

Loss of sodium, chloride, and water can cause severe dehydration. Signs of dehydration include dry mouth, unusual thirst, and oliguria. Clients should consume 2 to 3 L of fluid per day to prevent dehydration.

Calcium carbonate

Prescribed as a calcium supplement

The nurse should monitor the client for flank pain, which can indicate renal calculi, an adverse effect of calcium carbonate.

Ice cream is high in fat, which can form an insoluble soap that interferes with calcium absorption.

Peanuts are high in oxalate, which can form an insoluble, nonabsorbable compound that interferes with calcium absorption.

Spinach is high in oxalate, which can form an insoluble, nonabsorbable compound that interferes with calcium absorption.

Cottage cheese is high in lactose, which promotes calcium absorption.

Captopril

Prescribed for hypertension.

A sore throat, fever, easy bruising, and bleeding are manifestations of neutropenia, which is a serious adverse effect of captopril and other angiotensin-converting enzyme inhibitors (ACE inhibitors). The nurse should inform the client to notify the provider immediately if any of these manifestations occur.

Captopril, an ACE inhibitor, can cause hyperkalemia due to potassium retention by the kidney. The client should avoid salt substitutes, as most of them are high in potassium.

The client should take captopril on an empty stomach because food reduces the medication's absorption by 30 - 40%.

Captopril can result in a dry, persistent cough from bradykinin buildup. This can lead to excessive vasodilation and hypotension. The client should report this finding and the provider will most likely discontinue the medication.

The nurse should inform the client that taste impairment, including a metallic or salty taste, sometimes occurs when starting captopril, but that it should go away within the first few months. The client does not need to notify the provider immediately about this finding.

Captopril may cause weight loss

Celecoxib

Celecoxib is a nonsteroidal anti-inflammatory, cyclooxygenase-2 (COX-2) inhibitor used to relieve the pain and inflammation caused by rheumatoid arthritis and osteoarthritis in adults.

Chlorpropamide

Chlorpropamide is an oral hypoglycemic agent.

Chlorpropamide is first generation sulfonylurea that can interact with alcohol to cause a disulfiram-like reaction. This can lead to flushing, palpitations, and nausea. In addition, alcohol can promote the hypoglycemic effect of chlorpropamide, causing the client's blood glucose level to decrease and cause injury.

Chlorpromazine

Prescribed for schizophrenia

Choreiform movements, lip smacking, and spastic facial distortions. These findings indicate tardive dyskinesia, an adverse effect that occurs with long term use of chlorpromazine, which persists even when the client stops taking the medication.

Cimetidine

Prescribed for duodenal ulcers.

To heal a duodenal ulcer, the client should take the medication for 4 to 6 weeks.

Clients should not take cimetidine within 1 hr of taking an antacid, because the antacid will interfere with the absorption of cimetidine.

The client can take the medication once daily at bedtime or four times a day (three times with meals and at bedtime).

Adverse effects of cimetidine include thrombocytopenia, as well as dizziness and gastrointestinal system effects

Clindamycin hydrochloride

The greatest risk to this client who is taking clindamycin hydrochloride is colitis, ranging from mild diarrhea to a severe, life-threatening condition called pseudomembranous colitis. Watery diarrhea might be a manifestation of pseudomembranous colitis; therefore, this is the priority finding to report to the provider.

The nurse should monitor the client for nausea, an adverse effect of clindamycin hydrochloride; however, this is not the priority finding to report.

The nurse should monitor the client for abdominal bloating, an adverse effect of clindamycin hydrochloride; however, this is not the priority finding to report.

The nurse should monitor the client for pruritus, an adverse effect of clindamycin hydrochloride; however, this is not the priority finding to report.

Clopidogrel

Clopidogrel is an antithrombotic and antiplatelet medication; therefore, it poses a risk of serious bleeding. The nurse should monitor for signs of bleeding such as black, tarry stools and report these findings to the provider.

The nurse should administer clopidogrel once daily, with or without food.

Clozapine

Prescribed for schizophrenia

Clozapine is a second-generation antipsychotic agent that is effective in managing both positive and negative manifestations of schizophrenia, including reduction of hallucinations, delusions, disordered thinking, and lack of motivation.

These findings indicate tardive dyskinesia, an adverse effect that occurs with long term use of chlorpromazine, which persists even when the client stops taking the medication.

Decreased WBC count is an adverse effect of clozapine and places the client at risk for fatal agranulocytosis.

Seizures are an adverse effect of clozapine.

Codeine

Codeine is an opioid analgesic that causes CNS depression and orthostatic hypotension. The client should change positions slowly to avoid the risk of falls.

Colchicine

Prescribed for gout.

The nurse should instruct the client that colchicine can help with short- and long-term management of gout.

Gout is an anti-inflammatory disorder. High-dose colchicine produces relief within several hours and can reverse inflammation and bring significant pain relief in 48 to 72 hr.

The nurse should instruct the client that he should discontinue the medication immediately if gastrointestinal effects occur, such as nausea, vomiting, and abdominal pain.

Anorexia is an adverse effect of colchicine.

Oliguria is an adverse effect of colchicine.

Colestipol

antilipidemic

The client should take other medication 1 hr before or 4 hr after colestipol, as colestipol decreases absorption of other medications.

Colestipol granules can be mixed with a liquid, such as water, carbonated beverages, or soup. The granules can also be mixed with crushed fruit or a fruit sauce, such as applesauce, before swallowing them. This decreases the risk for irritation to the esophagus. If mixed with a clear liquid, colestipol mixture will remain cloudy because it is not a water-soluble solution.

Clients taking colestipol should have periodic monitoring of cholesterol levels and serum electrolytes

Cromolyn

Cromolyn is an anti-inflammatory agent that prevents bronchial inflammation. The client should use cromolyn prophylactically to manage asthma, not as a rescue medication.

Cyclobenzaprine

Cyclobenzaprine is a centrally acting skeletal muscle relaxant that is prescribed for relief of muscle spasms.

Drowsiness weakness and fatigue are adverse effects of cyclobenzaprine.

Dry mouth is an adverse effect of cyclobenzaprine.

Pruritus is an adverse effect of cyclobenzaprine.

