



Medication

PPT Created by: Camla St. Croix PSW
Program Director/Instructor

Objectives

- Identify role in assisting with medication
- Summarize how drugs work in the body
- Factors affecting drug action
- Different forms of medications
- Differentiate between assisting with medications and administering medications
- Guidelines to follow when assisting with medications
- Eight Rights of assisting with medications
- Outline main responsibilities when assisting with medications
- Summarize when medication error occur



What is Medication?

Medication

- Drugs and other substances used to prevent or treat diseases or illnesses

Medications

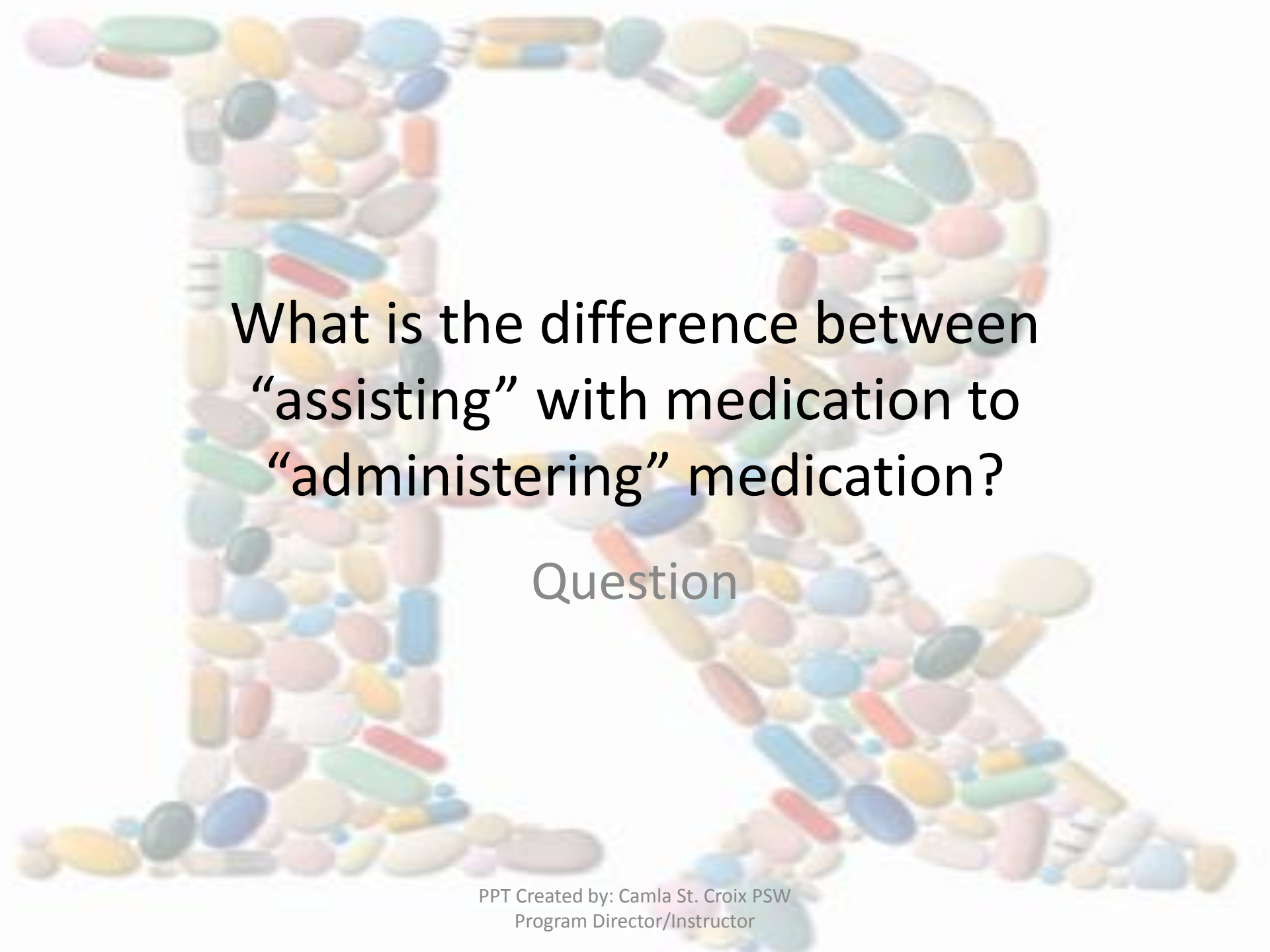


ADAM.



Your Role as a PSW

PPT Created by: Camla St. Croix PSW
Program Director/Instructor



What is the difference between
“assisting” with medication to
“administering” medication?

Question



Answer

- Different functions
- Assist means “to help” and administer “to give”

Assisting with medication

- Helping to self-administer the medication
- Strictly a mechanical functions
- Depends on provincial and territorial legislation, employer policy, your training and education
- May be required if working in a client home or in community settings (retirement homes or group settings)



Role as a PSW

- Assisting client with medication
- Getting the medication for the client
- Reading the labels





Scope of Practice: Your Role

PPT Created by: Camla St. Croix PSW
Program Director/Instructor

Scope of Practice

- Reminding the client to take a medication
- Bringing medication containers to the client
- Bringing pre-poured medications, prefilled syringes, blister packs or dosettes (pill boxes) to the client
- Reading the prescription label to the client
- Loosening or removing container lids or opening blister packs

Scope of Practice

- Checking the dosage against the medication label
- Providing water or other fluids, as needed
- Supervising the client as he or she places the medication into the hand, measuring spoon or cup
- Steadying the client's hand while he or she places medications or administers eye drops, nasal sprays, and so on
- Documenting the medications that you gave in the client's medication administration record according to your Agency's policy.

Remember

- You are not responsible for monitoring the outcome of the drug therapy
- Physician or nurses, or case manager
- Desired effects
- When
- How
- Side effects
- Allergies
- Medications to avoid



What is your role and
responsibilities after assisting with
medication?



Answer

- Report and observe any changes in the client behaviour
- Report if client does not have information



Medication Packages

- Blister pack or bubble pack
- Supplies by the client's pharmacy with the client's medications for the day or time grouped together
- Dosette- also known as pillbox. Have compartments that organize medications by day or by hour. It helps client to remember what they have taken and what remain to be taken each day
- Nurse or family members are the one to fill the dosette



JUSTIN MAGUIRE
SUNDAY

05/18/08 @ 8:00 AM

1 of 1
20 MG

1 PRILOSEC
(PURPLE CAPSULE)

TAKE ONE (1) CAPSULE BY MOUTH TWICE DAILY (PURPLE CAPSULE)

1 GLUCOPHAGE
(WHITE "BMS 6063")

TAKE ONE (1) TAB BY MOUTH TWICE DAILY WITH MEAL (WHITE "BMS 6063")

1 GLUCOTROL XL
(ROUND WHITE "5")

TAKE ONE (1) TABLET BY MOUTH IN AM WITH MEAL (ROUND WHITE "5")

1 ZOCOR
(PEACH "MSD 749")

TAKE ONE (1) TAB BY MOUTH ONCE DAILY BEFORE BED (PEACH "MSD 749")



010000G00104



Guidelines For Assisting Client's With Medication

Guidelines For Assisting Client's With Medication

- Always follow employer's policy
- Wash hands
- Follow Rights of assisting medication
- Check care plan
- Give glass of water (or other liquid) with oral medication as ordered
- Store medications in appropriate place

Guidelines For Assisting Client's With Medication

- Do not leave medications at the client's bedside
- Do not remove labels from the containers
- Never use medication that is unlabeled
- Do not use discolored or deteriorated medications
- Check the expiry date
- If you notice that medications are running low, inform the client, family or supervisor

Guidelines For Assisting Client's With Medication

- Check with the supervisor before discarding any unused medications
- Listen to the client. If he or she questions something about a medication – STOP – do not assist with self medication
- Report and document





Things to Report to Supervisor when Assisting with Medication

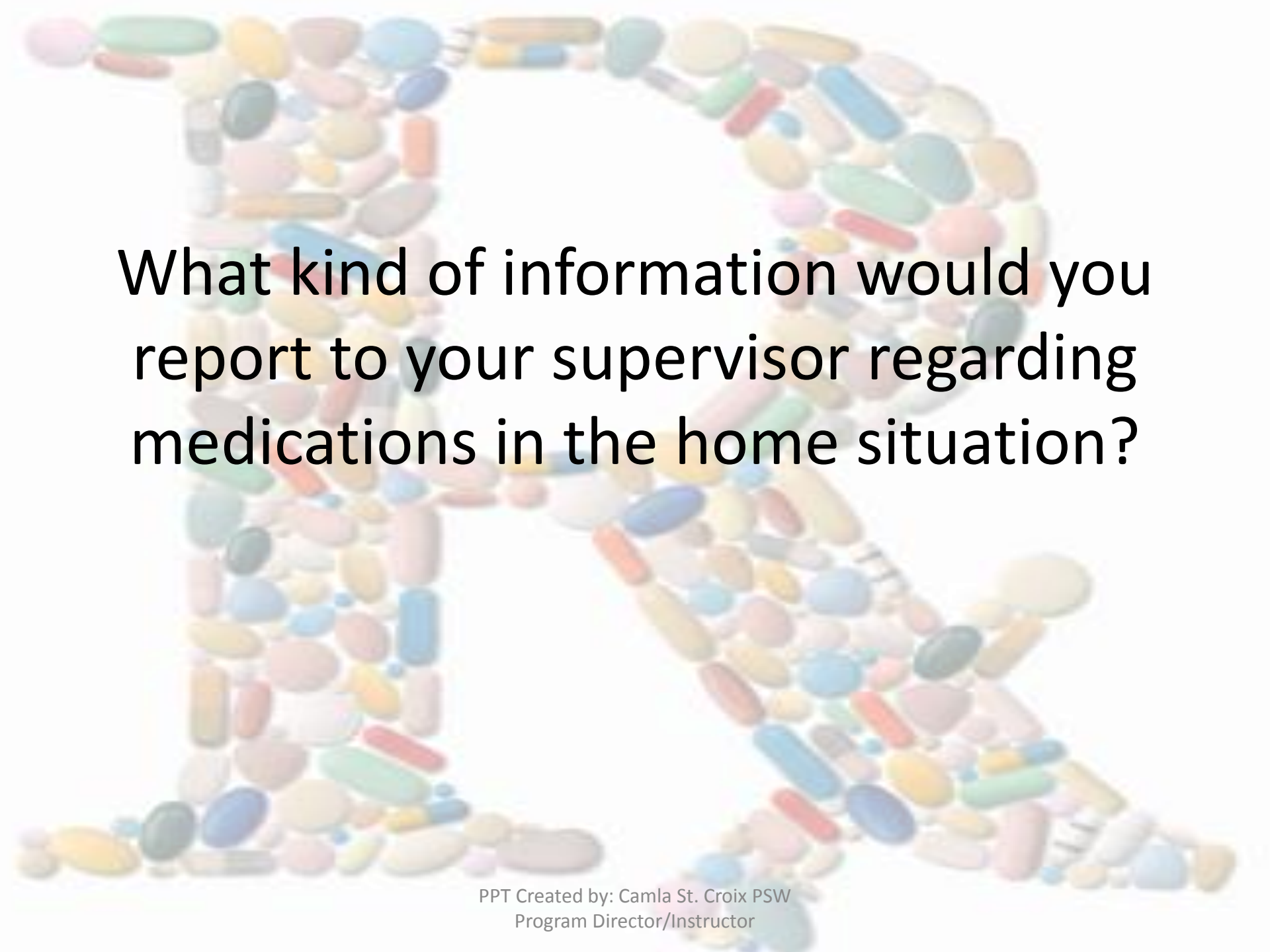
Report

- If client does not take the medications correctly
- The client does not understand why the medication should be taken
- If the client does not know the scheduled dosage
- Refuses, forgets, omits a dose
- Wants to take medications that are not on the Care plan



Report

- Wants to take medications other than those in the dosette, such as outdated medication
- Medication prescribed for someone else
- Recreational drugs, alcohol,
- Complains that medication is no longer working or producing the desired effect



What kind of information would you report to your supervisor regarding medications in the home situation?



Answer

- reactions
- failure to take
- taking too many
- medication stored in unsafe places
- clients asking you to administer

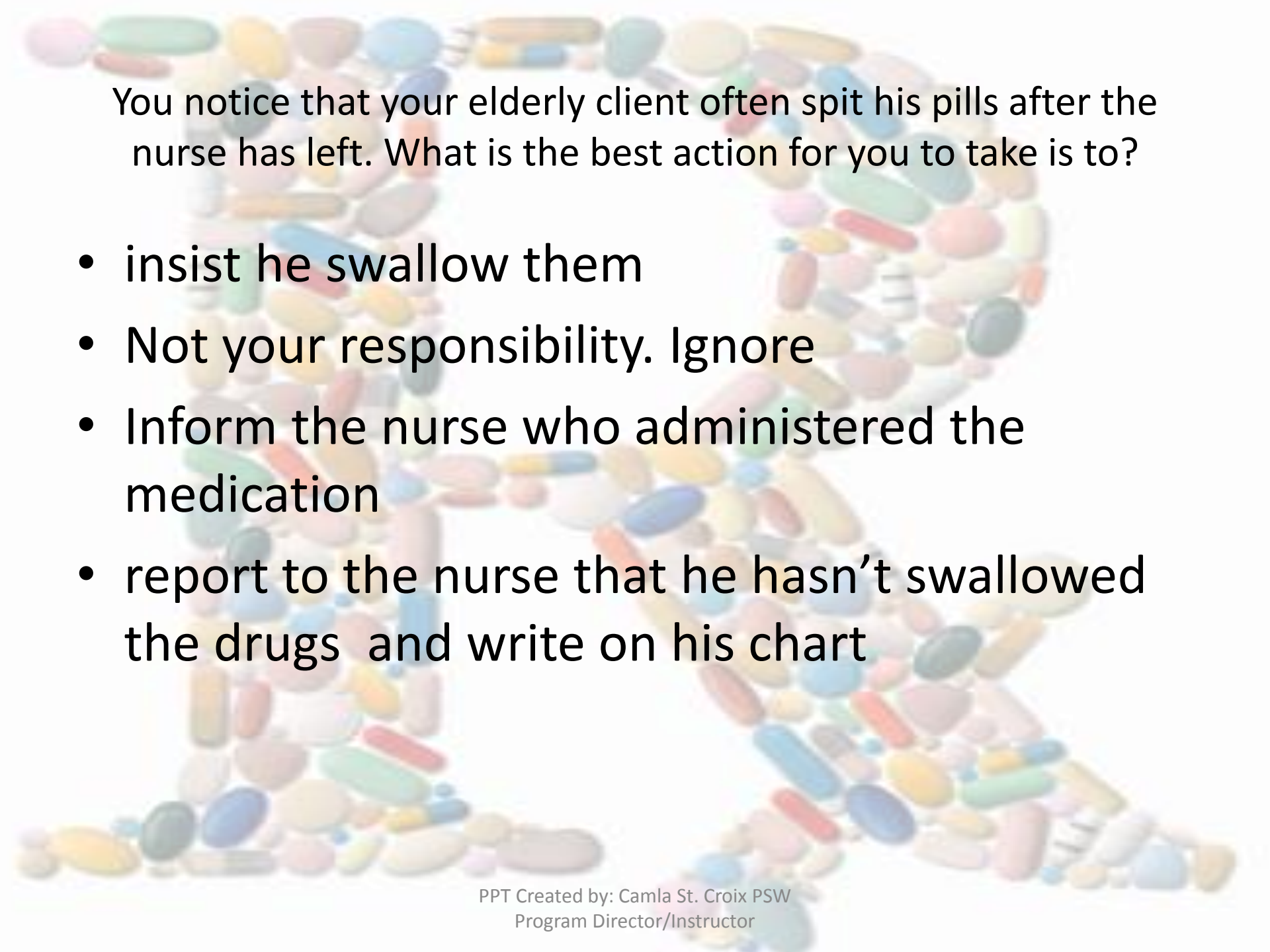


Roles and Responsibilities

- Record your action
- Report if medication has not been taken.
Explain why.

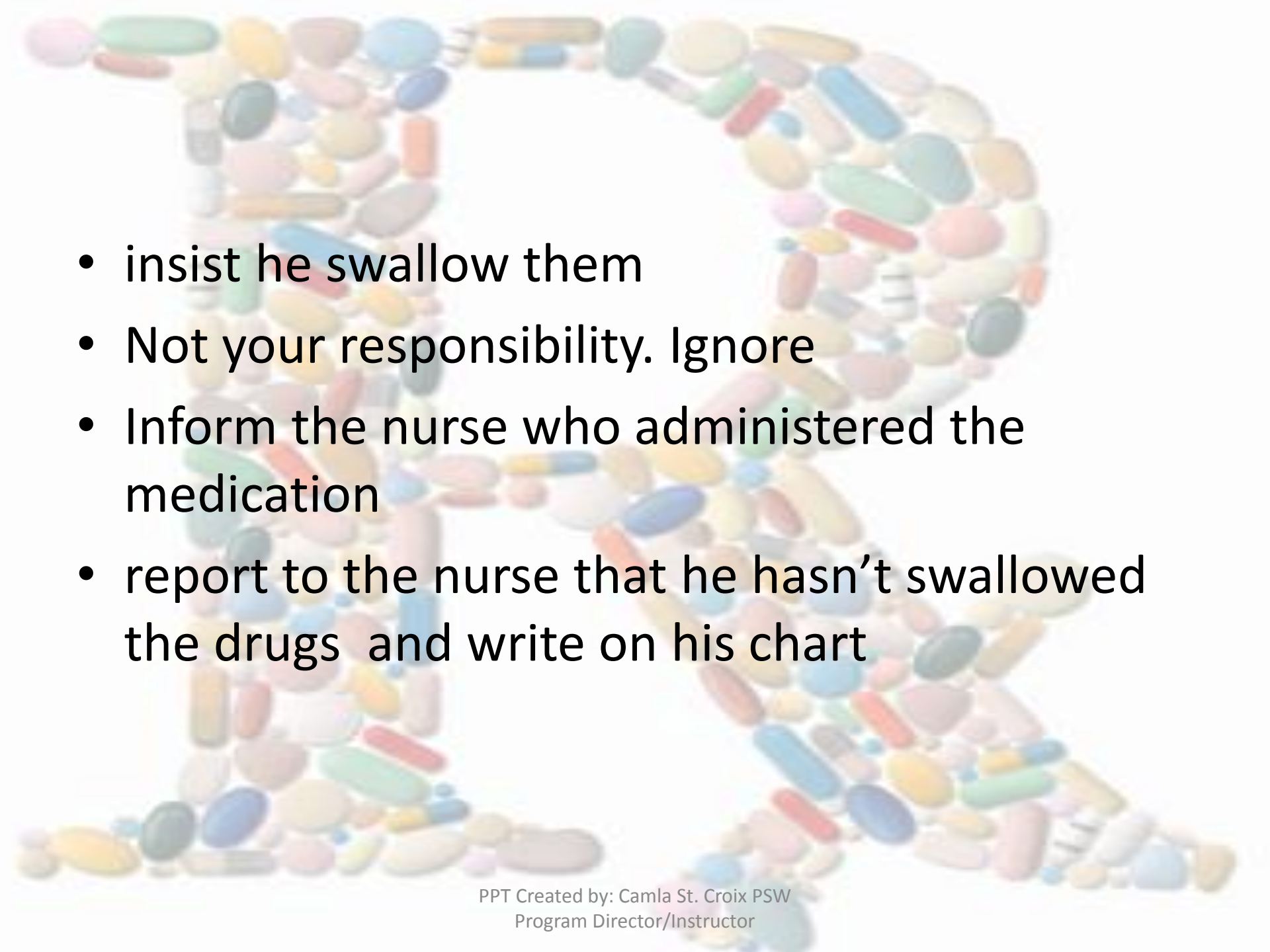
Report Medication Side Effects

- Vomiting
- Rash
- SOB
- Itching
- diarrhea



You notice that your elderly client often spit his pills after the nurse has left. What is the best action for you to take is to?

