**Final Cumulative Test Review – All Chapters**

**Which macrolide is a contraindication with Fluconazole?** Erythromycin should never be given with fluconazole because it causes sudden cardiac death.

**Signs and symptoms of super infection, acute retroviral syndrome**

Superinfection: the occurrence of a secondary infection when the normal microbial flora of the body are disturbed during antibiotic therapy.

S/s: diarrhea, bladder pain, painful urination, abnormal vaginal discharge

Acute Retroviral Syndrome: first stage of HIV infection. Symptoms are fever, fatigue, night sweats, pharyngitis, myalgia or arthralgia, lymphadenopathy, and headache.

**Patient education for:**

**Pyridoxine** – B6: -drug of choice for n/v in pregnancy

-used with INH which depletes B6

**Nystatin – antifungal:** - discontinuing the drug too soon will cause relapse

-keep appointments for lab testing of several liver enzymes, BUN, creatinine, and electrolytes

-do not consume alcohol

-teach proper application

**Amphotericin B – antifungal:** - protect drug against light and infuse slowly via an in-line filter

- discontinuing the drug too soon will cause relapse

-keep appointments for lab testing of several liver enzymes, BUN, creatinine, and electrolytes

-do not consume alcohol

-teach proper application

**trimethoprim–sulfamethoxazole – anti-infective – sulfonamides:** - drink several quarts of water daily to avoid crystalluria

-avoid in last 3 months of pregnancy

-do not take with antacids b/c they decrease absorption

**Sulfadiazine:** - drink several quarts of water daily to avoid crystalluria

-avoid in last 3 months of pregnancy

-do not take with antacids b/c they decrease absorption

**Amoxicillin – anti-infective – aminopenicillins:** -Females: use additional form of birth control

-wear medical alert bracelet if allergic to penicillin.

-take the entire prescribed amount to avoid drug resistance

-increase fluid intake to help with excretion of the drug and regulating body temperature

-chewable tablets must be chewed or crushed before swallowing

**sildenafil citrate – Viagra – erectile dysfunction agent:** - works best on empty stomach

-do not take with nitro

-patients with heart failure can’t take it.--

-do not take with grapefruit or grapefruit juice b/c it increases side effects

**Depo Provera – contraceptive:** -increase calcium and Vitamin D

BMD = Bone Mineral Density

-participate in regular weight bearing exercise

-Discuss benefits, risks, and alternatives, and the prevention of BMD loss while taking depo provera

**Metformin for polycystic ovarian disease (PCOS) – antidiabetic – biguanides**

Progestins: -derivatives of testosterone.

-lowest effective does should be used.

-treats insulin resistance and decreases androgen levels

**Progestin:** - must be removed 3 years from date of insertion

-doesn’t work as well in women with BMI >30 or who are on drugs that induce liver enzymes

**Metronidazole – anti-infective:** - avoid contact with eyes when using topical product

-milk thistle may decrease absorption

**Gentamycin – anti-infective – aminoglycosides:** - increase fluid intake unless fluids are restricted

-report side effects: n/v, tremors, tinnitus, pruritus, and muscle cramps

-use sun block and protective clothing b/c of photosensitivity

-can be administered with penicillins and cephalosporins.

**Amikacin – anti-infective – aminoglycosides:** - increase fluid intake unless fluids are restricted

-report side effects: n/v, tremors, tinnitus, pruritus, and muscle cramps

-use sun block and protective clothing b/c of photosensitivity

-can be administered with penicillins and cephalosporins.

**Clindamycin – anti-infective – lincosamides:** - take with a full glass of water

**Tetracycline – anti-infective:** take the entire prescribed amount to avoid drug resistance

-store drug away from light and extreme heat

-check expiration date: expired drug can be toxic

-discolors teeth in children under 8 years old

-teratogenic

-wear sunblock and protective clothing when in the sun

-report signs of super infection: mouth sores and anal and genital discharge

-use additional contraceptives

-use effective oral hygiene several times per day to prevent or stomatitis

-avoid milk, iron, and antacids

-should be taken 1 hour before or 2 hours after eating with full glass of water

**Doxycycline – anti-infective – tetracyclines:** -take the entire prescribed amount to avoid drug resistance

-store drug away from light and extreme heat

-check expiration date: expired drug can be toxic

-discolors teeth in children under 8 years old

-teratogenic

-wear sunblock and protective clothing when in the sun

-report signs of super infection: mouth sores and anal and genital discharge

-use additional contraceptives

-use effective oral hygiene several times per day to prevent or stomatitis

-avoid milk, iron, and antacids

-should be taken 1 hour before or 2 hours after eating with full glass of water

**Cephalosporins –** 10% of persons allergic to penicillin are allergic to cephalosporins.

-report signs of superinfection: mouth sores and discharge from anal or genital area

-ingest buttermilk, yogurt, or acidophilus supplement to prevent superinfection of intestinal flora.