Cyclobenzaprine might cause dysrhythmias when taken in high doses.

Dantrolene

Prescribed for multiple sclerosis.

The client should take dantrolene every day as the prescription indicates, not on a PRN basis for spasticity.

Dantrolene is highly hepatotoxic. If the client does not get relief from muscle spasms within 45 days, the provider should discontinue the medication.

Dantrolene is highly hepatotoxic. The client should have periodic tests for kidney function, liver function, as well as blood cell counts.

Dantrolene is pregnancy category C. For this category of medications, animal studies might have demonstrated a risk to the fetus, but studies on women are not available. It is used with caution during pregnancy.

Diazepam

Diazepam has sedative properties, so the client should not engage in potentially hazardous activities after receiving the medication.

Digoxin

Digoxin is a cardiac glycoside, which increases the force of ventricular contraction and thus increases cardiac output. This action reverses the manifestations of heart failure, resulting in decreased heart size, decreased heart rate, decreased vascular constriction, and reversal of water retention.

Digoxin decreases the heart rate, so the nurse should count the apical pulse for at least 1 min before administering it. The nurse should withhold the medication if the client's heart rate is below designated parameters such as 50 to 60/min.

Digoxin increases myocardial contractility by inhibiting the enzyme sodium, potassium-ATPase. Potassium and digoxin compete for the binding sites on this enzyme, so if serum potassium levels are low, more digoxin can bind to the enzyme and have a greater effect on the heart. To prevent cardiotoxicity, the nurse should monitor the client's serum potassium level to ensure it is within the expected reference range.The nurse should report a potassium level of 3.0 mEq/L to the provider. This finding is an indication of hypokalemia, which can lead to cardiac dysrhythmias, the most serious adverse effect of digoxin.

Loop diuretics, such as furosemide, might cause hypokalemia, which greatly increases the risk of digoxin toxicity.

Clients who take digoxin are at risk for toxicity due to the medication's narrow therapeutic range. Anorexia, nausea, and vomiting are some of the early manifestations of digoxin toxicity in adults. In children, cardiac dysrhythmias are often the first manifestation of digoxin toxicity.

The nurse should monitor the client for cardiac and noncardiac adverse effects that can indicate toxicity. Nausea, vomiting, anorexia, fatigue and visual disturbances, such as blurred vision can be early indicators of toxicity. The nurse should withhold the medication and contact the provider.

The client can take the medication with or without food, although giving it immediately after food can delay absorption slightly.

Weakness is a manifestation of digoxin toxicity;

Digoxin toxicity causes halos around lights, yellow vision, and blurred vision;

Aluminum hydroxide and other antacids can decrease the absorption of digoxin, as well as other medications, if given concurrently.

A digoxin level of 1.2 ng/mL is within the expected reference range. The nurse does not need to report this finding to the provider.

The nurse should expect adequate urine output because digoxin increases renal blood flow, which increases urine production and output. The nurse should withhold the medication and notify the provider if the heart rate is below 60/min.

Taking St. John's wort concurrently with digoxin can increase excretion of the medication and thus decrease its effectiveness.

Dimenhydrinate

Dimenhydrinate is used to treat nausea because it blocks signals in the vomiting center of the brain. It is used to treat acute attacks of Meniere's disease and vertigo, as well as to reduce nausea and vomiting from radiation sickness.

An adverse effect of dimenhydrinate is dry mouth.

An adverse effect of dimenhydrinate is headache.

An adverse effect of dimenhydrinate is diarrhea.

Disulfiram

The nurse should administer disulfiram to a client after he undergoes detoxification. This medication provides aversion therapy by causing unpleasant effects if the client drinks alcohol while taking this medication.

The greatest risk to this client is injury from acetaldehyde syndrome, which can be life threatening. The client can experience respiratory depression, cardiovascular collapse, convulsions and death if she has consumed alcohol within the last 12 hrs. Therefore, the priority action for the nurse to take is to determine when the client last drank alcohol.

disulfiram is contraindicated for clients who have severe liver disease.

The nurse should determine if the client has a history of kidney disease because disulfiram is contraindicated for clients who have severe kidney disease.

The nurse should determine if the client has taken disulfiram before to identify a history of hypersensitivity.

Docusate

The intended outcome of docusate therapy is to relieve constipation by producing stool that is softer in consistency and easier for the client to pass.

The client should experience soft stools 1 to 3 days after treatment is begun. Docusate sodium is a stool softener and the therapeutic effect is soft stools each day.

The client should take a full glass of water with this medication to prevent dehydration and promote defecation.

Epinephrine

The nurse should recognize that epinephrine is given to treat anaphylaxis.

Estrogen-progesterone

Contraceptive

The nurse should instruct the client to take the medication at the same time each day. Food does not alter absorption of the medication.

The nurse should instruct the client to use additional contraception during the first week of the initial treatment to prevent pregnancy.

The nurse should instruct the client to that breakthrough bleeding can occur. The client should report excessive bleeding.

The nurse should instruct the client to take the missed dose along with the next dose and to use additional contraception for 1 week to prevent pregnancy.

Etanercept

Prescribed for rheumatoid arthritis.

Etanercept is a tumor necrosis factor antagonist used to slow the progression of moderate to severe rheumatoid arthritis. Medications from this class are administered subcutaneously and etanercept should be injected once weekly. If the client is taught to self-administer etanercept, the anterior thigh and abdominal sites should be used and the client should rotate sites so that no injection is placed in an area, which is bruised, red, or tender from a previous injection.

Exenatide

Exenatide, an incretin mimetic, is an injectable medication for type 2 diabetes, which among other actions, slows gastric emptying and decreases appetite.

Enoxaparin

Enoxaparin is an anticoagulant used to prevent deep vein thrombosis after orthopedic and other types of surgery. It is administered only by the subcutaneous route and its duration of action is 12 hr. It is considered safe to allow the client to self-administer this medication.

administer enoxaparin subcutaneously into the client's abdomen. administer the prefilled medication with the air bubble to ensure all of the medication is given with the injection.

have protamine available to reverse the effects of enoxaparin in case of toxicity and bleedin

Enoxaparin does not require weekly laboratory testing. The nurse should instruct the client to notify the provide4r if manifestations of bleeding occur, such as bruising or epistaxis.