- insist he swallow them
- Not your responsibility. Ignore
- Inform the nurse who administered the medication
- report to the nurse that he hasn't swallowed the drugs and write on his chart

- 
- insist he swallow them
 - Not your responsibility. Ignore
 - Inform the nurse who administered the medication
 - report to the nurse that he hasn't swallowed the drugs and write on his chart



How The Medications Work In The Body

PPT Created by: Camla St. Croix PSW
Program Director/Instructor



Purpose of Medications



Medication

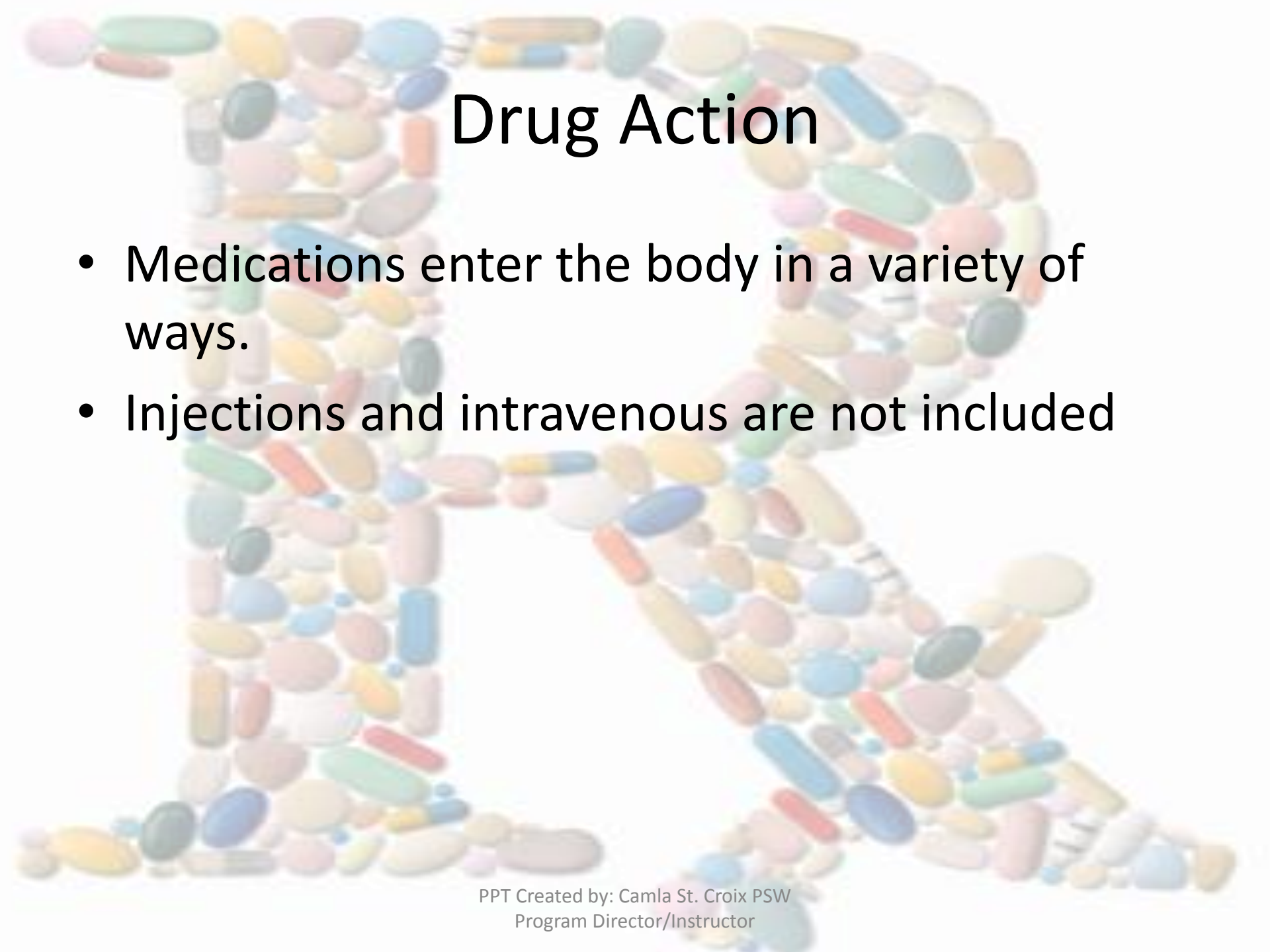
- Drugs
- Chemical substances that cause specific effect on the body
- Prescribed
- Taken to obtain various desired results in the body
- Promote health

Purpose of Medications

- Cause specific effect on the body
- Treat illness – aspirin –reduce pain
- Treat Pain
- Promote health – stool softener- reduce discomfort
- Prevent illness – antibiotic – prevent infection



Drug Action



Drug Action

- Medications enter the body in a variety of ways.
- Injections and intravenous are not included

Route

- How the medication enters the body
- Depending on the route, the body must absorb and distribute the drug in order for it to work and metabolize and how it can be excreted

Example

- Blood pressure pills → stomach → small molecules → bloodstream → (absorption) → throughout the body → intended tissues (distribution) = intended effect
- After the drug has done what is intended to do in the body → broken down to small waste particles → converted into substances for the body to use (metabolize in the liver) → removed from the body in urine or stool

First Pass Metabolism:

Nasal: Drug absorbs directly into the veins

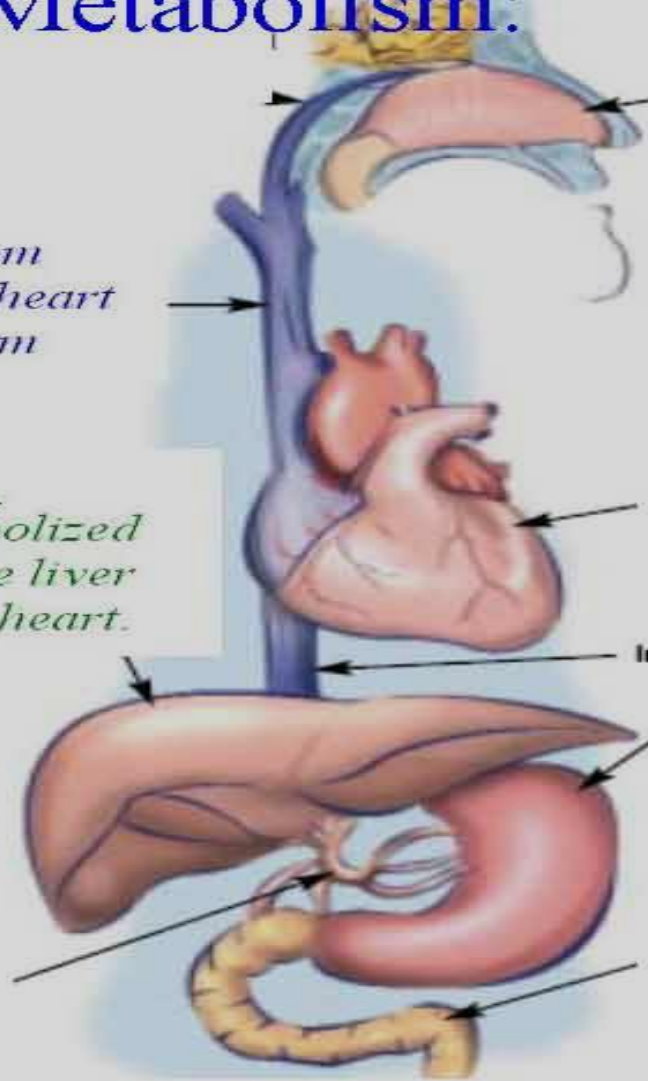
Venous system: transports blood from nose directly to the heart – no liver metabolism

Liver: 90% of oral medication is metabolized and destroyed by the liver before it gets to the heart.

Heart: pumps blood out to entire body – no delay

Portal circulation: All blood from the intestines is taken to the liver for detoxification.

Oral medications: Sit in the stomach for 30-45 minutes





Types of Medications and Their Routes

Oral

- Solids or semi-solids
- Capsules – small gelatin containers that hold medications



- Lozenges – Flat discs containing medications in a flavoured base. Held in the mouth and slowly release medication

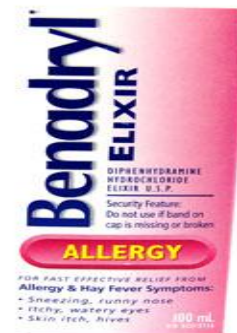


Oral

- Tablets – dry powdered medications that have been formed into hard disks or cylinders



- Oral Liquids
- Elixirs – Medication dissolved in Liquid containing alcohol or water and flavourings



Oral

- Suspensions – Medication suspended in a liquid and usually labelled “Shake before use”



- Syrups – Medication dissolved in a concentrated sugar solution



Topical

- Ointments or Cream – Semisolid material containing medication applied externally
- Transdermal discs or patches – medication on a small disc or patch that is applied to unbroken skin; absorbed through the skin over 24 h period





Topical

- Gloves are used when applying medication to the skin medication can give you a reaction through absorption on the skin
- to protect client's skin (i.e., rash, inflamed areas)

Eye, Ear

- Drops – Liquid form of medication in a special container that allows one drop at a time to be administered; usually eye drops, ear drops, and nose drops



Parenteral

- Liquid for Injection –
Liquid form of medication that is injected using a syringe (a device consisting of a plastic tube filled with medication, a plunger, and an attached needle)



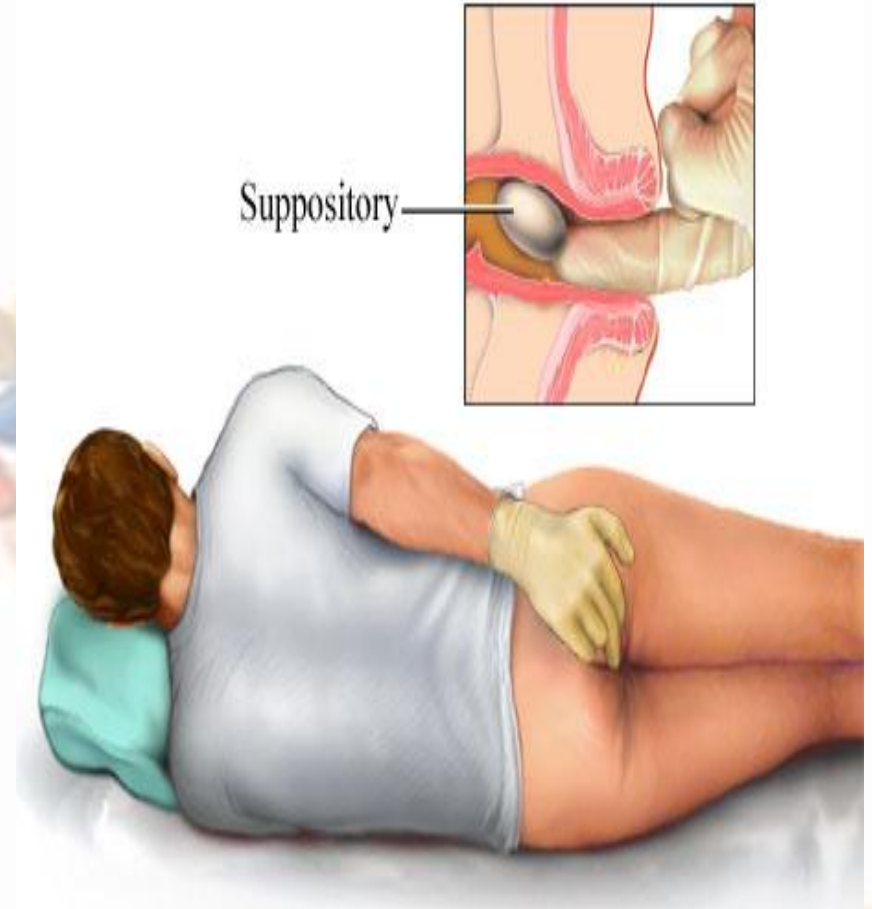
Inhalation

- Aerosols – medication particles suspended in air or gas that are inhaled into the lungs. Administered through metered dose inhaler (MDI)
- MDI- a small cylinder or puffer used with special delivery system. Can be used with holding chambers. The client uses it to inhale the medication through the mouth in specifically measured dose



Suppositories

- Rectal or vaginal – solid form of medication for insertion into the rectum or vagina. Body temperature causes the suppository to dissolve and the medication is released and absorbed by the mucous membranes in this area





Drug Interactions



Drug Interactions

- The way the medications interact with other drugs or substances in the body
- Alcohol → undesirable effect on the client
- OTC-, herbal supplement, or vitamin → prescribed medication

Drug Synergism

- When the combined effect of two drugs is greater than the effect of either drug given alone ($1+1 > 2$)
- Can cause the client to become extremely drowsy, hyperactive or nauseated.
- Combined → Can affect the client's heart function or BP
- such as codeine mixed with acetaminophen or ibuprofen to enhance the action of codeine as a pain reliever
- Antihistamine + narcotic = much more drowsy than when taken separately
- the most serious consequence of drug synergy is exaggerated respiratory depression, which can be fatal if left untreated.

Drug Antagonism

- Counteract the actions of other drugs when combined
- Antacid → prevent an antibiotic or birth control pill from being absorbed in the stomach



Remember

- Clients on prescribed medications should never drink alcohol or take OTC medications without consulting a doctor, pharmacist, or nurse= serious harm from combining medications and other drugs or alcohol



Polypharmacy

- When clients take more than their prescribed dosages of medications or take too many medications.
- Can cause serious illness
- Report to supervisor



Types of Medications

Over-the -counter

- OTC
- Can be bought without prescription
- Acetaminophen (Tylenol) and cough syrup

Alternative Remedies

- Herbal or other natural products
- Ginseng
- Shark cartilage
- Not part of conventional medicine

Prescription

- Rx
- Requires prescription
- Dispensed by pharmacies
- Antibiotics and BP medications

Remember

- You can only assist
- If the client requests you for help with medications that are not in the care plan (OTC, alternative meds) notify your supervisor
- Do not buy OTC drugs for client. Inform supervisor





Drug Effects and Classifications



Introduction

- Medications can have topical, local, or systemic effect according to where in the body the medication works.
- Drugs are classified according to how they work → antibiotic → eliminates harmful bacteria in the body → share common side effects → common observations and responsibilities
- Check with supervisor about specific observations to be made for a particular client

Topical Effect

- Only works on the skin surface
- cream

Localized Effect

- Eye drop medication
- Only works in the eye in which you put it

Systemic Effect

- Might help relieve pain elsewhere in your body
- Pill for headache



Drug Classifications

Generic name and Trade name

Generic Name

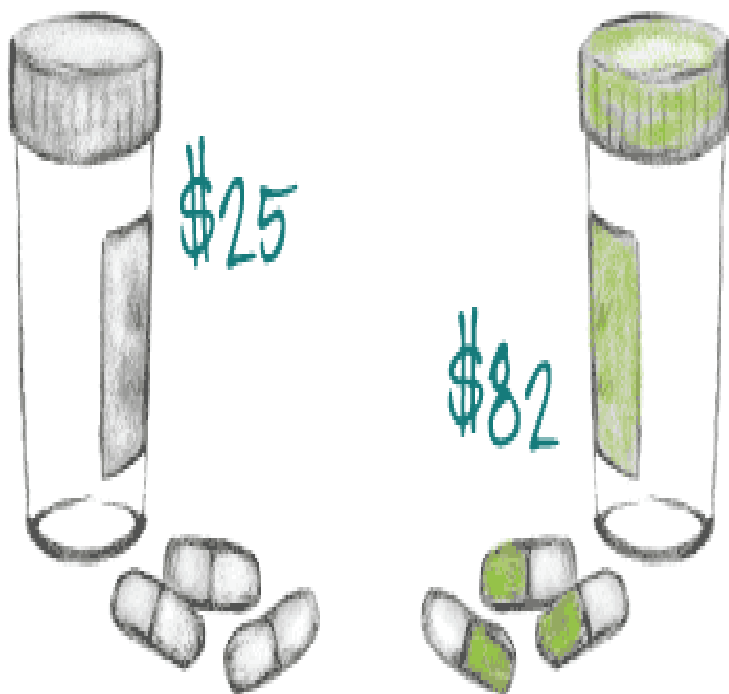
- Refers to chemical name
- Acetaminophen (Tylenol)
- Ibuprofen (Advil)

Trade Name

- Trademarked
- Packaged name given by the manufacturer

Prescription drug cost comparison

Generic ↔ Brand Name






Drug Classifications and Your Responsibilities

Alzheimer's disease medications

- Treat mild to moderate symptoms of AD
- Donepezil HCL – aricept
- Report any nausea, diarrhea, Vomiting, and muscle cramps
- Fatigue easily



Analgesics (non-narcotic)

- Relieve mild to moderate pain
- Acetaminophen (tylenol)
- Might cause stomachache, take with food



Analgesics (narcotic)

- Relieve severe pain
- Acetaminophen 325 mg; caffeine and codeine 30 mg (tylenol #3)
- Report excessive drowsiness, constipation



Antacids

- Relieve heartburn
- Calcium carbonate (TUMS)
- Should not be taken within two hours of another medicine as it might interfere with that drug's absorption



Anti-anginals

- Relieve anginal (chest pain)
- Nitroglycerin (Nitrostat)
- May cause dizziness in client
- Wear gloves when handling to avoid bad headache



Anti-anxiety

- Reduce anxiety
- Lorazepam (ativan)
- Might cause drowsiness and sleepiness
- Client should be careful when driving



Antibiotics

- Eliminate or reduce harmful bacteria
- Ampicillin (Novo-ampicillin)
- Diarrhea
- Vomiting
- Bitter aftertaste
- Finish the entire course



Anticoagulants

- Reduce blood clotting
- Warfarin (Coumadin)
- Prone to bruising
- Bleeding
- Must use care when brushing teeth or shaving
- Report bruises on body and blood on urine



Anticonvulsants

- Reduce seizures
- Phenytoin sodium (dilantin)
- Mouth care
- Thickening of the gingiva may cause tenderness when brushing



Anti-emetics

- Reduce nausea and motion sickness
- Scopolamine (Transderm-V)
- Mouth care
- Eliminate mouth sores and bad taste in mouth



Antihypertensive

- Reduce blood pressure
- Ramipril (Altace)
- Client should get up slowly to avoid dizziness or lightheadedness



Antiparkinsonian agents

- Reduce symptoms of Parkinson's disease
- Levodopa-carbidopa (Sinemet)
- Dizziness
- Pain
- Drowsiness
- irritability



Antipsychotics

- Reduce psychosis, severe agitation, severe vomiting or hiccups
- Haloperidol (Haldol)
- Hand tremors
- Dizziness
- Notify nurse for any signs of grimacing



Antitussives

- Liquify phlegm making it easier to cough
- Dextromethorphan (Robitussin DM)
- Should be taken after taking other drugs
- Clients must not drink fluids for 10- 15 minutes to give chance for drug to be absorbed into throat tissues



Antivirals

- Reduce virus production
- Acyclovir (Zovirax)
- Headache
- nausea



Bronchodilators

- Reduce spasm in breathing passages
- Salbutamol (Ventolin)
- Dry mouth
- Shakiness and tremors in hand
- Increased heart rate



Decongestants

- Reduce nasal congestion
- Pseudophedrine (Sudafed)
- Dry mucous membranes
- Rebound congestion (gets worse after drugs wears off)



Diuretics

- Lower blood pressure and body swelling by increasing urinary output
- Furosemide (Lasix)
- K rich foods
- Banana, baked white potatoes
- Frequent urination may occur



Hypoglycemic agents

- Improve insulin production in body
- Glyberide (Diabeta)
- Nausea
- Vomiting,
- Diarrhea
- Dizziness
- weakness



Insulin

- Makes up for lack of natural insulin
- Insulin regular, human biosynthetic (Humulin-R) report any blurred vision
- Dry mouth
- Extreme hunger
- Chest palpitations



Laxatives

- Help with bowel movements
- Bisacodyl (Dulcolax)
- Diarrhea
- Encourage plenty of fluid
- High fibre diet to reduce use of laxatives