-take the entire prescribed about to avoid drug resistance.

-infuse over 30 minutes to avoid pain and irritation

-observe for hypersensitivity reactions.

**Ceftriaxone – anti-infective – 3rd generation cephalosporins:** 10% of persons allergic to penicillin are allergic to cephalosporins.

-report signs of superinfection: mouth sores and discharge from anal or genital area

-ingest buttermilk, yogurt, or acidophilus supplement to prevent superinfection of intestinal flora.

-take the entire prescribed about to avoid drug resistance.

-infuse over 30 minutes to avoid pain and irritation

-observe for hypersensitivity reactions.

**Isoniazid – TB med**: - take 1 hour before or 2 hours after meals

-family members should get TB skin test

-avoid sunlight to decrease the risk of photosensitivity

-report tingling, numbness, or burning of hands and feet. Take B6 to avoid peripheral neuropathy.

-use dishwasher to clean dishes if possible

**Rifampin – TB:** -family members should get TB skin test

-avoid sunlight to decrease the risk of photosensitivity

-use dishwasher to clean dishes if possible

-may turn body fluids orange

-take on empty stomach

-contents of capsule can be mixed with applesauce or jelly

**Cyclophosphamide – immunosuppressants:** -take early in the day to avoid accumulation in the bladder overnight

-do not visit with anyone who has a respiratory infection

-empty bladder every 2-3 hours

-sun protection

-patient should be well hydrated to prevent hemorrhagic cystitis (bleeding due to severe bladder inflammation)

-may increase pigmentation of skin or nail beds

**Glucocorticoid:** -administer with food to minimize GI irritation

-taper off slowly to avoid adrenocortical insufficiency

**Corticosteroids:** -taper over 1-2 weeks

-avoid large crowds and patients with respiratory infection

-take with food to avoid GI irritation

**Prednisone – anti-inflammatories:** -taper over 1-2 weeks

-avoid large crowds and patients with respiratory infection

-take with food to avoid GI irritation

-do not take with aspirin or NSAIDs

**inhaled cromolyn sodium – asthma:** -must be taken daily

-take water before and after using

-should not be discontinued abruptly: can cause rebound asthma attack

**Captopril – antihypertensive – ACE inhibitor:** -can be taken with food

-do not discontinue abruptly or there will be rebound hypertension

-do not take OTC cold meds

-do not use salt substitutes that contain potassium

-rise slowly due to orthostatic hypertension

-pregnant women should not take because it decreases blood flow to the fetus

**Plavix – antiplatelet:** - discontinue 7 days before any surgery

-monitor intake of vitamin K and vitamin k rich foods

-avoid alcohol

-notify providers of s/s of bleeding: blood in urine, red or black stool, bruises with unknown cause

**Cyclobenzaprine – skeletal muscle relaxants:** -should not be stopped abruptly.

-do not drive or operate heavy machinery: drugs have sedative effect

-take for max 3 weeks

-avoid alcohol and other CNS depressants

**Rivastigmine – anti-Alzheimer’s agents – cholinergics (cholinesterase inhibitors)**

-clarify drug dose and timing

-absorbed faster in GI tract w/o food

**Stavudine – antiretrovirals – NRTI’s:** - can be taken with or without meals

**Foscarnet – antivirals:** -must be hydrated to minimize renal toxicity

-not a substitute for the flu vaccine

-take within 48 hours of flu symptoms

**Drug of choice for TB patients with isoniazid resistance**

-ethambutol

**When do you use broad spectrum antibiotics?** To treat gram positive and gram negative bacteria. Frequently used to treat infections when the offending microorganism has not been identified by the C&S test.

**What lab values do you need to monitor when giving sulfonylurea with Diflucan**

Glucose

**What is a Synergistic effect of medication, acquired bacteria resistance?**

A synergistic effect of medication increases the desired drug response.

Acquired bacteria resistance is caused by prior exposure to the antibacterial.

**Infusion rate for vancomycin**

Dilute in D5W, Normal saline, or Lactated ringers over 60 – 90 minutes

100 mL for 500 mg

200 mL for 1000 mg

**Drug of choice when penicillin is not an option**

Sulfonamides

**Treatment for a healthcare provider with exposure to blood from a HIV positive patient**

Postexposure prophylaxis (PEP)

-should be initiated within 72 hours of exposure and continued for 4 weeks

**Peak and trough levels are done for which type of drugs?**

-Drugs with a narrow therapeutic window

-antibiotics

-If the peak level is high then drug toxicity could occur

-If the trough level is low than there is not enough drug to kill the bacteria

**Drug interactions:**

ACE inhibitor and trimethoprim–sulfamethoxazole: increased Potassium levels

Clarithromycin and warfarin: serum warfarin levels increase. Serum levels should be monitored closely.