The recommendation for treatment with enoxaparin after hip arthroplasty is 7 to 10 days.

monitor the client's platelet count. Enoxaparin is a low molecular weight heparin that inhibits thrombus and clot formation. It can cause thrombocytopenia and bleeding.

Erythromycin

antibiotic

Erythromycin can cause gastrointestinal disturbances, such as epigastric pain, nausea, vomiting, and diarrhea. These side effects can be reduced by administering the medication with food. The best absorption occurs when taken on an empty stomach. If the drug is not tolerated on an empty stomach, it can be taken with food. Severe vomiting should be reported.

Fentanyl

Fentanyl is an opioid analgesic. The nurse should have the opioid reversal agent naloxone and resuscitation equipment available in the event that the client develops manifestations of opioid toxicity such as sedation.

Finasteride

Prescribed for benign prostatic hypertrophy.

The nurse should include in the teaching that the client may not respond to the medication for 6 to 12 months.

The nurse should include in the teaching that the client may take finasteride with or without food.

The nurse should include in the teaching that the client may have decreased libido as an adverse effect of the medication because of the androgenic effect on the prostate.

The nurse should include in the teaching that the client's PSA levels will decrease when taking the medication because of the androgenic effect on the prostate.

Fluticasone

Fluticasone is a glucocorticoid that decreases bronchial inflammation and airway mucus production. The client should use this medication prophylactically to manage asthma, not as a rescue medication.

Fluoxetine

Selective serotonin reuptake inhibitors, such as fluoxetine, help prevent and reduce panic attacks.

Prescribed for depression

The client should take both doses of fluoxetine early in the day because it can cause insomnia when taken in the late afternoon or evening. When two daily doses are prescribed, the client should take the first dose in the early morning and the second dose by noon.

Fluoxetine can cause anorexia, nausea, and vomiting early in treatment, possibly causing weight loss. Over the course of therapy, weight gain is common. The client should monitor weight regularly and report significant changes to the provider.

Fluoxetine can cause a withdrawal syndrome if stopped abruptly. The client should be instructed not to stop the medication abruptly and to contact the provider if adverse effects occur.

Furosemide

Prescribed for hypertension and heart failure.

An adverse effect of furosemide is hypokalemia, which can lead to life-threatening cardiac dysrhythmias.

Furosemide is a loop diuretic that promotes the excretion of potassium. The nurse should be aware that a very low serum potassium level can cause cardiac dysrhythmias. The greatest risk to the client is injury from cardiac dysrhythmias; therefore, this is the priority laboratory value to monitor.

A client who is taking furosemide can develop hypovolemia because the medication is a high-ceiling loop diuretic that results in excessive sodium, chloride, and water loss. The nurse should monitor for dry mouth, thirst, and decreased urine output, which indicate dehydration.

A client who is taking furosemide can develop hypotension, resulting from loss of blood volume and venous smooth muscle relaxation, which decreases venous return to the heart. The nurse should monitor for dizziness, lightheadedness, and fainting.

A client who is taking furosemide can develop hypokalemia because the medication is a high-ceiling loop diuretic that promotes secretion of potassium in the distal nephron. The nurse should monitor for muscle weakness, decreased bowel sounds, abdominal distention, and constipation.

Furosemide, a high-ceiling (loop) diuretic, can cause potassium loss. To prevent this, the client should add potassium-rich foods to his diet such as bananas and avocados.

client who is taking furosemide can develop hyperglycemia, resulting from decreased insulin release, glycogen synthesis, and increased glycogenolysis.

The client should take furosemide early in the day so that the medication's action will not disturb his sleep.

The client should avoid aspirin and other NSAIDs because they can blunt the diuretic effects of furosemide.

Furosemide can cause an elevation in serum amylase. The nurse should monitor the client's serum amylase.

Furosemide can cause an elevation serum triglyceride.

Furosemide can cause elevation cholesterol.

Gentamycin

Ointment prescribed for skin infections

The client should wash the area with soap and water and dry it thoroughly to promote absorption before applying the cream.

The client should cover the area with sterile gauze after applying the cream to keep the medication contained and promote absorption.

The client should not apply the cream to large areas due to the risk of systemic absorption and toxicity.

Glipizide

Glipizide is a sulfonylurea agent. It helps lower blood glucose levels by increasing insulin secretion from the beta cells of the pancreas.

Glucocorticoids

The client who is not a diabetic should have blood glucose levels checked for hyperglycemia twice a year because of the medication effects glucose production and utilization.

The client who is taking glucocorticoids can have an increase susceptibility to infection because of the suppression of both the immune system and neutrophil production.

Long-term use of high doses of glucocorticoids decreases the intestinal absorption of calcium. Therefore, calcium supplements with vitamin D are recommended.

The client who is taking high doses of glucocorticoids for extended periods of time can have bone loss, especially first in the back and neck, within weeks after starting the medication. This bone loss can result in fractures. There is an increase in parathyroid hormone, which causes calcium to move out of the bones.

Heparin

Heparin is an anticoagulant that prevents the formation of new clots by blocking the conversion of prothrombin to thrombin and fibrinogen to fibrin.

Heparin does not dissolve established clots.

Because of the risk for bleeding, an infusion pump must be used to prevent overdosage and its rate must be checked every 30 to 60 min.

The activated partial thromboplastin time (aPTT), not the PT, is measured to determine the effectiveness of a heparin drip.

Protamine zinc is the antidote for heparin, not vitamin K.

The nurse should select a 25 or 26-guage needle to administer subcutaneous heparin. The nurse should inject the medication into the abdomen above the level of the iliac crest, at least 2 inches from the umbilicus. The nurse should administer subcutaneous heparin at a 90° angle.

Heparin and warfarin are both anticoagulants that decrease the clotting ability of the blood and help prevent thrombosis formation in the blood vessels. However, they work in different ways to achieve therapeutic coagulation and must be given together until therapeutic levels of anticoagulation can be achieved by warfarin alone, which usually takes about 3 days. Oral warfarin therapy may continue for several months following discharge.