Non-steroidal anti-inflammatory drugs (NSAIDs)

- Reduce pain comes with swelling
- Ibuprofen (Motrin)
- Upset stomach
- Should not be taken on an empty stomach



Thyroid replacements

- Make up for lack of natural thyroid
- Levothyroxine sodium
- Menstrual irregularities
- Nausea
- vomiting



Factors Affecting Drug Actions

Factors Affecting Drug Actions

- Storage (dry, safe place); not in direct sunlight (chemical change)
- Read label for instructions and follow instructions carefully

Pharmacy name and address

Number used by the drugstore to identify this drug for your refills

Person who gets this drug

Instructions about how often and when to take this drug

Name of drug and strength of drug

Number of refills before certain date

Doctor's name

Drugstore phone number

Prescription fill date



Local Pharmacy
123 MAIN STREET
ANYTOWN, USA 11111

(800) 555-5555

DR C. JONES

NO **0060023-08291** DATE 06/23/09

JANE SMITH
456 MAIN STREET ANYTOWN, US 11111

TAKE ONE CAPSULE BY MOUTH THREE TIMES DAILY FOR 10 DAYS UNTIL ALL TAKEN

AMOXICILLIN 500MG CAPSULES

QTY MRG
NO REFILLS - DR. AUTHORIZATION REQUIRED

USE BEFORE **06/23/12**
SLF/SLF



Don't use this drug past this date



Factors Affecting Drug Actions

- May affect two people differently (cells, age, body size, sex, genetic factors, emotional state, and physical condition)



Age

- Children and older adult absorbs, metabolize, and excrete drugs differently



Body size

- Dose of medication that would have therapeutic effect in large, overweight adult might be an overdose in a small, thin adult of the same age because the drug level would be more concentrated in the small person



Sex

- Affects men and women differently
- Body size
- Hormones
- Muscle mass
- Pain killers



Genetic factors

- Some people have an inherited tendency to react to certain medications-
- Client with unusual reaction to anesthetic, doctors may choose not to give the same anesthetic to family



Emotional state

- Severe state cause person's heart rate and blood pressure to change
- Change the way drug is absorbed
- metabolized
- excreted



Physical condition

- Certain diseases will affect how well a drug is absorbed
- Distributed
- Metabolized
- Excreted
- Client with kidney disease may not be able to excrete certain drugs through urine as a person with healthy kidneys can

Side Effects

- Another response to medication
- Intended response
- Predictable and harmless
- BP pills can cause bradycardia
- Pain relief can cause drowsiness, nausea and constipation

Adverse Effects

- Can be serious or harmful
- Medication might be stopped



Drug Allergy

PPT Created by: Camla St. Croix PSW
Program Director/Instructor

Drug Allergy

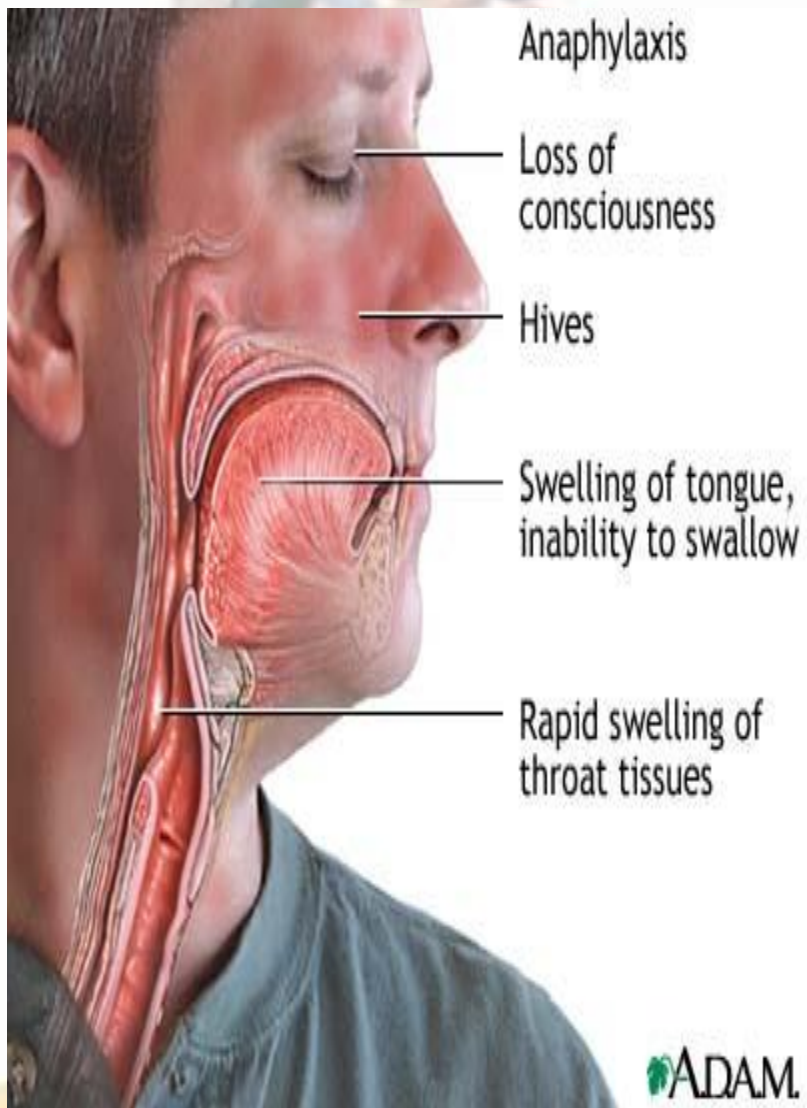
- Abnormal response to a drug
- Caused by body fighting or attacking the drug (antigen) by releasing chemicals called antibodies

Anaphylaxis

- *Ana* (without)
- *Phylaxis* (protection)
- Life threatening sensitivity to antigen
- Can occur within seconds
- Emergency and EMS situation
- Epinephrine injection (to reverse allergic reaction)
- Keep airway open
- Provide CPR if cardiac arrest occur

Symptoms of Anaphylactic Shock

- Sweating
- SOB
- Irregular pulse
- Respiratory congestion
- Swelling of the larynx (laryngeal edema)
- Hoarseness
- Dyspnea



Rash

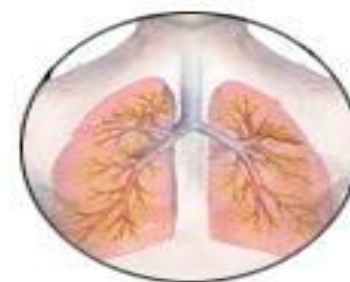


Hives



ADAM.

Anaphylaxis



A severe type of allergic reaction that involves two or more body systems (e.g., hives and difficulty breathing).

ADAM.

© 2005 Duplication not permitted

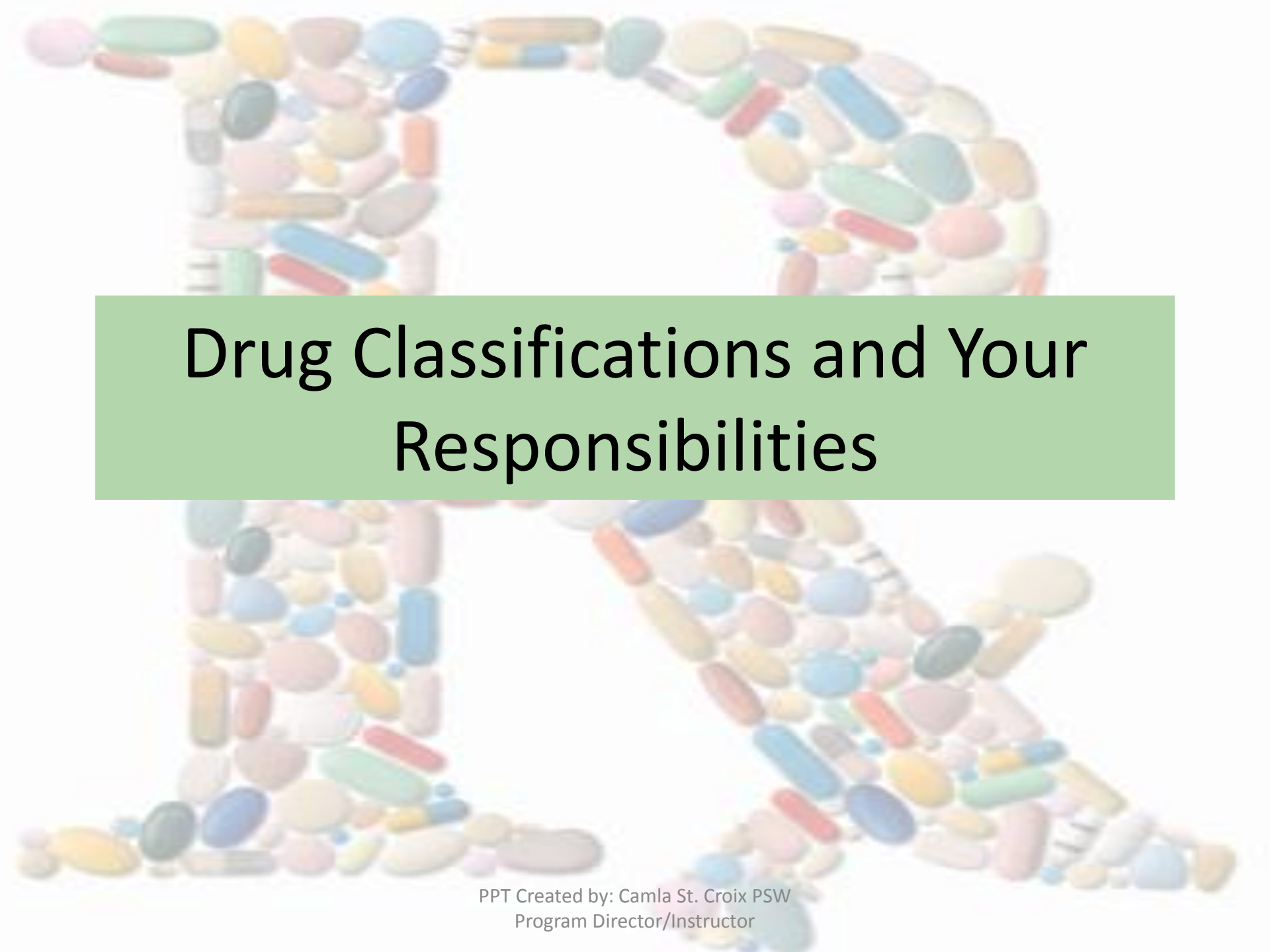


What will you do during
Anaphylactic shock?



Answer

- Activate Emergency medical service
- Epinephrine auto-injector to reverse allergic reactions
- Keep client lying down
- Ensure airway is open
- Initiate CPR



Drug Classifications and Your Responsibilities

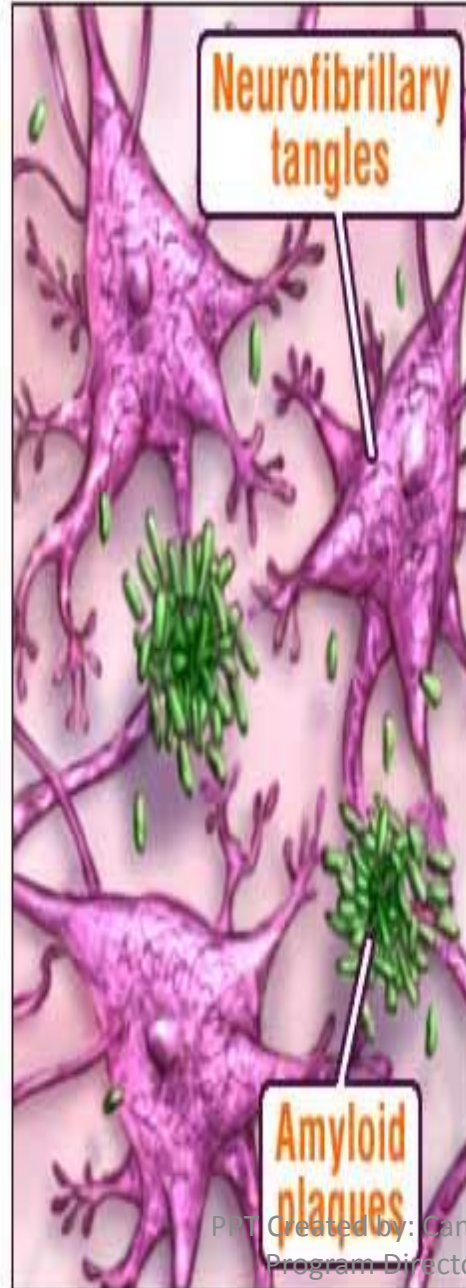
Overview of Alzheimer's disease

- a form of dementia
- progressive degenerative disease that is fatal
- an irreversible, progressive disorder, in which neurons deteriorate resulting in loss of cognitive functions, primary memory, judgment, reasoning, movement & coordination, and patterns of recognition
- in late stages of disease, all memory and mental functioning may be lost

Normal



Alzheimer's



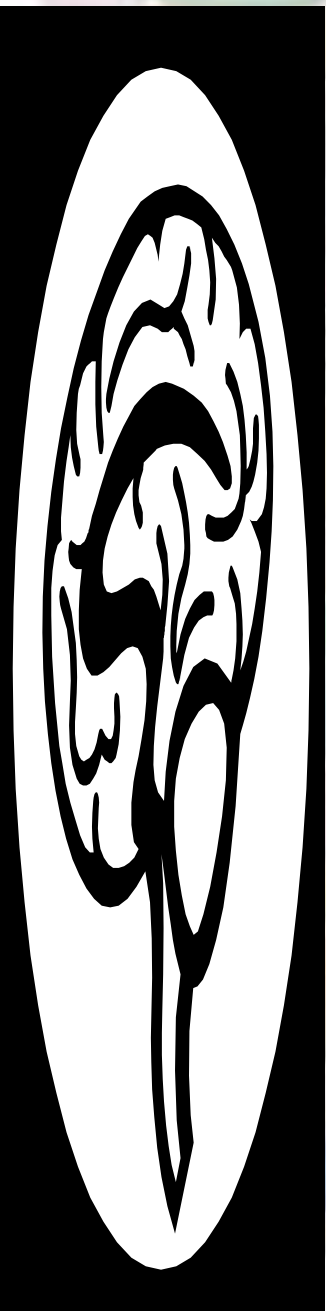
Alzheimer's Disease

- Amyloid-beta protein-forming plaques
- Neurofibrillary tangles
- Decreased acetylcholine production

Stages of Alzheimer Disease

STAGE 1 (short-term memory loss)

- 2- 4 years
- increasing forgetfulness
- inability to concentrate
- patient aware and compensates:
 - makes lists
 - rationalization
- general interests diminish:
 - reduced socialization
 - does not volunteer for fear of inadequacy
 - work competencies diminish

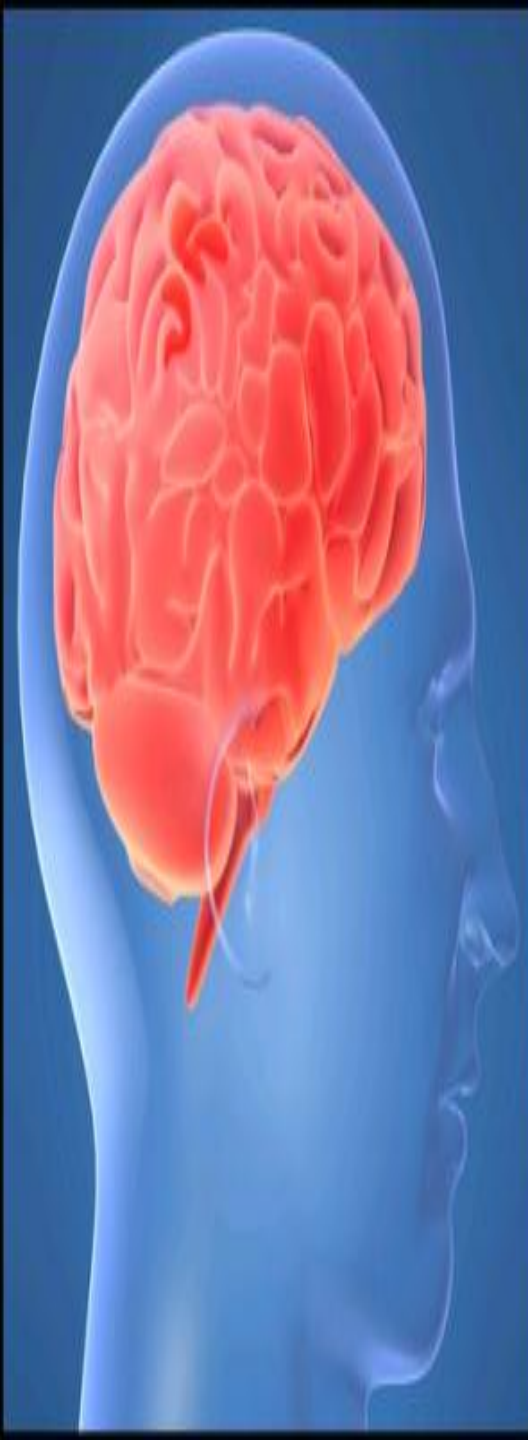


STAGE 2 (confusion stage)

- 2 -12 years
- deterioration of cognitive functioning
- Amnesia
- recent & remote memory; simple calculations
- personality changes
 - irritability & mood swings
 - agitation & hostility (belligerence)
 - emotionally labile
 - fearfulness
- Apraxia
 - dressing, eating
- depression
- inability to carry out tasks or remember
- dysphasia
- inability to make self understood



- More physically active:
 - wandering
 - disrupted sleep patterns
- Confusion
 - cannot recognize familiar surroundings
 - unable to follow normal daily routines:
 - preparing meals; feeding a pet;
 - paying bills; unable to dress
- visual hallucinations
- Seizures
- Personal hygiene deteriorates
- Inappropriate social behaviour
 - hoarding
 - making up stories to cover for inadequacies (confabulation)



STAGE 3 (Incontinence)

- progression to complete dependence
- unable to converse, loss of language skills (*aphasia*)
- mobile → immobile
- loss of coordination
- patients become bedridden
- loss of motor control; incontinence
- requires constant supervision
- loss of emotional control
- Agnosia
- unable to eat or swallow
- physical immobility
- death due to complications
- survival – 5-20 years

Alzheimer's Medications

- Donepezil HCL (aricept)
- Treat mild to moderate symptoms of Alzheimer's disease

Report:

- N & V
- Diarrhea
- Muscle cramps
- fatigue

Analgesics (non- narcotic)

- Relieve mild to moderate pain
- Acetaminophen (Tylenol)
- Take with food
- Report: stomachache

Analgesics (Narcotics)

- Relieve severe pain
- Acetaminophen 325 mg
- Codeine 30 mg (Tylenol # 3)
- Report: Excessive drowsiness, constipation