Trimethoprim–sulfamethoxazole and Sulfonylureas: increased hypoglycemic effect

**Gentamycin peak levels**

5-8 mcg/mL

**Signs and symptoms of digoxin toxicity:** anorexia, diarrhea, n/v, bradycardia, premature ventricular contraction, cardiac dysrhythmias, headaches, malaise, blurred vision, visual illusions (white, green, or yellow halos around objects), confusion and delirium.

**Drug of choice for rapid improvement of symptoms for hypothyroidism**

Levothyroxine sodium drug of choice for replacement therapy for primary hypothyroidism

Liothyronine has a rapid onset of action and is used as initial treatment for myxedema

**Mechanism of action and uses:**

**Digoxin**

**MOA**: -increases myocardial contraction which increases cardiac output and improves

circulation and tissue perfusion.

-decreases conduction through the AV node, decreasing the HR.

-inhibits sodium-potassium ATPase, promoting increased force of cardiac contraction,

cardiac output, and tissue perfusion.

-decreases ventricular rate.

**USES**: heart failure, atrial fibrillation

**Narcan**

**MOA**: blocks effects of narcotics by competing for opiate receptor sites in the body

**USES**: to treat respiratory or cardiac depression or arrest caused by narcotics

**Albuterol**

**MOA:** Stimulates beta2-adrenergic receptors in the lungs, which relaxes the bronchial smooth muscle, thus causing bronchodilation

**USES**: to treat asthma and bronchospasm

**Tiotropium**

**MOA:** blocks muscarinic cholinergic receptors and antagonizes acetylcholine action by inhibits M3 receptors response to acetylcholine, thereby relaxing smooth muscle of bronchi, dilates bronchi.

**USES**: maintenance treatment of asthma and COPD. Maintenance treatment for bronchospasms associated with COPD.

**Streptokinase - thrombolytics**

**MOA:** combines with plasminogen to form activator complexes, then converts plasminogen to plasmin, which is then able to degrade clot bound fibrin.

**USES**: acute MI, PE, DVT, acute peripheral arterial thrombosis

**Epinephrine**

**MOA:** acts on alpha and beta receptors, promotion of CNS and cardiac stimulation and bronchodilation; strengthens cardiac contraction, increases cardiac rate and cardiac output; reduces mucosal congestion by inhibiting histamine release; reverses anaphylactic reactions.

**USES**: cardiac arrest, nasal congestion, allergic reaction, anaphylaxis, asthma exacerbation, bronchospasm, angioedema, cardiac resuscitation

**pyridostigmine bromide – anticholinesterase inhibitors**

**MOA:** promotes transmission of neuromuscular impulses across the myoneural junctions by preventing destruction of acetylcholine.

**USES**: treats myasthenia gravis (increase muscle strength), and neuromuscular blockade reversal and nerve gas exposure prophylaxis

**Exenatide – glucagon like peptide 1 agonist**

**MOA:** improves beta cell responsiveness which improves glucose control in people with type 2 diabetes mellitus

**USES**: enhance insulin secretion, increase beta cell responsiveness, suppress glucagon secretion, slow gastric emptying, and reduce food intake.

**Omeprazole: PPI**

**MOA:** suppress gastric acid secretions. Promotes irreversible hydrogen or potassium ATPase inhibition

**USES**: peptic ulcer, GERD, dyspepsia (indigestion), pyrosis (heartburn), H. pylori infection, esophagitis, Zollinger-Ellison syndrome

**Pancrelipase**

**MOA:** Contains lipolytic, amylolytic, and proteolytic activity.

**USES**: pancreatic insufficiency related to chronic pancreatitis, cystic fibrosis, pancreatectomy, GI bypass surgery

**Loperamide hydrochloride – opiate antidiarrheal**

**MOA:** inhibits peristalsis and prolongs transit time

**USES**: diarrhea, reduces fecal volume, reduces intestinal fluid and electrolyte losses.

**Administration of schedule II injectable drug**

Ask another nurse to observe and cosign wasting

**Herbal remedies for GI disorders**

Chamomile: treats stomach or intestinal ailments

Cinnamon:

Garlic: used to prevent cancer of the stomach and colon. May cause upset stomach

Licorice root: treats stomach ulcers

Milk thistle: gallbladder disorders

Turmeric: stomach ulcers and gallstones