Hydromorphone

Hydromorphone is an antitussive and is used to treat cough.

An adverse effect of opioid analgesics, which includes hydromorphone, is nausea and vomiting. The nurse can reduce the emetic effects of this medication by having the client lie still or administering an antiemetic medication prior to the administration of an opioid analgesic.

Opioid analgesics such as hydromorphone cause constipation.

Hydroxychloroquine

Prescribed for rheumatoid arthritis.

The client should take the medication with food or milk to prevent gastrointestinal distress. If the client has difficulty swallowing the tablets, he can crush them and mix them with food or fluids.

The nurse should instruct the client that hydroxychloroquine can cause a blue-black discoloration of the skin and may give the urine a rust or brown color.

An adverse effect of hydroxychloroquine is retinopathy.

The nurse should instruct the client to wear sunglasses to decrease photophobia. The client should have an ophthalmologic examination before treatment and every six months because the medication can cause retinopathy.

Insulin

Rapid-acting insulin peaks in 30 min to 3 hr. NPH insulin is not a rapid-acting insulin.

Short-acting insulin peaks in 1 to 5 hr. NPH insulin is not short acting insulin.

Short-acting insulin peaks in 1 to 5 hr. NPH insulin is not short acting insulin.

Long-acting insulin does not have a discernible peak level. NPH insulin is not long-acting insulin.

Insulin detemir is a long-acting insulin and is contraindicated for use in clients who are experiencing diabetic ketoacidosis.

Insulin detemir should not be mixed with any other insulin in the same syringe.

Insulin detemir is absorbed slowly and does not need to be taken before a meal.

As with other types of insulin, the client should be instructed to monitor for hypoglycemia when taking insulin detemir and should also learn how to manage manifestations of hypoglycemia.

When prescribed once daily, insulin detemir is injected in the evening, either with the evening meal or at bedtime.

Regular insulin is the type of insulin used in the emergency treatment of diabetic ketoacidosis to reduce hyperglycemia and acidosis. It is the only insulin that can be given by IV and it has an onset of action as rapid as 30 min.

Insulin glargine is a long-acting insulin that is used in the treatment of diabetes mellitus. However, it is not used for the treatment of diabetic ketoacidosis.

NPH insulin is an intermediate-acting insulin and is contraindicated for use in clients who are experiencing diabetic ketoacidosis.

The nurse should teach the client that when mixing regular and NPH insulin in the same syringe, the client should draw up the regular insulin into the syringe first to prevent contamination of the vial of short acting insulin.

The nurse should teach the client that air should be injected into the NPH vial first and that he should avoid allowing the end of the needle from coming in contact with the NPH insulin.

The nurse should teach the client to roll the vial of NPH insulin between the palms of the hands. The client should avoid shaking the insulin vial because this will cause the insulin solution to form bubbles, which can result in inaccurate dosage.

The nurse should teach the client to discard regular insulin that appears cloudy. All insulin preparations except NPH should be clear. NPH insulin has a cloudy appearance.

Ibuprofen

The nurse should instruct the client to have regular vision and hearing examinations due to the potential adverse effects of ibuprofen.

The nurse should instruct the client to avoid alcohol intake to reduce the risk of gastric ulceration and hemorrhage.

The nurse should instruct the client to report increased weight or edema to the provider, as these signs can indicate nephrotoxicity.

The nurse should instruct the client to take ibuprofen with an antacid to decrease GI symptoms.

Iron

Liquid solution prescribed for iron deficiency anemia.

Vitamin C promotes the absorption of iron

Rinsing the child's mouth with water after administration can help prevent staining the child's teeth

Diluting the iron solution with juice or water can help prevent staining the child's teeth and might help in increasing absorption of iron

Reinforcing teaching about ways to increasing the child's consumption of iron-rich foods can help treat iron deficiency and prevent its recurrence.

The greatest risk to this client is injury from iron toxicity which can be fatal in young children; therefore, the priority instruction the nurse should give is to keep the iron solution stored in a locked cupboard. The nurse should also instruct the parent to keep the medication in a child-proof container.

Deferoxamine binds to iron to reduce iron toxicity from supplemental iron therapy.

Laculose

The nurse should monitor for diarrhea. Lactulose is a synthetic disaccharide that the small intestine cannot utilize. It causes diarrhea by lowering the pH, so the bacterial flora are changed in the bowel.

Lamotrigine

Prescribed for epilepsy.

Lamotrigine can cause several serious skin rashes, including Stevens-Johnson syndrome and others. The client should be instructed to notify the provider and withhold the medication if a skin rash develops.

Levodopa/carbidopa

Prescribed for Parkinson’s disease

The client should take levodopa/carbidopa with food to decrease nausea and vomiting but should avoid food high in protein because it interferes with absorption and decreases the therapeutic response.

Levothyroxine

Prescribed for hypothyroidism.

Taking calcium supplements concurrently with levothyroxine can decrease the absorption of the medication. The nurse should instruct the client to separate taking levothyroxine and calcium carbonate by 4 hr.

Monitor for thyrotoxicosis from excessive amounts of thyroid hormone will have increased metabolic processes, which will increase cardiac output and oxygen demand. The client's respiratory and cardiac rate increase dramatically and the client can have weakness, insomnia, tremulousness and agitation.

Lithium

Prescribed for bipolar disorder.

Clients who are taking lithium carbonate should drink 2 to 3 L of fluid per day to maintain hydration because lithium increases urine output.

Lithium is a salt. If sodium level falls, the client will retain lithium and have an increased risk for lithium toxicity.

Normal lithium levels are 0.8 to 1.4 mEq/L during the initial treatment period. The lithium level should remain below 1.5 mEq/L to prevent serious adverse effects from occurring. The nurse should administer the regular dose of lithium to the client.

Clients who are taking lithium carbonate should avoid a low-salt diet and instead should follow a diet with normal sodium and fluid intake. Following a low-sodium diet can lead to lithium retention by the kidneys and toxicity.

Clients who are taking lithium carbonate should monitor for and report a fine hand tremor. The client should withhold the dose and contact the provider as soon as possible to have an evaluation of blood lithium levels and possible adjustment of dose.