Antacids

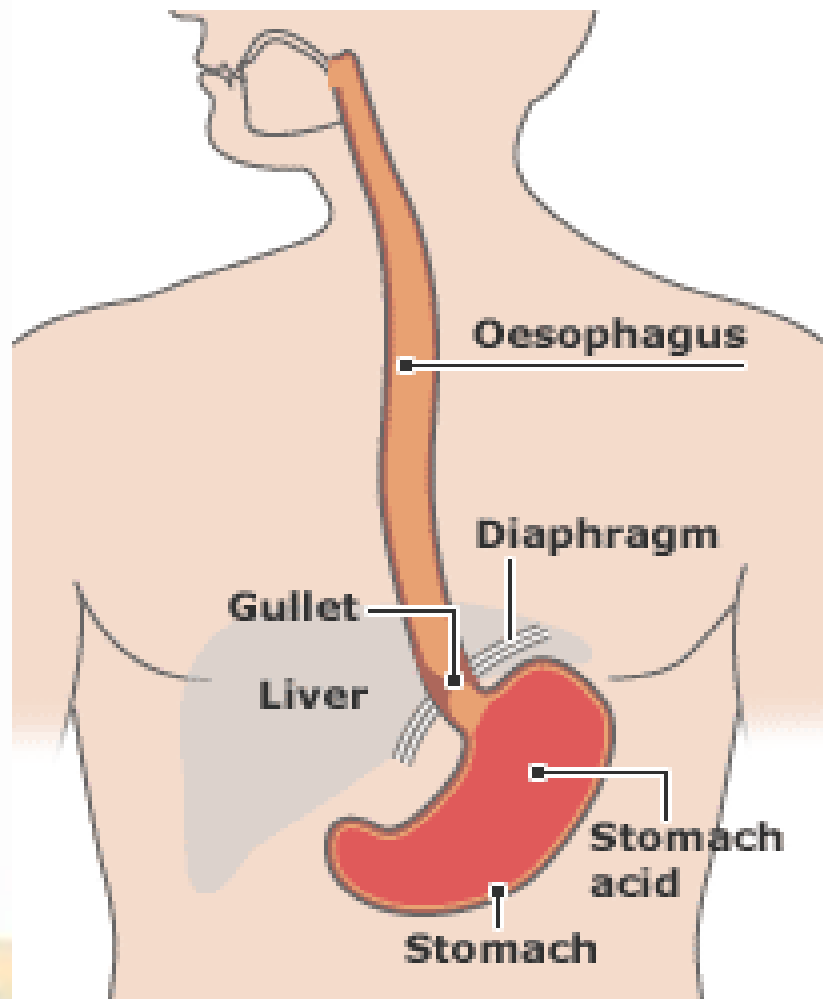
- Relieve Heartburn
- Calcium Carbonate (TUMS)
- Not to be taken within two hours of another medicine, might interfere with drug's absorption

Heartburn

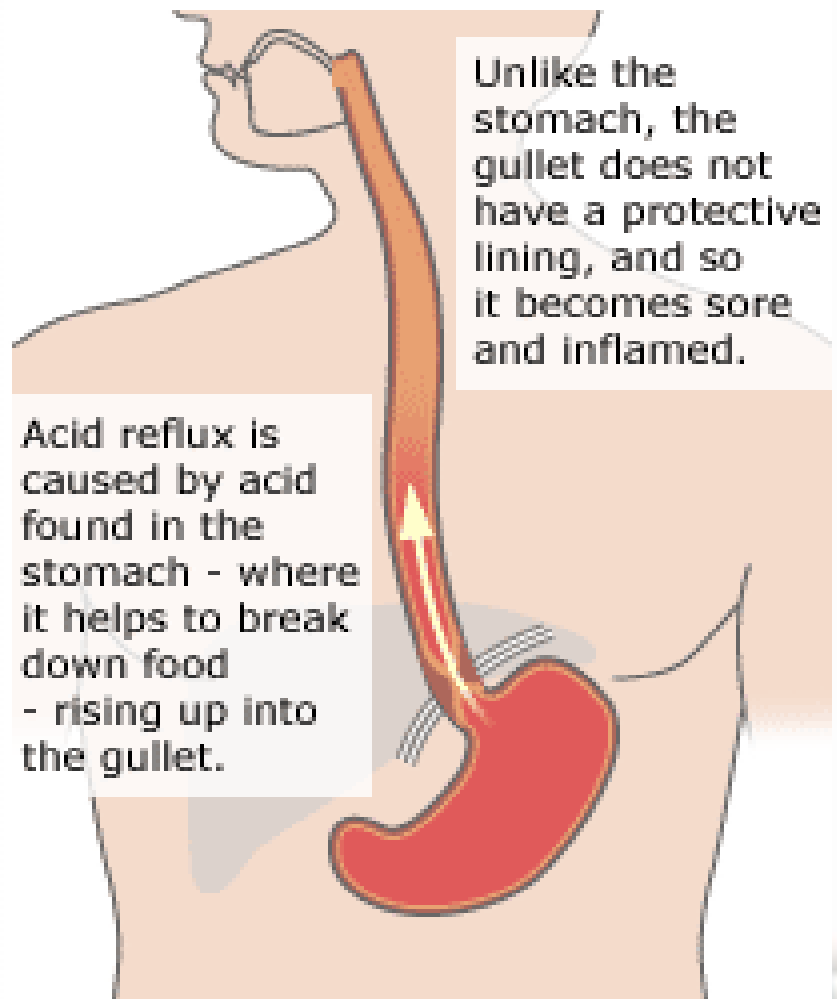
- also known as **pyrosis^[1]**, **cardialgia**, or **acid indigestion**
- common symptom of indigestion is heartburn
- burning chest pain that occurs when stomach acid and other contents flow backward, or reflux, into the esophagus. Unlike the stomach, the lining of the esophagus has no protective lining or mucus producing tissue, so the acid produces irritation and even ulcerations.

WHAT CAUSES HEARTBURN

Normal



Heartburn



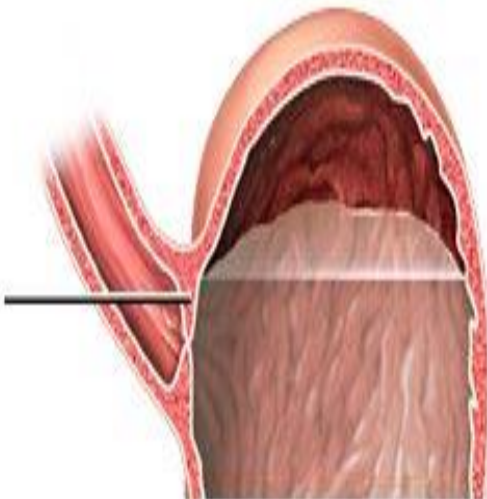
Heartburn

- Indigestion
- pain in the upper abdomen and chest
- feeling of fullness and bloating, associated with belching and nausea
- can be triggered by drinking alcohol, carbonated beverages, eating too fast or too much, fatty or spicy foods and taking too much caffeine or high fibre foods.

Heartburn

- Avoiding large meals towards the end of the day, proper posture and eliminating smoking helps avoid indigestion and heartburn.

Lower esophageal
sphincter (LES)

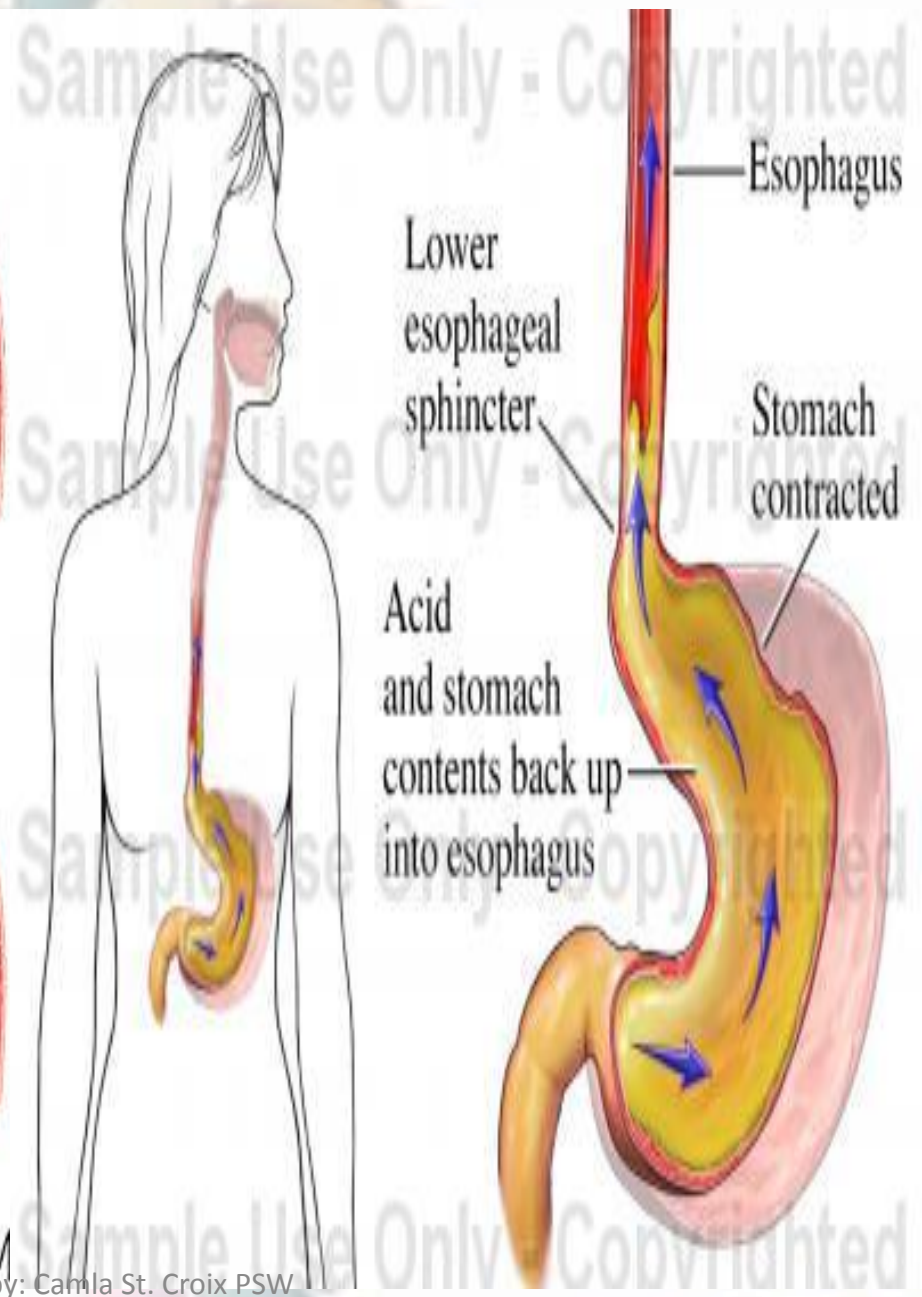


Closed LES



Open LES

Stomach contents
pass through the LES,
causing heartburn

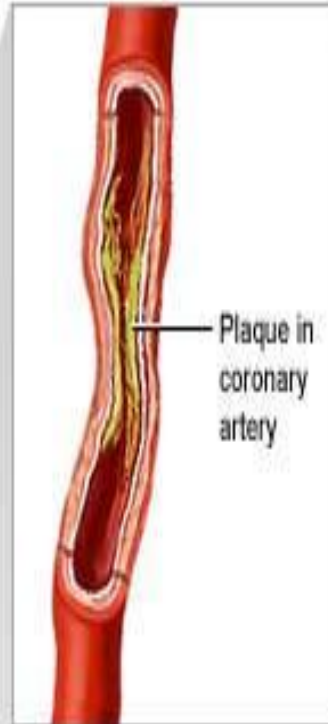
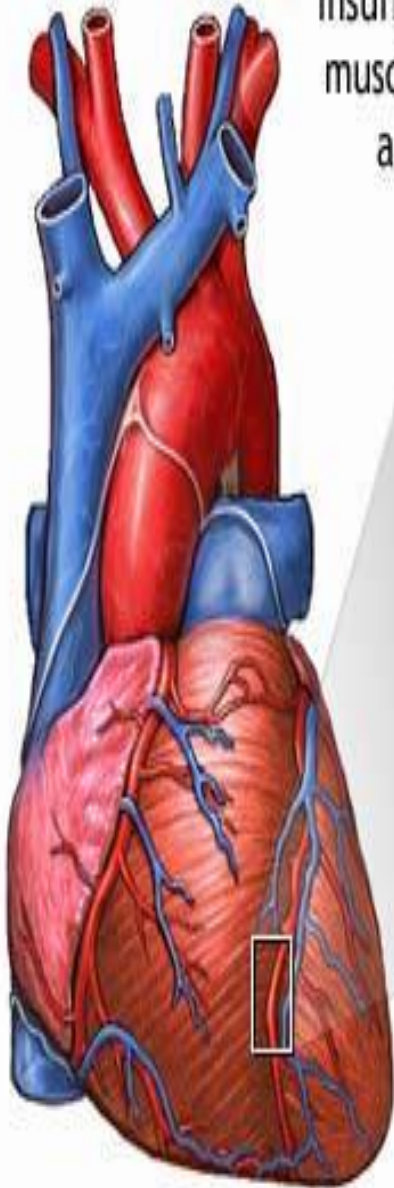


Anti-anginals

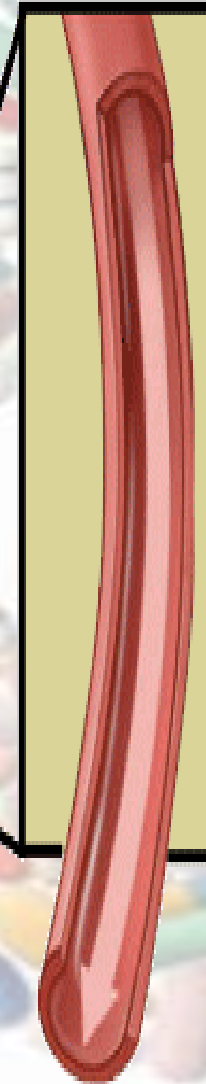
- Relieve anginal pain or chest pain
- Nitroglycerin (Nitrostat)
- May cause dizziness
- Wear gloves while handling this drugs to avoid bad headache

Insufficient blood flow to the heart muscle from narrowing of coronary artery may cause chest pain

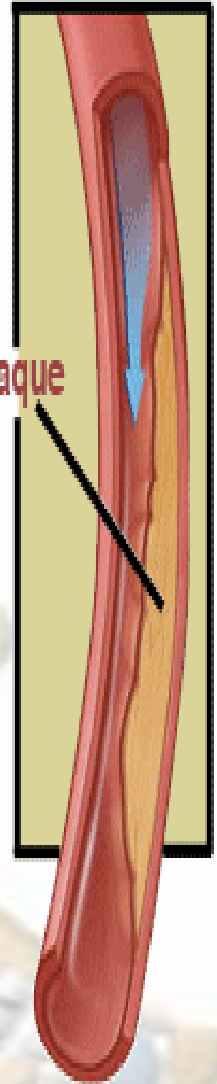
Heart



Normal Artery



Blocked Artery



Plaque



Angina

A type of chest pain, pressure or discomfort.

Heart is not receiving enough oxygen due to narrowed coronary artery

Chest

Possible areas of radiating pain:
neck, jaw, upper abdomen, shoulders and arms

Angina

- Angina is chest pain caused by too little blood flow to the heart muscle.
- The pain usually begins slowly and gets worse over a period of minutes before going away.
- Stable angina typically occurs when you exert yourself, and is quickly relieved with medication or rest. It is also called chronic angina.
- Angina chest pain that lasts longer than a few minutes or occurs with rest is considered unstable angina.

Causes, Incidence, And Risk Factors

- Male gender
- Cigarette smoking
- High cholesterol levels (in particular, high LDL and low HDL cholesterol)
- High blood pressure
- Diabetes
- Family history of coronary heart disease before age 55
- Sedentary lifestyle
- Obesity

Stable angina

- Occurs after activity, stress, or exertion
- Lasts 1 to 15 minutes
- Is usually relieved with rest or nitroglycerin
- The most common symptom is a feeling of tightness, heavy pressure, or squeezing or crushing chest pain that: Occurs under the breastbone or slightly to the left
- Is not clearly focused in one spot
- May spread to shoulder, arm, jaw, neck, back, or other areas
- May feel like gas or indigestion
- Elevated BP
- Pulse rapid and bounding
- Dyspnea if first attack

Anti-anxiety Medications

- Reduce anxiety
- Lorazepam (Ativan)
- Might cause drowsiness and sleepiness
- Client should be careful driving



Stress is caused by an existing stress-causing factor or "stressor"



Anxiety is stress that continues after the stressor is gone



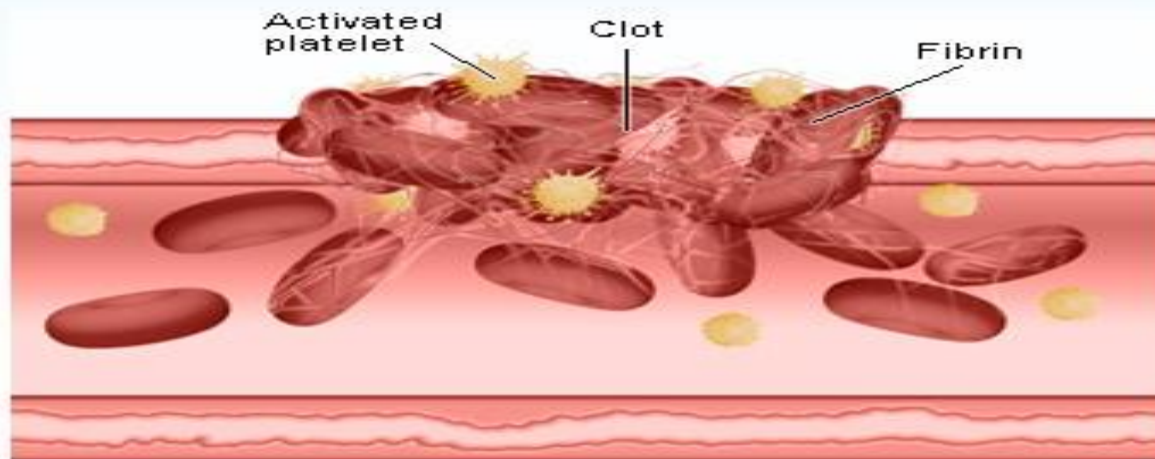
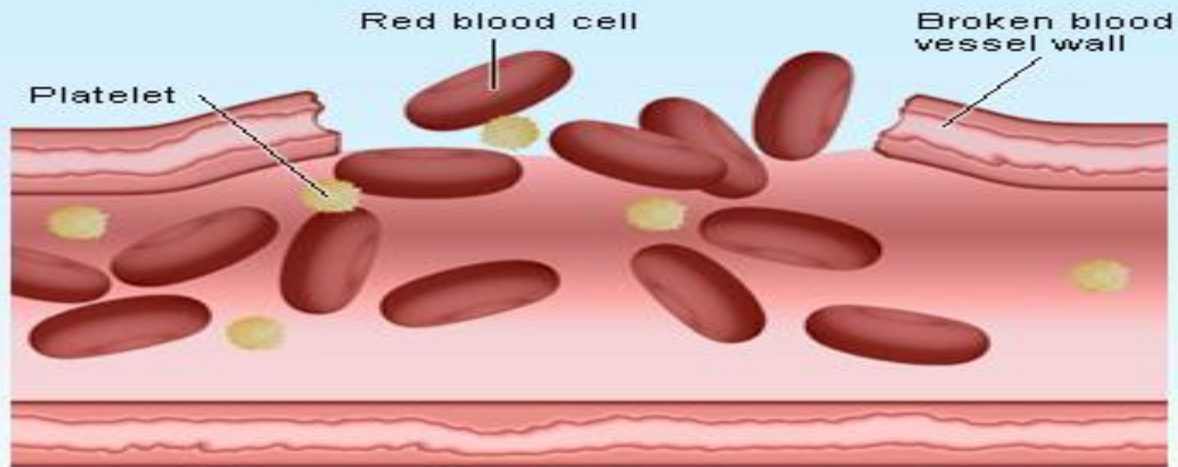
Antibiotics

- Eliminate or reduce harmful bacteria
- Ampicillin (Novo-ampicillin)
- Check for diarrhea, vomiting
- Some clients may experience a bitter after taste
- Ensure client finished the entire course prescribed unless told by the doctor or pharmacist

Anticoagulant

- Reduce blood clotting
- Dalteparin sodium (Fragmin)
- May make client more prone to bruising and bleeding
- Must use extra care when brushing or shaving
- Report bruises on body, blood in urine