Lithium carbonate limits the reabsorption of sodium in the kidneys, which can result in sodium deficiency. Sodium deficiency can lead to lithium toxicity.

Lithium can cause gastric distress. The client should take the medication with milk or meals.

Although some effects of the medication occur with 5 to 7 days of treatment, it can take 2 to 3 weeks for the medication's full effect.

An adverse effect of lithium is polyuria. The client should drink from 1500 to 3000 mL per day. Dehydration places the client at risk for toxicity.

Clients taking lithium carbonate can develop a goiter as a result of hypothyroidism.

The nurse should monitor for fine and course hand tremors, fasciculations, incoordination, and hyperreflexia.

Liothyronine

Prescribed for hypothyroidism

Depression, lethargy, and fatigue are manifestations of hypothyroidism. Effective treatment should result in an increase in energy and mood. Liothyronine is a synthetic preparation of triiodothyronine (T3), a naturally occurring thyroid hormone. Liothyronine is used to treat and improve the manifestations of hypothyroidism, which include anorexia, depression, lethargy, fatigue, cold and dry skin, a pale and puffy face, brittle hair, decreased heart rate, decreased temperature, weight gain, and intolerance to cold.

Lorazepam

The nurse should administer lorazepam to decrease the client's manifestations of alcohol withdrawal such as restlessness, irritability, anorexia, insomnia, cognitive function, and mild perceptual changes. In addition, lorazepam will stabilize vital signs and prevent seizures and delirium tremens.

MAOIs

Prescribed for depression

Clients who are receiving an MAOI should avoid foods containing a high tyramine content, such as avocadoes. Eating foods with high tyramine content can lead to hypertensive crisis. The client can have a severe headache, tachycardia, hypertension, confusion, which can lead to stroke and death.

Metoclopramide

Prescribed for gastroesophageal disease.

The nurse should monitor the client who is taking metoclopramide for hypotension.

The nurse should monitor the client for sedation, which is a common adverse effect of metoclopramide.

Methenamine

Methenamine is used to treat urinary tract infections.

Methotrexate

Prescribed for rheumatoid arthritis.

The client should take methotrexate weekly to treat rheumatoid arthritis.

The client should avoid taking the medication with foods containing citric acid and hot or course textured foods if the client develops stomatitis. The client can take methotrexate without regard to food intake.

The client may develop stomatitis when taking this medication. Therefore, the nurse should instruct the client to avoid using commercial mouthwash that may contain alcohol, which can dry the mouth.

The nurse should instruct the client to discontinue breastfeeding while taking methotrexate, as this can lead to toxicity in the infant.

Methotrexate can cause renal toxicity. The client should drink 2 to 3 L of fluid to maintain adequate hydration and promote excretion of the medication.

Concurrent use of NSAIDs might increase the client's risk for methotrexate toxicity. Methotrexate is more likely to cause drowsiness.

Methylphenidate

Prescribed for ADHD

Methylphenidate acts on the cerebral cortex to create a stimulating effect that helps increase focus on metal activities and tasks.

A common adverse effect of methylphenidate is insomnia.

A common adverse effect of methylphenidate is anorexia.

Metformin

Metformin, a biguanide medication for type 2 diabetes mellitus, blocks glucose production in the liver.

Medications that increase plasma glucose levels are contraindicated. Corticosteroids, such as prednisone, increase plasma levels of glucose levels and cause hyperglycemia and glycosuria.

Methadone

The nurse should administer methadone to a client who has opiate abuse disorder to assist with withdrawal, maintenance therapy, and suppressive therapy.

Methimazole

Prescribed for hyperthyroidism

Hyperthyroidism results in an increase in physiologic processes such as elevated heart rate, palpitations, insomnia, and agitation. Therefore, a decreased heart rate can indicate the effectiveness of methimazole.

Montelukast

Prescribed for asthma.

Montelukast is an anti-inflammatory agent that suppresses leukotriene effects in the respiratory tract, resulting in decreased inflammation, bronchoconstriction, edema, and mucus secretion. The client should use this medication prophylactically to manage asthma, not as a rescue medication.

Montelukast is absorbed rapidly after first administration and should begin to relieve asthma manifestations within the first 24 hr.

Montelukast is a leukotriene modulator and is ineffective as a “rescue” medication for asthma.

Montelukast provides better outcomes for clients who have asthma when taken once daily in the evening.

Montelukast can be taken without food.

Morphine

Opioid tolerance, as well as physical dependence, occurs over time when morphine is administered regularly for longer than 1 to 2 weeks. Tolerance occurs when a larger dose of opioid is required to relieve pain that was previously relieved by a smaller dose. For a client who has severe, ongoing pain, the dosage of morphine may need to be increased to control pain adequately.

Opioid addiction is a rare phenomenon that means the client is experiencing a psychological craving for morphine despite a decreased need for the opioid. The client who has sustained a severe traumatic injury and has ongoing acute pain requires continued opioid treatment. Addiction is not an issue at this time. Fear of addiction might cause a nurse to administer less pain medication than the client requires and might cause the client to refuse needed pain relief.

Manifestations of opioid toxicity include decreased respiratory rate and sedation. There is no data to show that toxicity is being experienced by this client. In addition, a client who is experiencing severe pain is unlikely to experience opioid toxicity.

Manifestations of opioid withdrawal include abdominal cramping, muscle pain, tremor, and irritability. A client who is administered morphine every 4 hours should not have manifestations of opioid withdrawal and there is no data to show that these manifestations are present.

The priority action the nurse should take when using the airway, breathing, and circulation (ABC) approach to client care is to evaluate the client's respirations. The respiratory rate is a priority because opioid analgesics such as morphine can cause respiratory depression.

Naloxone

Naloxone is a narcotic antagonist that combines competitively with opiate receptors and blocks or reverses the action of narcotic analgesics. By blocking the effects of narcotics on the central nervous system (CNS), it prevents CNS and respiratory depression.

Tremors are an adverse effect of the opioid antagonist naloxone.

Naproxine

Naproxen tablets have an enteric coating that prevents them from dissolving in the stomach. Instead, the tablets pass into the intestine where they dissolve and the client absorbs it. This prevents gastric irritation.