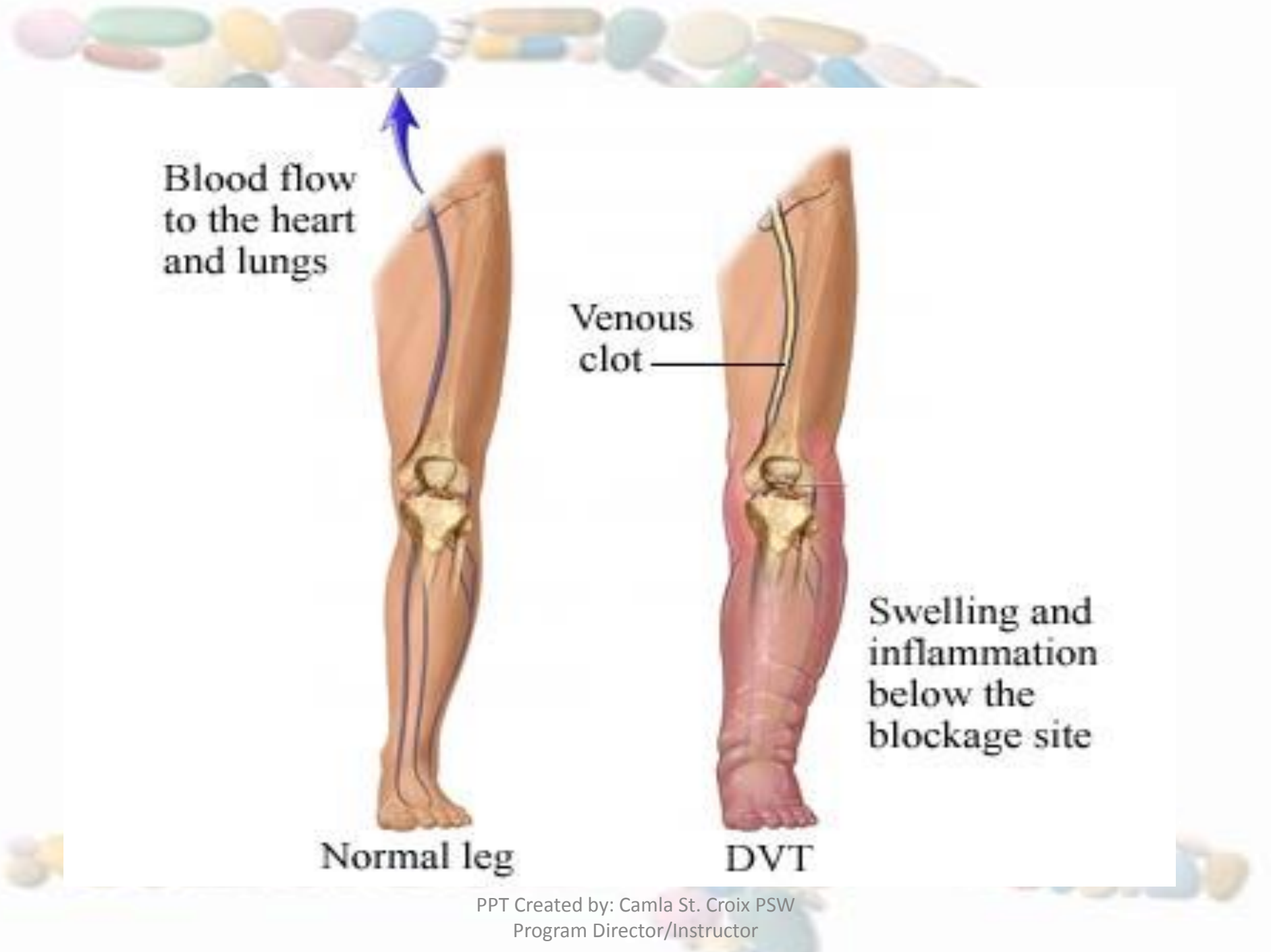
Blood Clot



© 2009 MedicineNet, Inc.

Deep Vein Thrombosis

- a blood clot in a vein deep within the body. Veins are blood vessels. The muscles in the arms and legs contract and help force the blood through the veins back to the heart. A system of valves within the veins helps prevent the blood from flowing backwards.
- Deposits of red blood cells and clotting elements in the blood can accumulate in a vein and lead to blood clot formation. Clots usually occur in the legs but can occur in other locations. As the clot grows, it blocks blood flow in the affected vein.



Blood flow
to the heart
and lungs

Venous
clot

Swelling and
inflammation
below the
blockage site

Normal leg

DVT

Several factors contribute to clot formation, including:

- Slow blood flow, often due to lying or sitting still for an extended period of time
- Pooling of blood in a vein, often due to:
 - Immobility
 - Medical conditions
 - Damage to valves in a vein or pressure on the valves, such as occurs during pregnancy
- Injury to a blood vessel
- Clotting problems (can occur due to aging or disease)
- Catheters placed in a vein

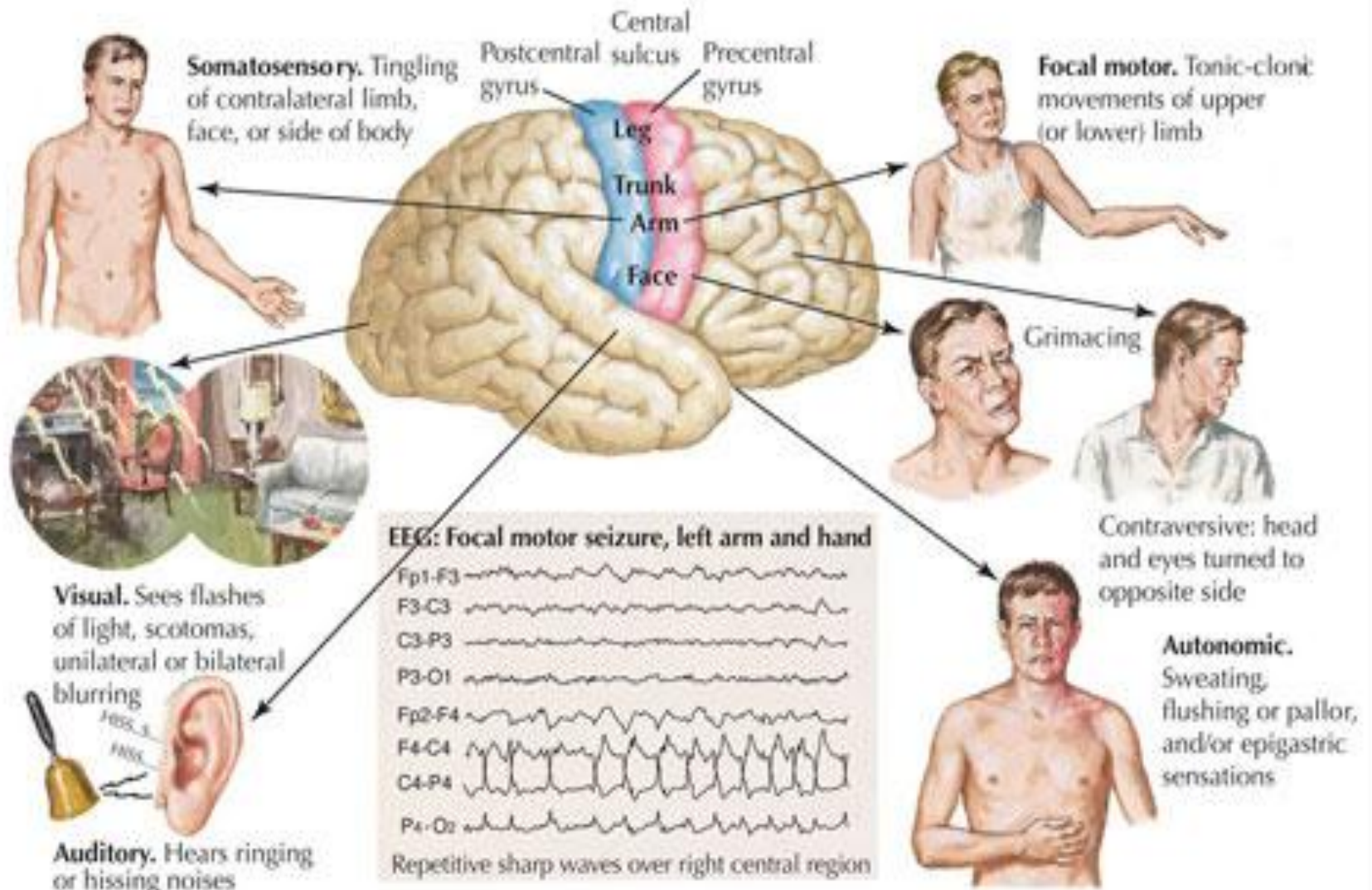
Anticonvulsants

- Reduce seizures
- Phenytoin sodium (Dilantin)
- Ensure mouth care is done often
- Thickening of gingiva may cause tenderness when brushing teeth

Seizure

- represent a sudden violent uncontrollable shaking of the body parts in epilepsy
- i.e. a disease in which the activity of nerve cells in the brain is increased.
- Partial seizures affect a localized or limited area of the brain and have the ability of spreading to other parts of the brain

Simple Partial Seizures

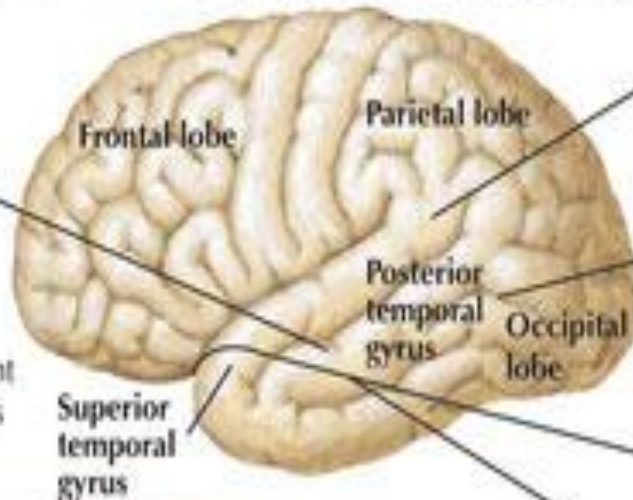


Impairment of consciousness:
cognitive, affective symptoms



Dreamy state; blank, vacant
expression; déjà vu; jamais
vu; or fear

Complex Partial Seizures



Formed auditory
hallucinations. Hears
music etc



Formed visual hallucinations. Sees
house, trees that are not there



Bad or
unusual
smell

Olfactory hallucinations

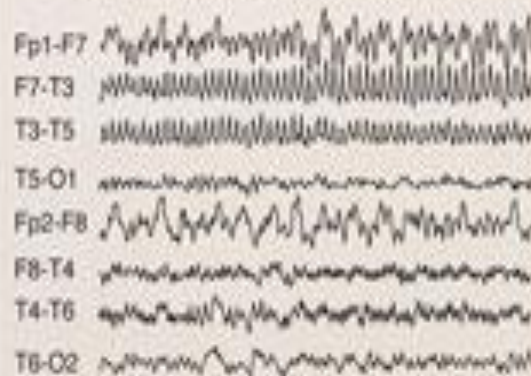


Psychomotor
phenomena.
Chewing
movements,
wetting lips,
automatisms
(picking at
clothing)




Dysphasia

EEG: left temporal lobe seizure



Repetitive sharp waves over left temporal region



Tonic phase



Clonic phase



 ADAM.



Cushion Head



Loosen Necktie



Turn On Side



Nothing In Mouth



Look For ID



Don't Hold Down



As Seizure Ends



...Offer Help

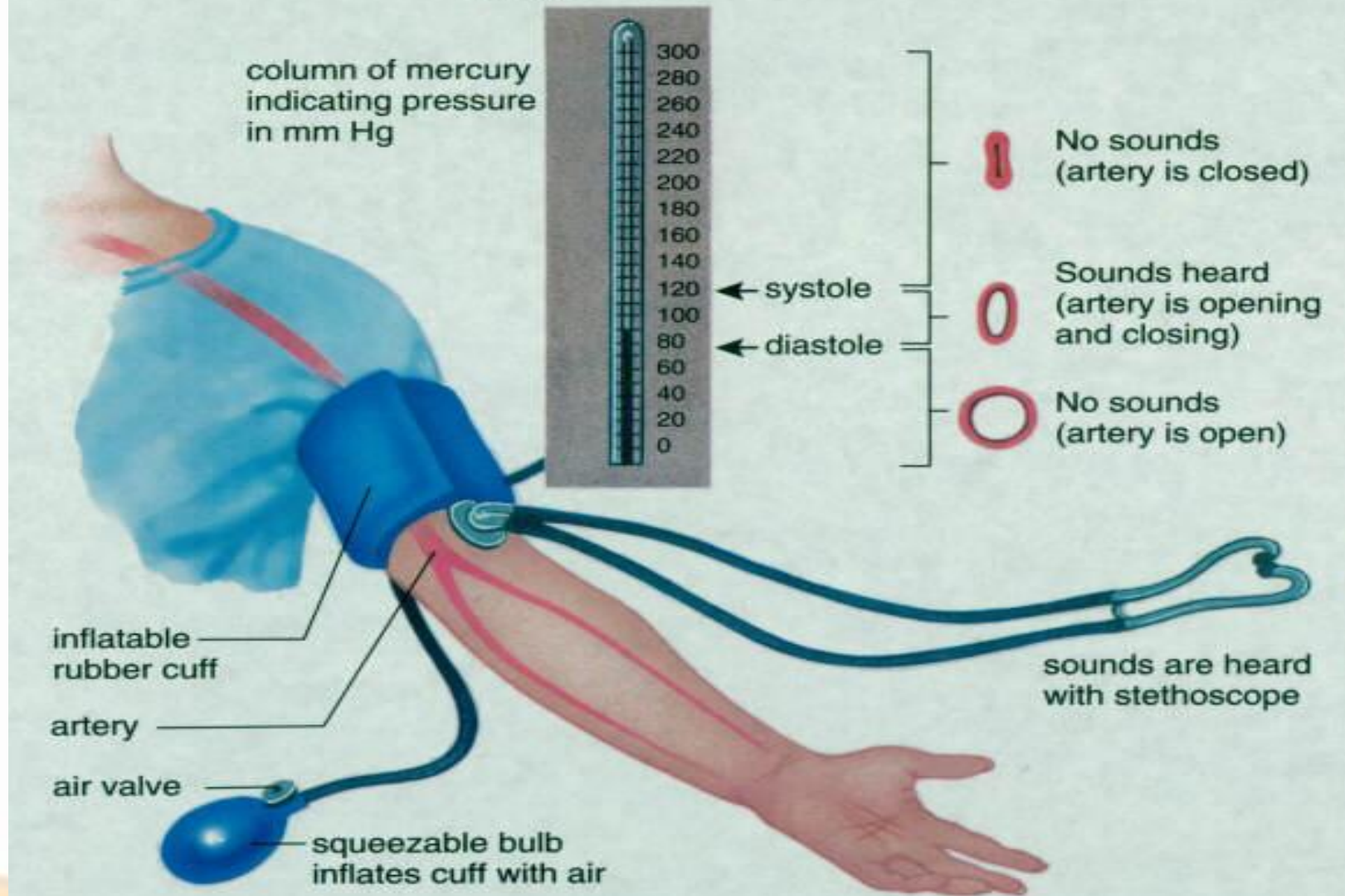
Anti-emetics

- Reduce nausea, motion sickness
- Scopolamine (Transderm-V)
- Ensure good mouth care to eliminate mouth sore and bad taste in mouth

Anti-hypertensives

- Reduce blood pressure
- Ramipril (Altace)
- Client should get up slowly to avoid dizziness or lightheadedness

Sphygmomanometer

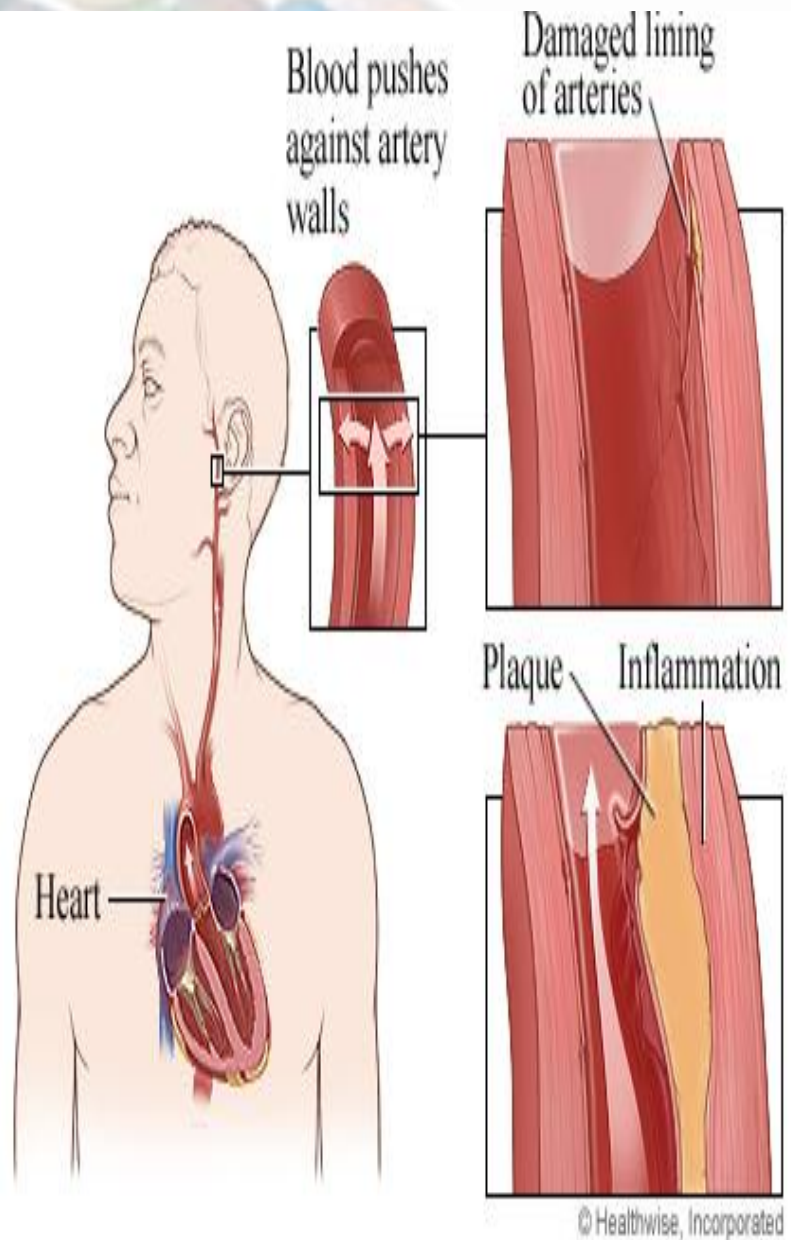
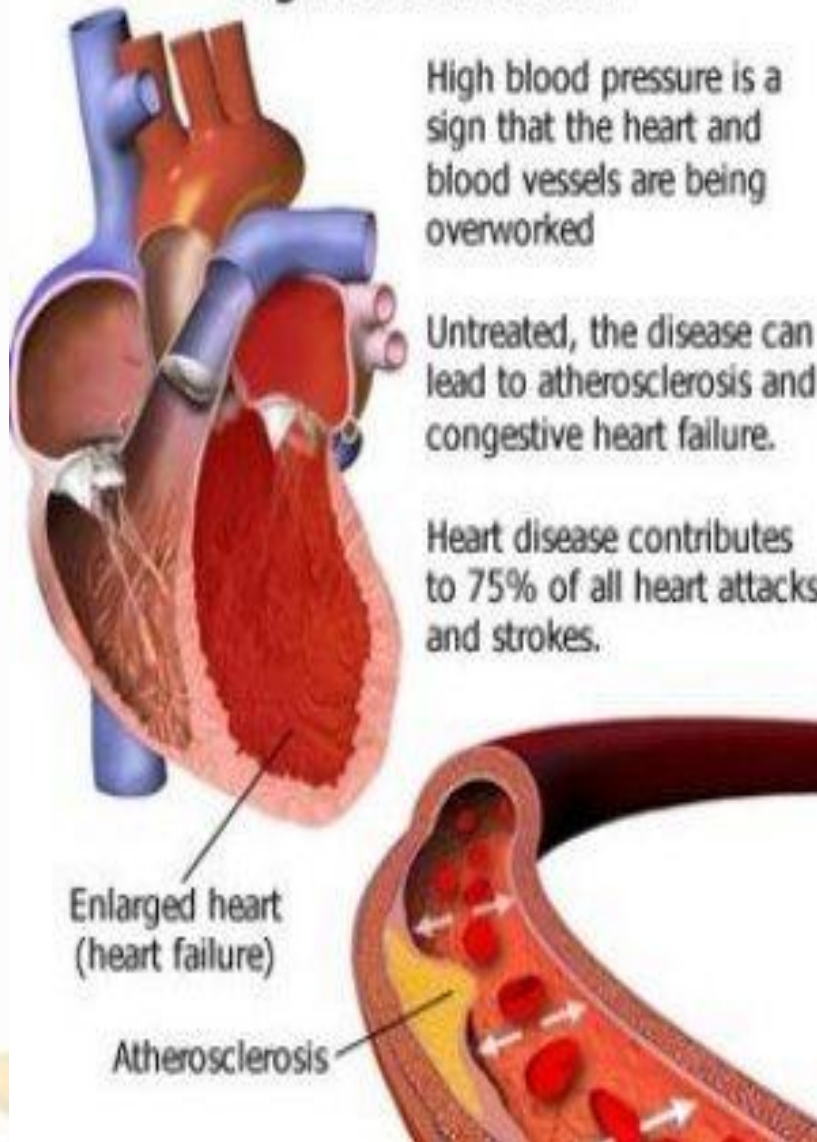


High Blood Pressure

High blood pressure is a sign that the heart and blood vessels are being overworked

Untreated, the disease can lead to atherosclerosis and congestive heart failure.