The client should not crush an enteric-coated tablet, because this will interfere with the coating and allow the medication to dissolve in the stomach, resulting in gastric irritation.

The client can take the medication with meals to decease gastrointestinal distress.

It is important for the client to understand that she might not get experience the therapeutic effect for 3 to 4 weeks and to continue taking the medication.

Niacin

Angina and antilipidemic medication

The nurse should instruct the client to take niacin with meals to avoid gastrointestinal upset.

The nurse should advise the client that niacin causes flushing of the face, neck, and ears in most clients within the first 2 hr of taking the medication.

The nurse should advise the client that niacin causes flushing of the face, neck, and ears in most clients within the first 2 hr of taking the medication.

The nurse should instruct the client to store the medication at room temperature in a light and moisture-proof container.

Nicotine transdermal patch

Nurses should wear clean gloves when applying transdermal medication patches to protect themselves from exposure to the medication. It is not necessary to wear sterile gloves.

Always remove the existing patch before applying a new one to prevent a medication overdose.

Always date, time, and initial the transdermal medication patch prior to application on the client. Pressure of the writing pen can cause discomfort to the client and increase release of the medication.

The nurse should not apply a patch with estrogen or nicotine to the breasts of a female client.

Nifedipine

Peripheral edema can occur due to the vasodilation principles of nifedipine. The nurse should monitor for edema of the feet and ankles and notify the provider if this occurs.

The nurse should administer nifedipine to treat essential hypertension. The goal is to reduce the BP value below 140/90 mm Hg.

Nifedipine will increase heart rate and can result in reflex tachycardia.

Nifedipine can result in mild to moderate increases of alkaline phosphatase, CPK, LDH, AST and ALT levels.

Nitrofurantoin

Prescribed for UTI

Since nitrofurantoin imparts a harmless brown color to the urine, the nurse should inform the client of this harmless effect. Suprainfections can occur while taking nitrofurantoin, and the nurse should collect additional data regarding presence of dysuria and foul-smelling urine, which could indicate that suprainfection is occurring

Nitroglycerine

Prescribed for angina.

The client should take nitroglycerin as soon as he feels pain, pressure, or tightness in his chest and not wait until his chest pain is severe.

The client should be instructed to take no more than a total of three sublingual nitroglycerin 5 min apart, if necessary, in a 15 min time period.

The client should take the first nitroglycerin tablet at the onset of pain to provide immediate vasodilation. If pain is not relieved in 5 min, the client should call 911.

The client should place the tablet under his tongue and allow it to dissolve.

The client can take a sublingual tablet without removing the nitroglycerine patch.

The vasodilation nitroglycerin induces increases blood flow to the head and typically results in a headache. Up to half of clients who take nitroglycerin experience a headache following administration, especially during the first few weeks the medication is used. The client should not stop taking the medication and does not need to notify the provider if a headache occurs. The client should ask the provider about an appropriate analgesic to take if a headache occurs.

Nitroglycerin tablets should be kept in their original container with the top tightly closed and protected from moisture, light and heat. The client should be taught to discard outdated nitroglycerin and make sure to refill the prescription if the expiration date on the container has been reached.

Nitroglycerin tablets require moisture to dissolve completely. The client should be taught to take a sip of water before putting the tablet under the tongue if the mouth is very dry.

Nitroglycerin transdermal patches are designed for prophylaxis of angina pain and are not to be used to stop an existing angina attack. Adding a second patch is not appropriate and could cause adverse effects, such as hypotension. The client should discuss strategies for treating an angina attack with the provider.

The client should be instructed to apply the patch to a hairless area of the skin.

The client should be instructed to apply the patch to a different hairless area each day. If it is necessary to apply the patch to an area with hair, the hair should be clipped, not shaved, to avoid irritation to the skin.

The client should never alter the size of the transdermal unit, because this will alter the amount of medication he will receive.

Since clients can develop tolerance to nitroglycerin, the transdermal patch should be removed after 12 to 14 hr each day, and the client should have 10 to 12 hr of time without a patch during the evening and nighttime hours.

The client should remove the current patch and apply a new transdermal patch at the same time each day.

To reduce the risk of skin irritation, the client should change the application site every time a patch is applied.

The client should be instructed to not abruptly stop using the transdermal patches because vasospasm can occur. The nurse should instruct the client that headaches are a common adverse effect of nitroglycerin that should decrease with time.

It is important to prevent pets, children, and others in the client's home from coming into contact with the medication on the nitroglycerin patch. Therefore, the client should be instructed to fold the patch in half with the medication area to the inside and to discard the patch in a closed receptacle rather than in an open trash can.

Sildenafil, a medication used to treat impotence in men, increases the body's ability to achieve and maintain an erection during sexual stimulation. Isosorbide is a nitrate medication used to prevent or treat angina. Clients who are taking nitrates, including isosorbide and nitroglycerin preparations, should not take sildenafil due to the potential for severe hypotension.

The client should never alter the size of the transdermal unit, because this will alter the amount of medication he will receive.

Abruptly discontinuing the use of long-acting nitroglycerin capsules can cause vasospasm. The nurse should inform the client that headaches will lessen with time but he can take an over-the-counter mild analgesic such as aspirin or acetaminophen to manage pain. If the headaches persist, the client should report this finding to the provider who may lower the dosage. The client should swallow the capsules whole and not chew, crush them, or place them under the tongue because this will interfere with the sustained release effect of the medication.

The client should take the medication on an empty stomach with 240 mL (8 oz) of water.

Nystatin

Candidiasis might appear as white patches on the tongue and elsewhere on the mucosa of the gastrointestinal tract. The patches might look like coagulated milk, but removal with a washcloth could be painful and is not recommended, especially after nystatin is administered.

Nystatin should be applied topically to the area affected with candidiasis, usually four times daily. Adults and older children can swish the nystatin suspension around in their mouth for a period of time and then swallow it. Since infants and very young children cannot follow these directions, the medication should be applied orally using a swab.

The infant should not receive a feeding or drink other liquids for 30 min after administration of nystatin to prevent removal of the medication from the affected areas. The parent should rinse the infant's mouth with water just before administering the nystatin.