Heart disease contributes to 75% of all heart attacks and strokes.



© Healthwise, Incorporated

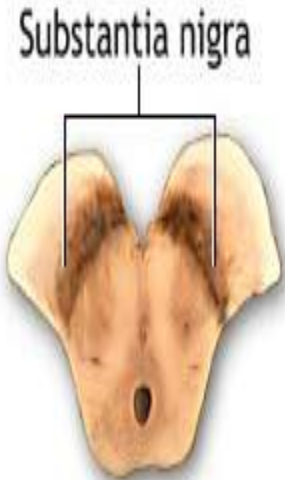
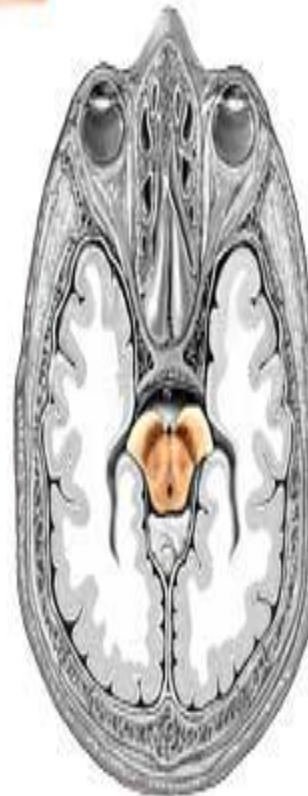
Anti-Parkinsonian agents

- Reduce symptoms of PD
- Levodopa-carbidopa (Sinemet)
- Report: dizziness, pain drowsiness or irritability

Parkinson's disease

- is a slowly progressive neurological disorder that affects movement, muscle control, and balance.
- Parkinson's disease is part of a group of conditions called motor system disorders, which are associated with the loss of dopamine-producing brain cells.
- These dopamine-associated motor disorders are referred to as *parkinsonism*

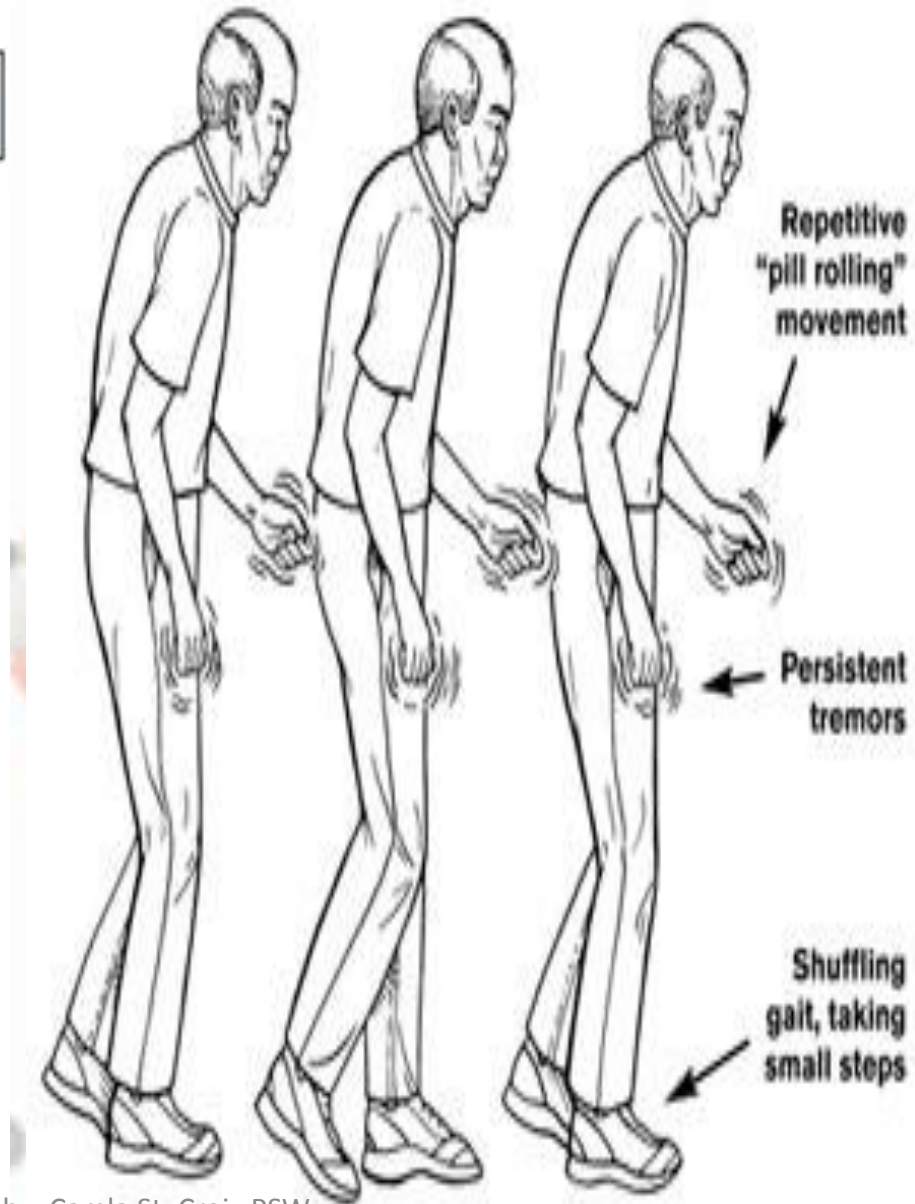
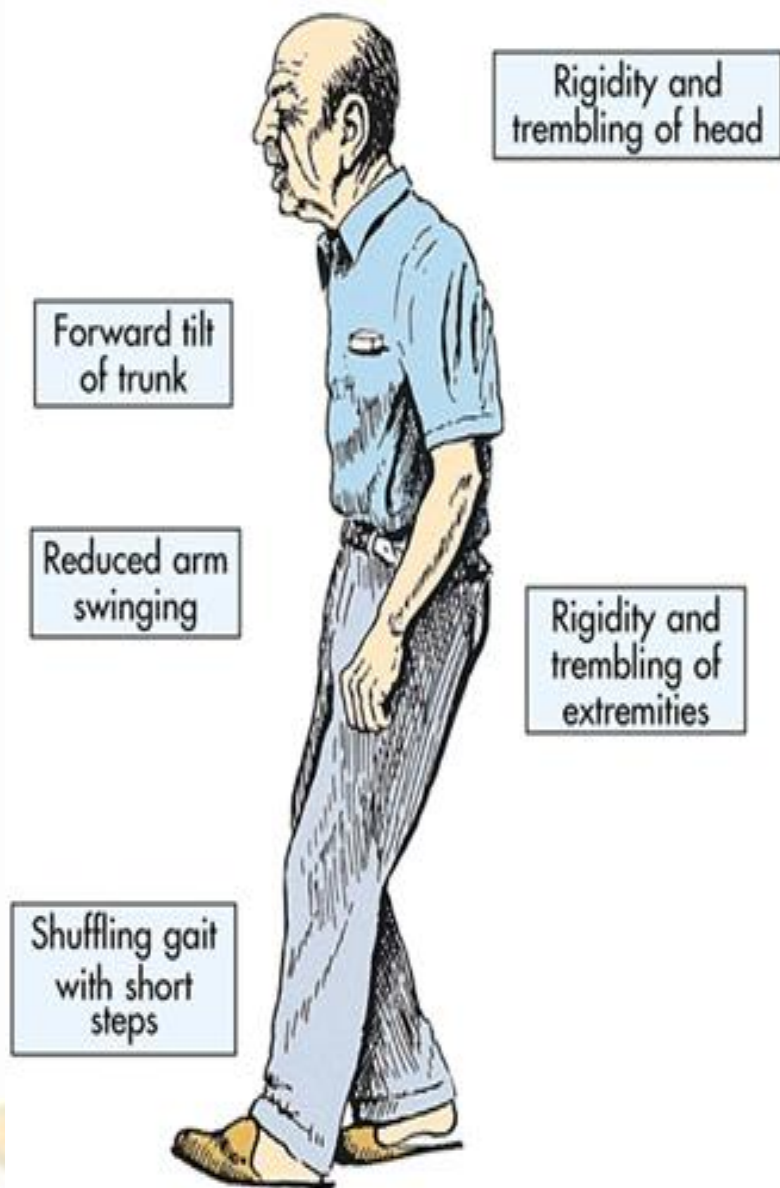
Dopamine levels in a normal and a Parkinson's affected neuron.



Diminished substantia nigra as seen in Parkinson's disease



ADAM.



Anti-Psychotics

- Reduce psychosis, severe agitation, severe vomiting or hiccups
- Haloperidol (Haldol)
- Watch for hand tremors and dizziness
- Notify the nurse if you see any grimacing

Anti-tussives

- Liquefy the phlegm
- Making it easier to cough
- Dextromethorphan (Robitussin DM)
- Should be taken after taking other drugs
- Client must not drink fluids for 10 to 15 minutes to give chance for drug to be absorbed into throat tissues

Anti-virals

- Reduce virus reproduction
- Acyclovir (Zovirax)
- Report: Headache, nausea

Bronchodilators

- Reduce spasm in breathing passages
- Salbutamol (Ventolin)
- Watch for dry mouth
- May cause shakiness and tremors in hands and increased heart rate in clients

Why asthma makes it hard to breathe

Air enters the respiratory system from the nose and mouth and travels through the bronchial tubes.

In an asthmatic person, the muscles of the bronchial tubes tighten and thicken, and the air passages become inflamed and mucus-filled, making it difficult for air to move.

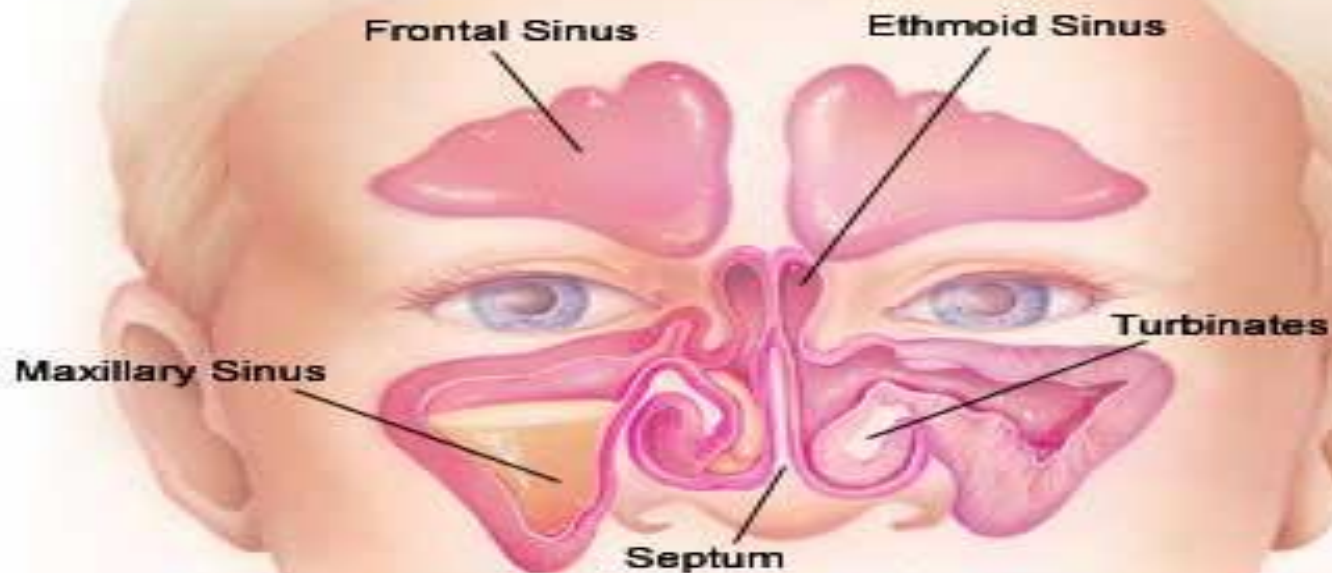
In a non-asthmatic person, the muscles around the bronchial tubes are relaxed and the tissue thin, allowing for easy airflow.



Source: American Academy of Allergy, Asthma and Immunology

Decongestants

- Reduce nasal congestion
- Pseudoephedrine (Sudafed)
- May cause dry mucous membranes and rebound congestion (congestion gets worse after drug wears off)



Normal cilia beat back and forth, propelling mucus and trapped particles out of the sinus



Cilia can become paralyzed during acute sinusitis; sinuses are congested with mucus.



Chronic sinusitis may further damage cilia; the mucosal lining becomes thick and scarred.

Diuretics

- Lower blood pressure and body swelling by increasing urinary output
- Furosemide (Lasix)
- Depending on drug, some client must eat potassium rich foods (bananas, baked white potatoes;
- More frequent urination

Hypoglycemic Agents

- Improve insulin production in body
- Glyberide (Diabeta)
- Report any nausea, vomiting, diarrhea, dizziness, or weakness

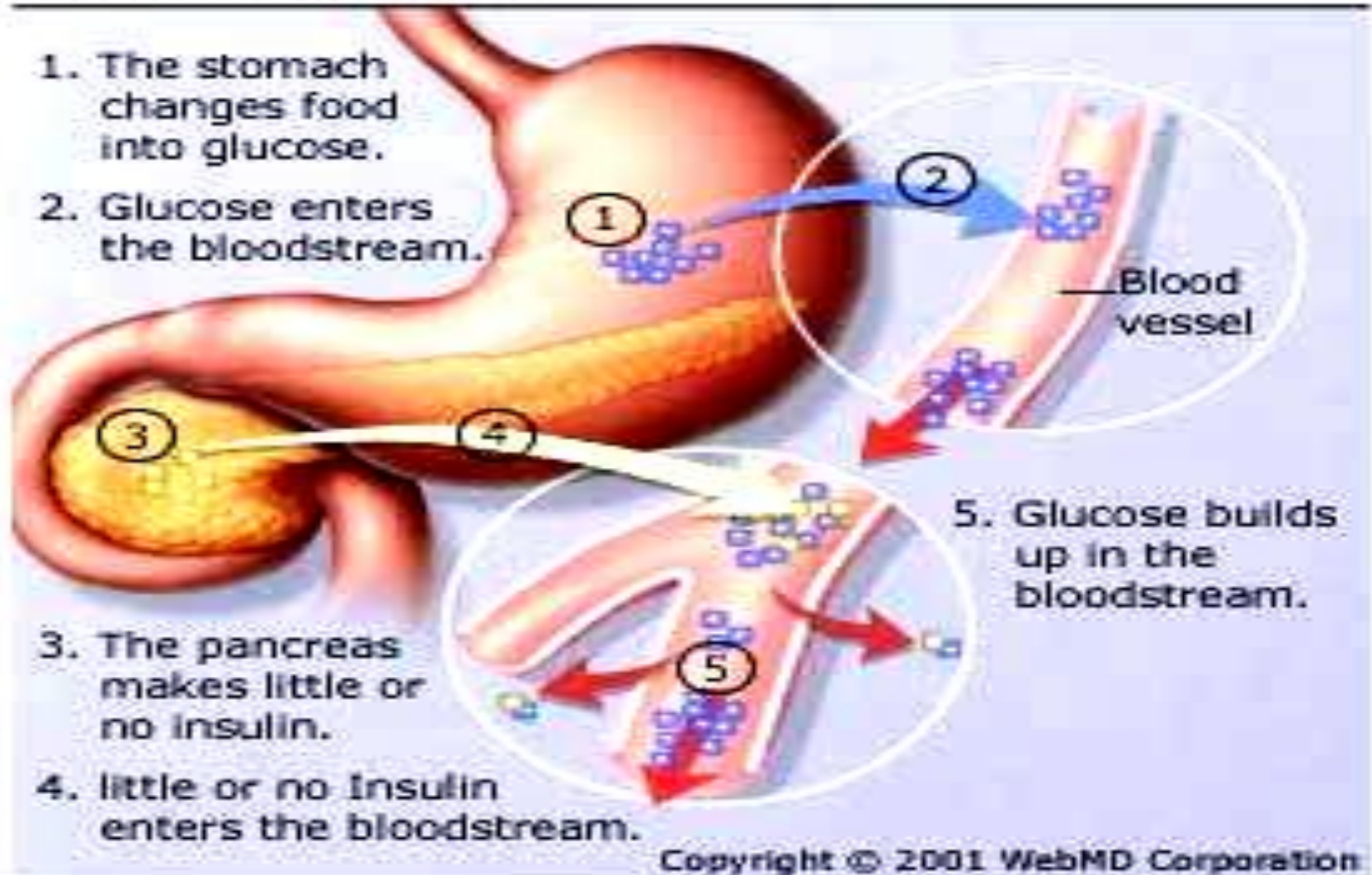
Insulin

- Makes up for lack of natural insulin
- Insulin regular, human biosynthetic (Humulin-R)
- Report any blurred vision, dry mouth, extreme hunger, or chest palpitation

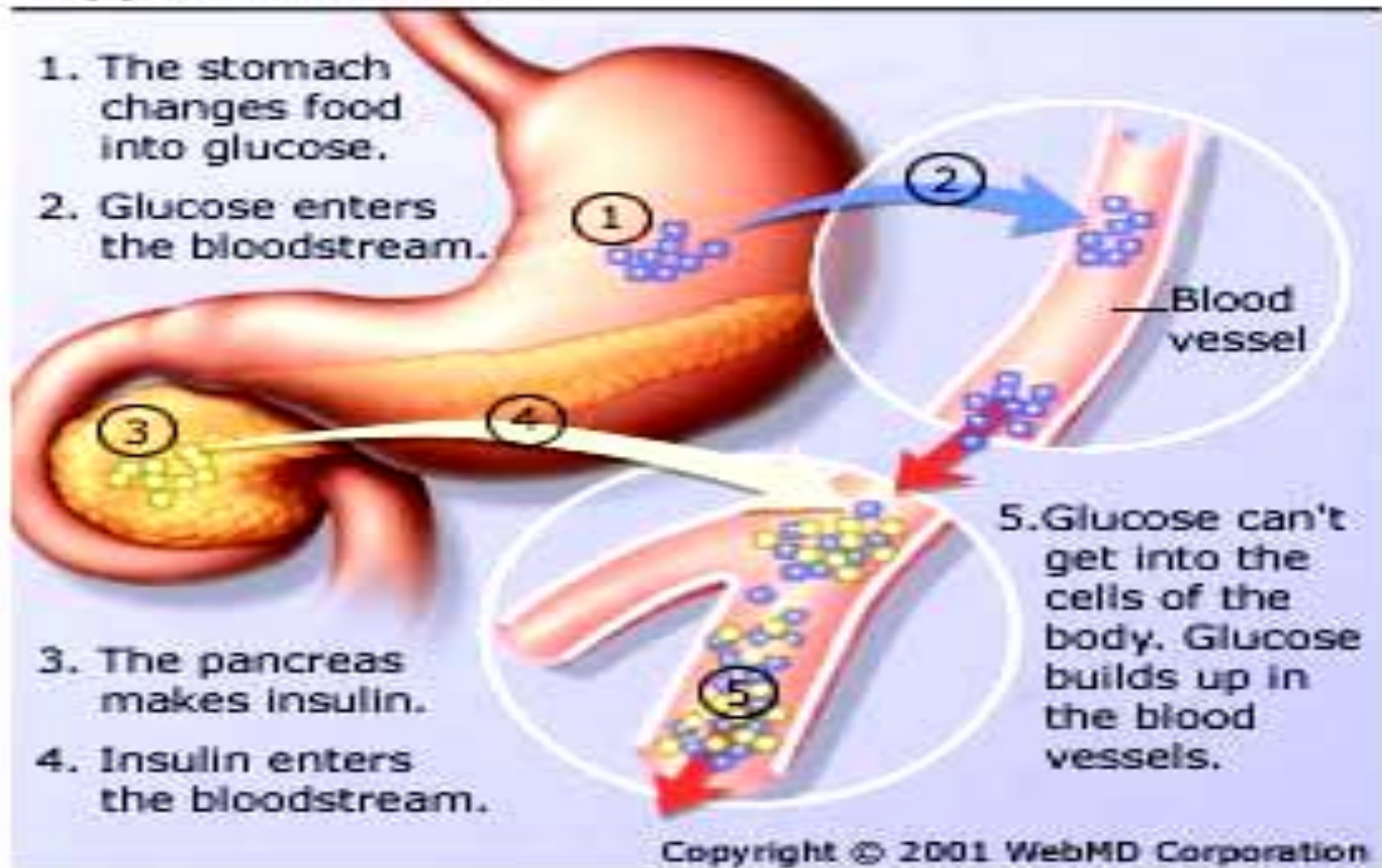
Diabetes

- A condition in which too much glucose (sugar) can accumulate in the blood.
- Your body makes glucose from carbohydrates- foods like bread, potatoes, rice, pasta, milk and fruit. To use this glucose for energy, your body needs insulin.
- Insulin is a hormone that helps your body control the level of glucose in your blood.
- If you have type 1 diabetes, you no longer produce insulin.
- If you have type 2 diabetes, you produce less insulin than normal and your body does not use this insulin effectively (this is called “insulin resistance”).

Type 1 Diabetes



Type 2 Diabetes



Main symptoms of Diabetes

green = more common in Type 1

Central

- Polydipsia
- Polyphagia
- Lethargy
- Stupor

Eyes

- Blurred vision

Systemic

- Weight loss

Breath

- Smell of acetone

Respiratory

- Kussmaul breathing (hyper-ventilation)

Gastric

- Nausea
- Vomiting
- Abdominal pain

Urinary

- Polyuria
- Glycosuria

Table 1 – Insulins available for use in children

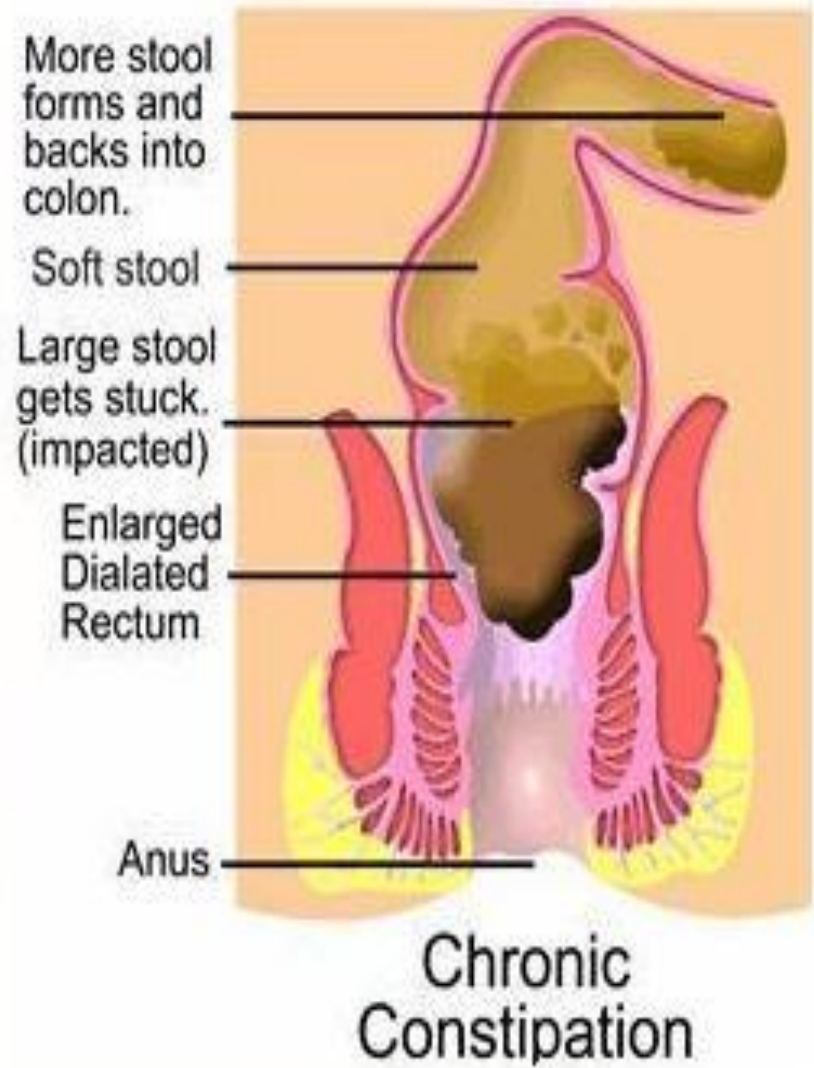
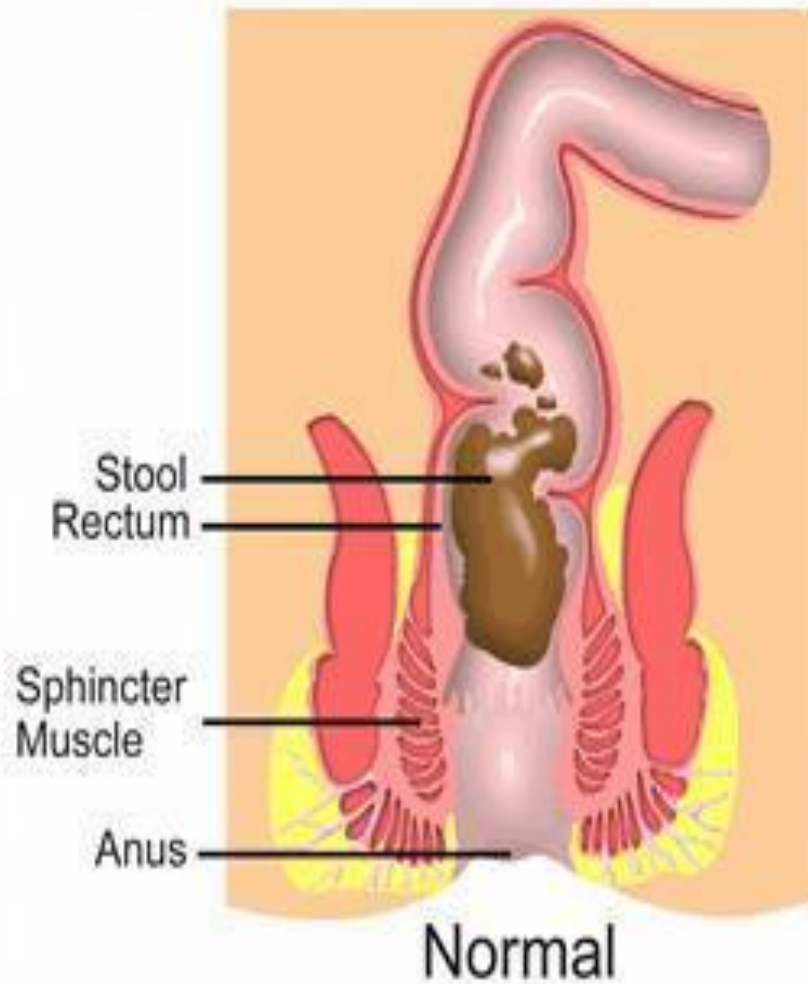
Insulin type (appearance)	Specific insulins available	Onset	Peak	Duration	Administration
Rapid-acting analog (clear)	Glulisine (Apidra) Lispro (Humalog) Aspart (NovoRapid)	10 - 15 min	60 - 90 min	3 - 5 h	Premeal (bolus insulin)
Short-acting (clear)	Human insulin (Humulin R, Novolin ge Toronto)	30 min	2 - 3 h	6.5 h	Premeal (bolus insulin)
Intermediate-acting (cloudy)	Human insulin (Humulin N, Novolin ge NPH)	1 - 3 h	5 - 8 h	up to 18 h	Twice a day (basal insulin)
Long-acting analog (clear)	Glargine (Lantus) Detemir (Levemir)	90 min	none	up to 24 h	Once or twice a day (basal insulin)
Premixed (cloudy)	Short-acting with intermediate OR Rapid-acting analog with intermediate	The numbers indicate the percent of rapid- or short-acting insulin relative to the percent of intermediate-acting insulin (eg, 30% rapid / 70% intermediate)			Usually twice a day

Adapted with permission from the Canadian Diabetes Association 2008 clinical practice guidelines for the prevention and management of diabetes in Canada.¹³



Laxatives

- Help with bowel movements
- Bisacodyl (dulcolax)
- May cause diarrhea, encourage plenty of fluids and high fibre diet to reduce need for laxatives



Constipation

- Constipation is when you lack the ability of having 2-3 bowel movements a week.
- have incomplete evacuations.
- It's considered healthy to make 1-3 bowel movements daily
- Constipation is not necessarily a dangerous disorder; however, leaving constipation untreated can cause discomforting symptoms like abdominal pain, swollen abdomen, vomiting, skin problems, hemorrhoids, infrequent bowel movements, bad breath, and of course body odor.
- common causes of constipation are a lack of fiber, inadequate fluid intake, little to no exercise, over-consumption of dairy products, and preventing yourself from making bowel movements.
- But for some people who have constipation, this problem may be caused by diseases and disorders like hypothyroidism, hemorrhoids, colon cancer, neurological conditions(like Parkinson's disease), metabolic disorder, and a host of other disorders

Nonsteroidal anti-inflammatory drugs (NSAIDs)

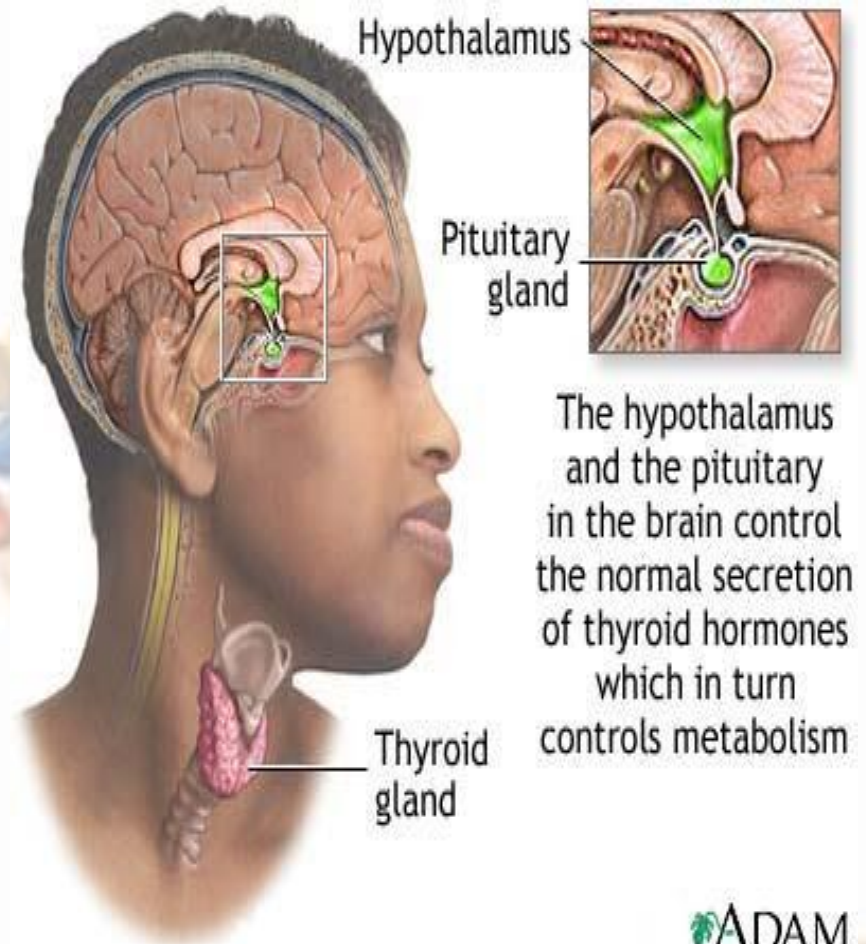
- Reduce pain that comes with swelling
- Ibuprofen (Motrin)
- May cause upset stomach, so should never be taken on an empty stomach

Thyroid replacements

- Make up for lack of natural thyroid
- Levothyroxine sodium (Eltroxin)
- Report menstrual irregularities, N&V

Hypothyroidism

- Your thyroid is a gland that controls many different things in your body, mainly your metabolism. Hypothyroidism means that this gland isn't producing enough hormone to control those necessary processes. Many times, this happens due to an autoimmune disorder that causes your antibodies to attack the thyroid gland



Symptoms of Hypothyroidism

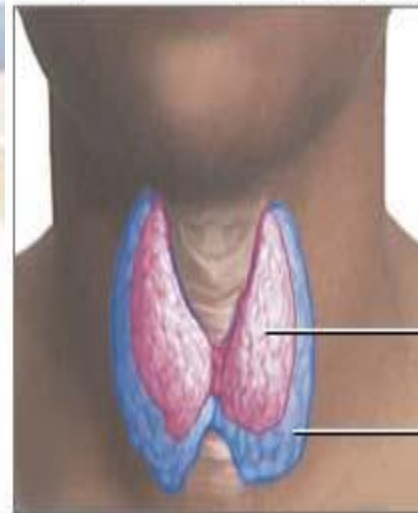


Hyperthyroidism

- hyperthyroidism, a condition in which the thyroid gland produces excessive hormones. Once the disorder has been correctly diagnosed, it is quite easy to treat



Exophthalmos (bulging eyes)



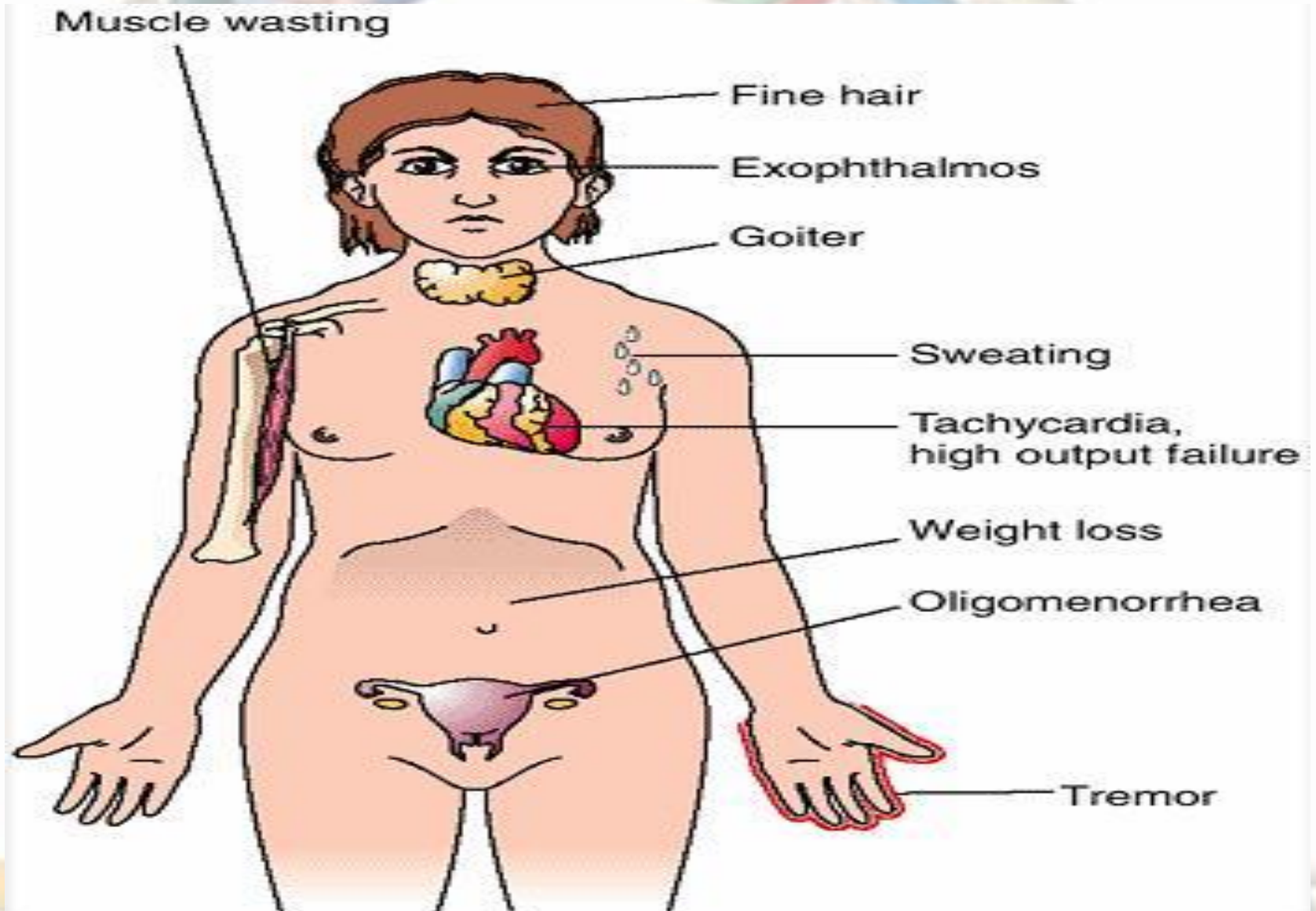
Diffuse goiter

Graves' disease is a common cause of hyperthyroidism, an over-production of thyroid hormone, which causes enlargement of the thyroid and other symptoms such as exophthalmos, heat intolerance and anxiety

Normal thyroid

Enlarged thyroid

ADAM.