Ofloxacin

Otic drops prescribed for otitis externa

Straightening the ear canal for adults is done by pulling the auricle upward and back. The dropper should be held 1 cm above the ear canal.

Applying gentle pressure with a finger to the tragus of the ear after administration will facilitate movement of the fluid down the ear canal.

Medication should be at room temperature before administration. Instillation of chilled medication might cause dizziness.

Olanzapine

Olanzapine is an atypical antipsychotic medication used in the treatment of schizophrenia. A common adverse effect is increased appetite and significant weight gain.

Olanzapine can cause some visual disturbances

Olanzapine might cause tachycardia and postural hypotension, which can lead to dizziness.

The client might experience constipation and other anticholinergic effects, such as dry mouth.

Omeprazole

Proton pump inhibitors, such as omeprazole, work by suppressing gastric acid secretion.

Omeprazole, a proton pump inhibitor, reduces gastric acid secretion and treats duodenal and gastric ulcers, prolonged dyspepsia, gastrointestinal reflux disease, and erosive esophagitis.

Ondansetron

Ondansetron is used to treat postoperative nausea.

Orlistat

Prescribed to treat obesity

Because the medication reduces the gastrointestinal tract's absorption of fat, oily fecal spotting is an adverse effect of orlistat.

Because the medication reduces the gastrointestinal tract's absorption of fat, the nurse should monitor a client who is taking orlistat for diarrhea.

The nurse should monitor a client who is taking orlistat for insomnia and anxiety.

The nurse should monitor a client who is taking orlistat for light-colored stools, which can indicate liver damage and should be reported to the provider.

Oxybutynin

Oxybutynin is an anticholinergic that can be used to relieve the pain of bladder spasms after transurethral procedures.

Pancrelipase

Prescribed for cystic fibrosis.

Clients who take pancrelipase can experience anorexia.

Clients who have cystic fibrosis supplement meals with oral pancreatic enzymes to reduce the fat content in their stools. Clients receiving pancreatic enzymes as a digestive aid should expect to have a reduction of fat in their stools.

Perphenazine

Prescribed for psychotic disorders.

The client who has schizophrenia can take perphenazine to manage psychotic episodes as well as manage symptoms long term to prevent relapse.

The client should change from a lying or siting to a standing position slowly to prevent orthostatic hypotension. If the client feels lightheaded or dizzy, he should sit or lie down.

Phenazopyridine

Phenazopyridine is a urinary tract analgesic that is used to relieve burning from urinary tract infection as well as trauma such as surgery.

Phenytoin

Many medication interactions can occur with phenytoin, so the client should contact the provider before taking a new medication.

The client understands that phenytoin can cause an overgrowth of the gum tissue; therefore, good oral hygiene and dental monitoring is important.

Phenytoin should be taken with meals to reduce the occurrence of gastrointestinal distress.

The client should not discontinue the phenytoin abruptly, because withdrawal from treatment can cause seizures to resume. Clients taking anticonvulsant medications often require them for life, and phenytoin should not be stopped unless indicated by the provider.

The nurse should instruct the client to shake the phenytoin suspension prior to dispensing the medication to ensure uniform dosing.

The nurse should instruct the client not to take phenytoin within 2 to 3 hr of taking an antacid.

The nurse should instruct the client that urine might turn pink or red to red-brown in color while taking phenytoin.

The nurse should instruct the client that alcohol can increase the chances of phenytoin toxicity by increasing the serum levels of phenytoin.

The nurse should instruct the client that the influenza vaccine has the potential to increase seizure activity while taking phenytoin. The client should consult his provider before obtaining the flu vaccine.

The nurse should instruct the client not to switch phenytoin brands with each refill, as there might be a variation in the effects of a new brand. The client should consult with the provider first.

Pilocarpine

Prescribed for chronic open angle glaucoma

A client who has chronic open angle glaucoma is generally prescribed one or two drops of pilocarpine solution in the affected eye from 2 to 4 times a day. Missing even one dose in a day will put the client at risk for increased intraocular pressure.

A common adverse effect of pilocarpine is difficulty seeing in dim environments. The client should be instructed not to try driving at night and to take care when entering darkened rooms.

Clients who use pilocarpine experience blurred vision for 1 to 2 hr after use, and should time activities accordingly.

Pilocarpine can be systemically absorbed and the client may experience cholinergic effects, such as tachycardia, diaphoresis, and bronchoconstriction. The client should be encouraged to place pressure on the internal canthus for 1 to 2 min after administration to minimize the amount systemically absorbed.

Hypotension is an adverse systemic effect of pilocarpine.

Systemic effects of pilocarpine are due to muscarinic stimulation and include diarrhea.

Urinary urgency is an adverse systemic effect of pilocarpine.

Prednisone

Prednisone is a glucocorticoid that produces anti-inflammatory and immunosuppressive effects. The client should experience a reduction in pain and inflammation and improved range of motion in joints. Clients who have arthritis in only a few joints can receive intra-articular injections but should refrain from overusing these joints to prevent injury.

The nurse should monitor the client who takes prednisone for hyperglycemia.

Clients who have difficulty swallowing the tablet can crush it.

Long-term use of prednisone can cause glucose intolerance even in clients who do not have diabetes. Therefore, periodic testing for blood glucose is recommended.

A fever can indicate the presence of infection, which is a risk factor associated with prolonged prednisone therapy. The client should notify the provider. If discontinuation of the medication is necessary, the dose is tapered rather than stopped immediately to prevent withdrawal syndrome.

Prednisone can cause sodium and water retention, leading to fluid retention and elevated blood pressure. The nurse should instruct clients to monitor for signs of fluid retention, such as weight gain and edema, and should contact the provider if these occur.

Propranolol

The use of propranolol is not contraindicated for a client who has a history of migraines.

Beta-blockers, such as propranolol, can be safely used by a client who has glaucoma.

Depression is not a contraindication for the use of propranolol, a beta-blocker.

Propranolol is used with caution in clients who have heart failure due to the depressive effect on myocardial contractility; therefore, the nurse should report this finding to the provider.

Propylthiouracil

Prescribed for hyperthyroidism

Tachycardia is an adverse effect of propylthiouracil.

Rifampin

Prescribed for tuberculosis.

Rifampin will turn the urine and other secretions a harmless reddish-orange color. This includes sputum, tears, and sweat.

The client should take rifampin 1 hr before or 2 hr after meals.

Rifampin may cause fatigue and drowsiness

Risperidone

Prescribed in schizophrenia

The nurse should monitor for weight gain.

The nurse should monitor for increased total cholesterol, LDL cholesterol, and triglycerides as well as decreased HDL cholesterol. Risperidone can lead to weight gain, diabetes, and dyslipidemia, which increase the client's risk for cardiovascular disease.

The nurse should monitor for elevated blood glucose levels.

The nurse should monitor for orthostatic hypotension.

Salmeterol

Salmeterol is a beta-adrenergic agonist that promotes bronchodilation.

Salmeterol is used for long-term control of asthma and should be taken on a regular basis.

Salmeterol is inhaled twice daily, approximately every 12 hr. It is not effective in stopping an acute asthma attack.

Salmeterol is an inhaled, long-acting beta-$_2$ adrenergic agonist used to treat severe persistent asthma. When used every day as prescribed, salmeterol decreases the number and severity of asthma attacks. Salmeterol is prescribed along with a glucocorticoid medication, which adds an anti-inflammatory effect to the client's asthma treatment.

Simvastatin

Angina and antilipidemic agent

Statins have potential adverse effects when taken with grapefruit juice.

Statins are most effective if taken at bedtime or with the evening meal because this is when the peak production of cholesterol takes place.

Spironolactone

Spironolactone is a potassium-sparing diuretic and can result in hyperkalemia, which can cause cardiac arrhythmias.

Spironolactone is a potassium-sparing diuretic that can cause hyperkalemia. The nurse should plan to monitor potassium levels while the client takes this medication. Spironolactone may be discontinued if the serum potassium level is above 5 mEq/L.

Sucralfate

Prescribed for duodenal ulcers.

Sucralfate provides a protective barrier in the GI mucosa to protect against excessive acid erosion. To promote adherence of the medication to the ulcer, the client should take the medication on an empty stomach.

Sucralfate creates a protective coating over the ulcer that lasts about 6 hrs.

The client should avoid taking an antacid at the same time he takes sucralfate because a gastric acid pH greater than 4 diminishes the absorption of sucralfate.

The nurse should instruct the client that constipation is an adverse effect of this medication. The client should ensure that he consumes and adequate amount of fluid and fiber and maintains an exercise program.

Tamoxifen

Prescribed for breast cancer.

The client will experience hot flashes as an adverse effect of the medication because tamoxifen is an antiestrogen medication that blocks estrogen receptors.

The client should report depression or mood changes as an adverse effect of the medication.

The client should report nausea and vomiting as an adverse effect of the medication.

Theophylline

Prescribed for asthma

Theophylline can increase cardiac stimulation and cause tachycardia.

theophylline may cause insomnia, diarrhea, urinary retention.

Timolol

Prescribed for open angle glaucoma

Timolol is a beta adrenergic blocking agent used to treat glaucoma. Decreased heart rate is an adverse effect of beta adrenergic blockers, and timolol applied topically to the eye sometimes causes systematic effects. Therefore, the nurse should monitor for bradycardia.

Timolol, a beta adrenergic blocker, might cause hypotension

Sucralfate

Prescribed for peptic ulcer disease.

The nurse should instruct the client to take sucralfate two to four times per day for 4 to 8 weeks. It is not taken for prophylaxis pain relief.

Antacids can interfere with the therapeutic effects of sucralfate. The nurse should instruct the client to not take antacids within 30 min of taking sucralfate.

The nurse should instruct the client to take sucralfate on an empty stomach, 1 hr before meals, and at bedtime for maximum effectiveness.

The nurse should instruct the client to store the medication at room temperature to maintain effectiveness.

Sulfonylurea

Jaundice is a sign of sulfonylurea toxicity in older adults

Vancomycin

Rapid infusion of vancomycin can cause a phenomenon known as Red Man syndrome. The nurse can minimize the risk of this from occurring by slowly infusing the medication over a period of 60 min or longer.

Verapamil

Prescribed for hypertension.

The nurse should instruct the client to take verapamil with food to reduce gastric irritation.

The nurse should instruct the client to avoid taking verapamil with grapefruit juice. Grapefruit juice can inhibit the metabolism of verapamil, a calcium channel blocker, and cause an increase in verapamil blood level. This excess amount of medication can cause severe hypotension and cardiotoxicity.

Warfarin

Warfarin, an anticoagulant, is a medication for the prophylaxis and treatment of deep vein thrombosis.

Warfarin, an anticoagulant, increases the client's risk for bleeding. The nurse should instruct the client to stop the medication and notify the provider if bleeding occurs.

Warfarin, an anticoagulant, increases the client's risk for bleeding. The nurse should teach the client safety measure, such as using an electric razor, to decrease the risk for injury and bleeding.

Warfarin, an anticoagulant, should be taken at the same time each day and the client should not adjust the dose. Doubling a dose increases the client's risk for bleeding.

Heparin and warfarin are both anticoagulants that decrease the clotting ability of the blood and help prevent thrombosis formation in the blood vessels. However, they work in different ways to achieve therapeutic coagulation and must be given together until therapeutic levels of anticoagulation can be achieved by warfarin alone, which usually takes about 3 days. Oral warfarin therapy may continue for several months following discharge.

Warfarin therapy is contraindicated in the pregnant client because it crosses the placenta and places the fetus at risk. Warfarin is a pregnancy category X medication.

The PT, reported as an INR, is used to monitor warfarin therapy.

Vitamin K injection antagonizes the actions of warfarin and serves as an antidote to the medication.

The nurse should be aware that the use of garlic as a dietary supplement might potentiate the action of warfarin and may cause bleeding.

Zileuton

Prescribed for asthma

Zileuton can cause conjunctivitis.

Zileuton can cause diarrhea, headaches, nervousness, and insomnia.

Zileuton can cause liver damage and hepatitis. The client should report any signs of hepatic toxicity such as abdominal pain or jaundice.