Factors Affecting Drug Actions in the Body

Age

- Young children and older adults may absorb, distribute, metabolize, and excrete drugs very differently

Body size

- A dose medication that would be therapeutic in a large overweight adult may be an overdose in a small, thin adult of the same age
- Drug level may be more concentrated in the small person
- Drugs are stored in the adipose tissue and this could lead to a buildup of that drug in the body over time

Sex

- Drugs affect men and women differently
- Depending on their body size, hormones and other factors such as muscle mass

Genetic factors

- Some people may have inherited tendency to react to certain medications
- For example Mrs. A had a very unusual reaction to anaesthetics, doctors may choose not to give the same anaesthetic to her daughter

Emotional state

- A severe emotional state will usually cause a person's heart rate and blood pressure to change
- May change the way the drug is absorbed, metabolized and excreted

Physical condition

- Certain diseases will affect how well a drug is absorbed, distributed, metabolized or excreted
- For example a client with kidney disease may not be able to excrete certain drugs through their urine as a person with healthy kidney



Documentation

Medication Administration Record

- Serves as record for action taken
- Includes:
 - client's name
 - The name, dose, administration instruction for each medication
 - A place to sign or initial after administering the medication

Medication Administration Record

- May contain extra information (client's allergies, expected side effects and special instructions)
- Nurse is responsible for signing and initialing the MAR
- May not need by the client who administer h/her own medications



Understanding Abbreviation

Types of Medications

- elix- elixir
- caps- capsules
- gtt- drops (or a drop- measurement)
- syr- syrup
- tab- tablet
- tr- tincture
- ungt- ointment

Routes

- IV- intravenously
IM- intramuscularly
SC- subcutaneously
po- by mouth

Administration Times

- ac- before meals
- pc- after meals
- bid- twice a day
- tid- three times a day
- qid- four times a day
- h., or hr.- hour
- hs- bedtime
- prn- when needed
- q- every
- qd- every day
- qod- every other day
- q.2h- every 2 hours
- q.4h- every 4 hours
- q.6h- every 6 hours
- q.12h- every 12 hours
- stat- immediately

Other Common Terms

- aa- of each
ad lib- as much as desired
@- at
AD- right ear
AS left ear
c- with
c/o- complains of
DAT- diet as tolerated
d/c- discontinue
d/t- due to
et, &, or +- and
®, or rt- right
- L, or lt- left
L/D- last dose
OD- right eye
OS- left eye
OU- both eyes
qs- quantity sufficient
rep- repeat
Rx- take
s- without
ss- one half
Sig- label

Measurements

- cc- cubic centimetres
- gm- gram
- gtt- a drop (or drops, types)
- L- litre
- U- unit
- ml- millilitre
- mcg- microgram



Rights of Assisting Medication Administration

The right medication

- comparison of the medication to the medication order is imperative. The administrator must only give medication they have prepared and be present when it is taken.



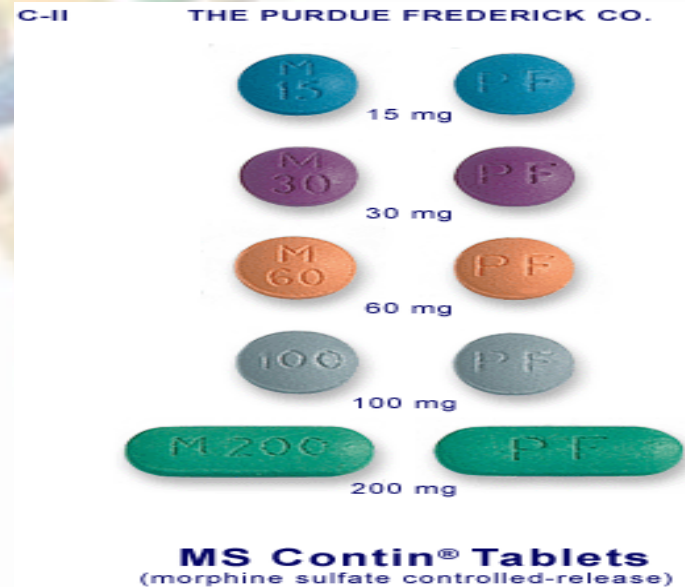


Right medication

- Name of medication is printed on the prescription label on the medication container
- Make sure it is the same medication listed in the MAR and careplan

The right dose

- to ensure that the right dose is given, the administrator must triple check any calculations and have another team member check the calculation.





Your Role

- Listed on the prescription label, care plan, and the MAR
- “take one tablet daily”
- Apply the correct amount
- Ensure client is taking right amount of medication

The right client

- the administrator must identify the client by checking the medication order and the client's identification bracelet to ensure that the right client is receiving the right medication.





Your Role

- Make sure you are assisting the right client
- Clients may have the same or similar names in some homes and facilities

The right route

- the administrator must give the medication via the right route. In preparing the medication, the triple check will identify the route to be given on the medication order





Route

- Oral
- Sublingual
- Topical – skin or mucous membranes; ointments, eye drops
- Inhalants
- Parenteral – IM, IV, SC, insulin

The right time

- administrator will check the medication order to ensure that the medication is given at the right time. The prescriber will identify the times that the medication is to be given.





Right time

- Must be taken at the correct time
- Bid, Tid, qid as stated on the prescriptions
- CP and MAR – exact time
- Client has 0600h, 1400h and 2200h – specified time
- Taking medications at the wrong time can reduce effectiveness
- can cause serious side effects



Right time

- Take on empty stomach- 1 hour before or two hours after meal
- Take with food or milk- reduce stomach irritation and promote absorption

Your Role and Responsibilities

- Confused client
- “ I can never remember”
- “ Do, I take two tablets at 3 o’clock, or three tablets at 2 o’clock
- Report
- Client may need a refresher course

Right day

- Ensure the medication is meant for that specific day





Right Reason

- “I took an extra pill to help me go to sleep”
- Indicate client is unaware of the risk associated with taking medication incorrectly
- Report to supervisor

Right expiry date

- Always checked that the medication has not expired





Right expiration

- Like food has expiry date and shouldn't be taken beyond their expiry dates
- Lose potency
- Change chemically can become toxic
- Check with supervisor when in doubt

Proper documentation

- the administrator will record the client's status prior to the medication administration as well as the medication given, the time it was given, the dose given, and the route it was given in. Then the administrator will follow up and record the client's response to the medication given.



Right Documentation

- Document properly according to agency policy
- Usually documented in the MAR
- Document all the medications that you have assisted
- Ask question from your supervisor to clarify

Pharmacy Stamp	Age 70yrs 1mth D.o.B 2/6/1941	Title, Forename, Surname & Address SMITH John 22 Bridge Street Anytown KB1 5SX
Please don't stamp over age box Number of days' treatment N.B. Ensure dose is stated		
Endorsements	Diamorphine 30mg injection Supply 6(six) ampoules 60mg daily by subcutaneous infusion over 24 hours [No more items on this prescription]	
Signature of Prescriber	Date 02/07/11	
For dispenser No. of Prescns. on form	Anyborough Health Authority Dr D O Good 345543 7 High Street Anytown KB1 CD2 Tel: 0111 222 333	
	PPT Created by: Camla St. Croix PSW Program Director/Instructor	

Phone: 555-3732

DEA # AC1273628

DEA Number

Eva Adams, M.D.
298 Appleby Street
Eden, NY 14057

Prescriber Information

Patient Information

Name Laurel Hardy

Age 41

Address Abel St, Eden

Date 06/16/86

Date Prescription
was Written

Superscription
(Meaning Recipe)

Rx

Phenobarbital 0.075

Pimethicone 0.020

Magnesium Carbonate 0.050

Inscription
(Medication prescribed)

m. fl. 12

Subscription
(Instructions to Pharmacist)

Fig 2 capsules tid and hs

Signa
(Directions for Patient)

Refill _____

E. Adams

M.D.

Special
Instructions

THIS PRESCRIPTION WILL BE FULFILLED ONLY IF THE
PHARMACEUTICAL FIRM "Bayer" IS THE BOX BELOW



Dispense as written

Charting and Documentation

- 1. Do not erase, apply correction fluid or scratch out errors while charting – Draw a single line through error, write error and initial above it.**
- 2. Do not be critical or express personal opinions about the client or other care providers – only objective data should be recorded; client's comments should be quoted.**
- 3. Correct all errors promptly – be sure information is accurate.**
- 4. Record all facts – do not speculate or guess, be specific with your information.**
- 5. Use non erasable ink and make entries legible.**

Charting and Documentation

- 6. Do not leave any blank spaces – draw a line to the end of the line.**
- 7. Do not chart for anyone else – only chart what activities you have performed.**
- 8. If an order is questioned – record that you sought clarification – you are responsible for your actions.**
- 9. Begin each entry with the date, time, and end each entry with your signature and title.**



Medication Error

Medication Error

- Report immediately to supervisor
- Supervisor will assess the situation and determine the next course of action
- Incident report must be filled

Your Role and Responsibilities

- If you believe that you have made a drug error (or you noticed a drug error that might have been committed by someone else. Report immediately
- Failing to report= trouble
- You are required even if you think it might get you into trouble



Nursing Skills Videos

<http://nursingvideos.wilkes.edu/>



Practice Skills

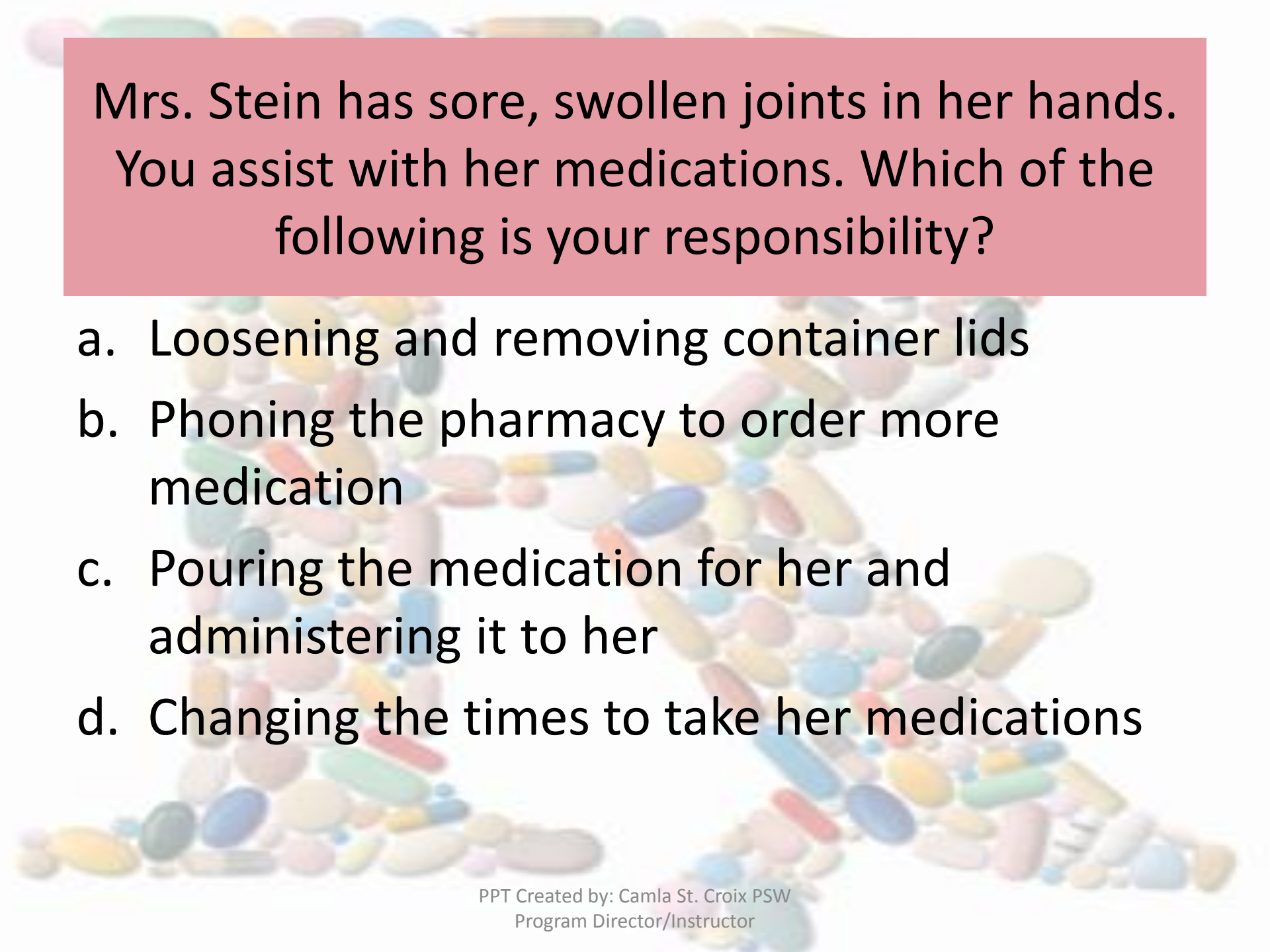
Assisting with Medications



Review Questions

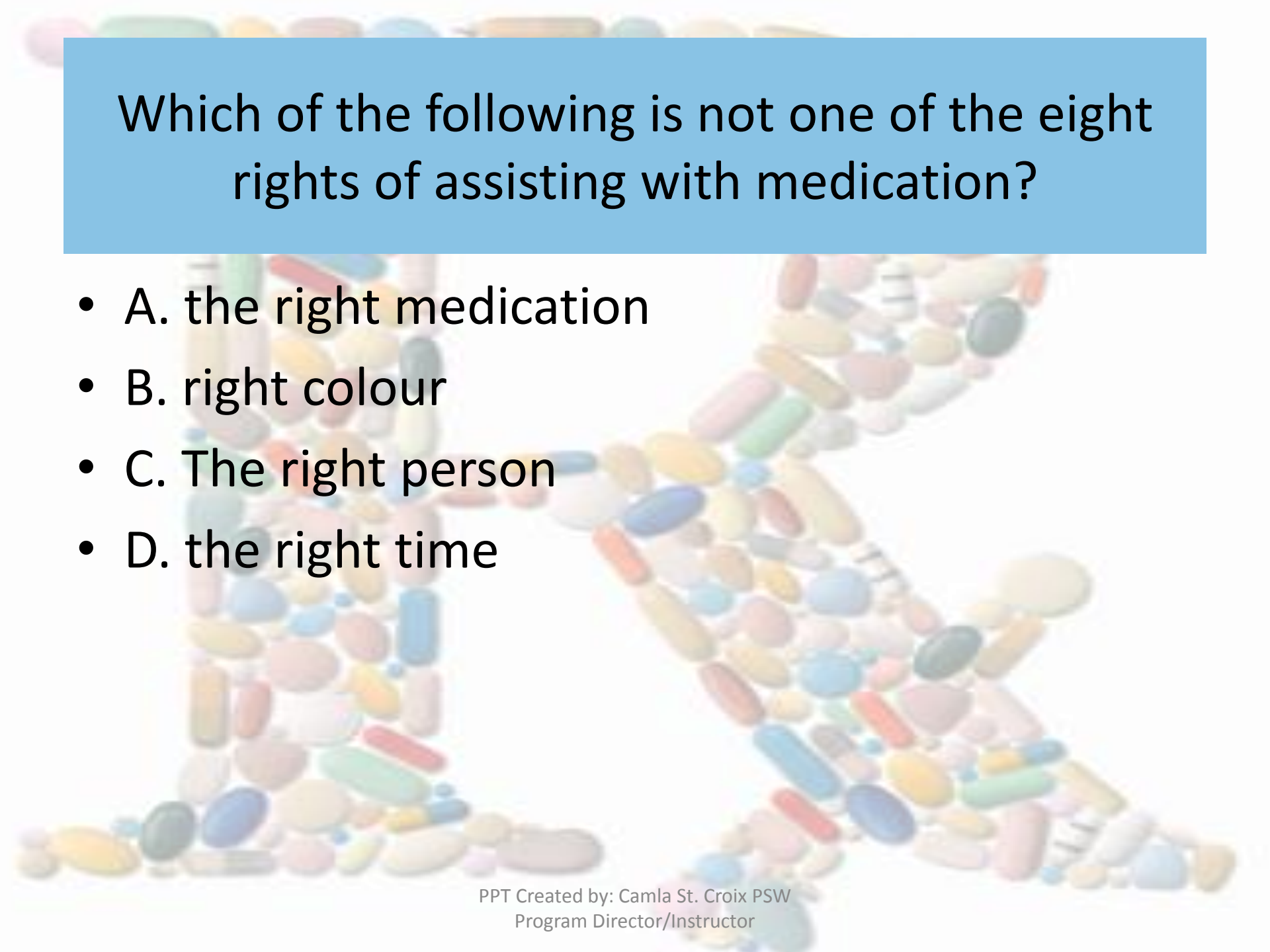
True or False

1. Support workers routinely administer medications
2. A lozenge is a type of medication
3. OTC medications require a prescription
4. You can purchase OTC medications for client
5. Side effects do not need to be reported
6. You are responsible for filling pill boxes
7. Medications can be taken at any time, as long as the correct dose is given
8. Medications should always be stored in the kitchen cabinet above the stove



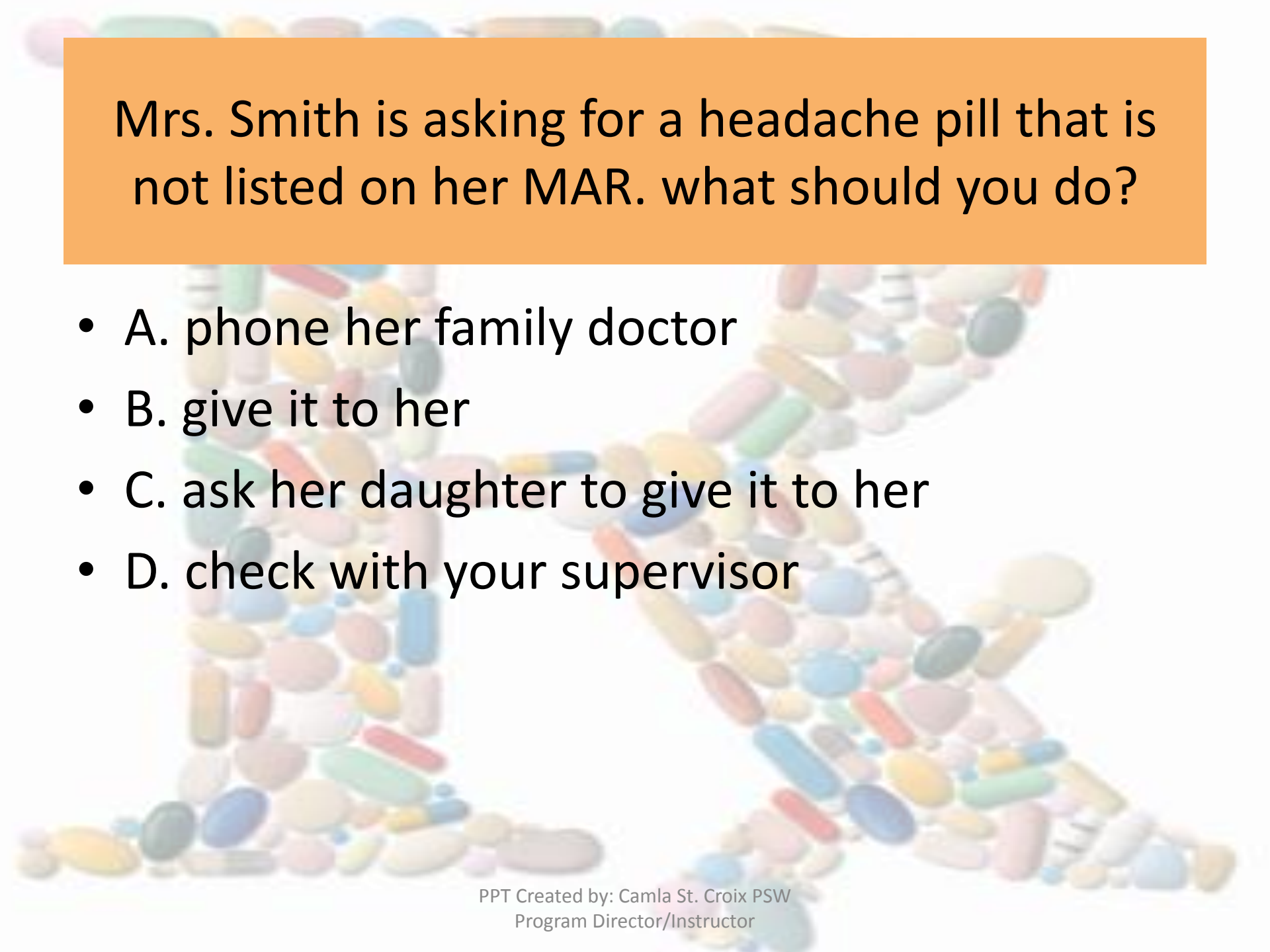
Mrs. Stein has sore, swollen joints in her hands. You assist with her medications. Which of the following is your responsibility?

- a. Loosening and removing container lids
- b. Phoning the pharmacy to order more medication
- c. Pouring the medication for her and administering it to her
- d. Changing the times to take her medications



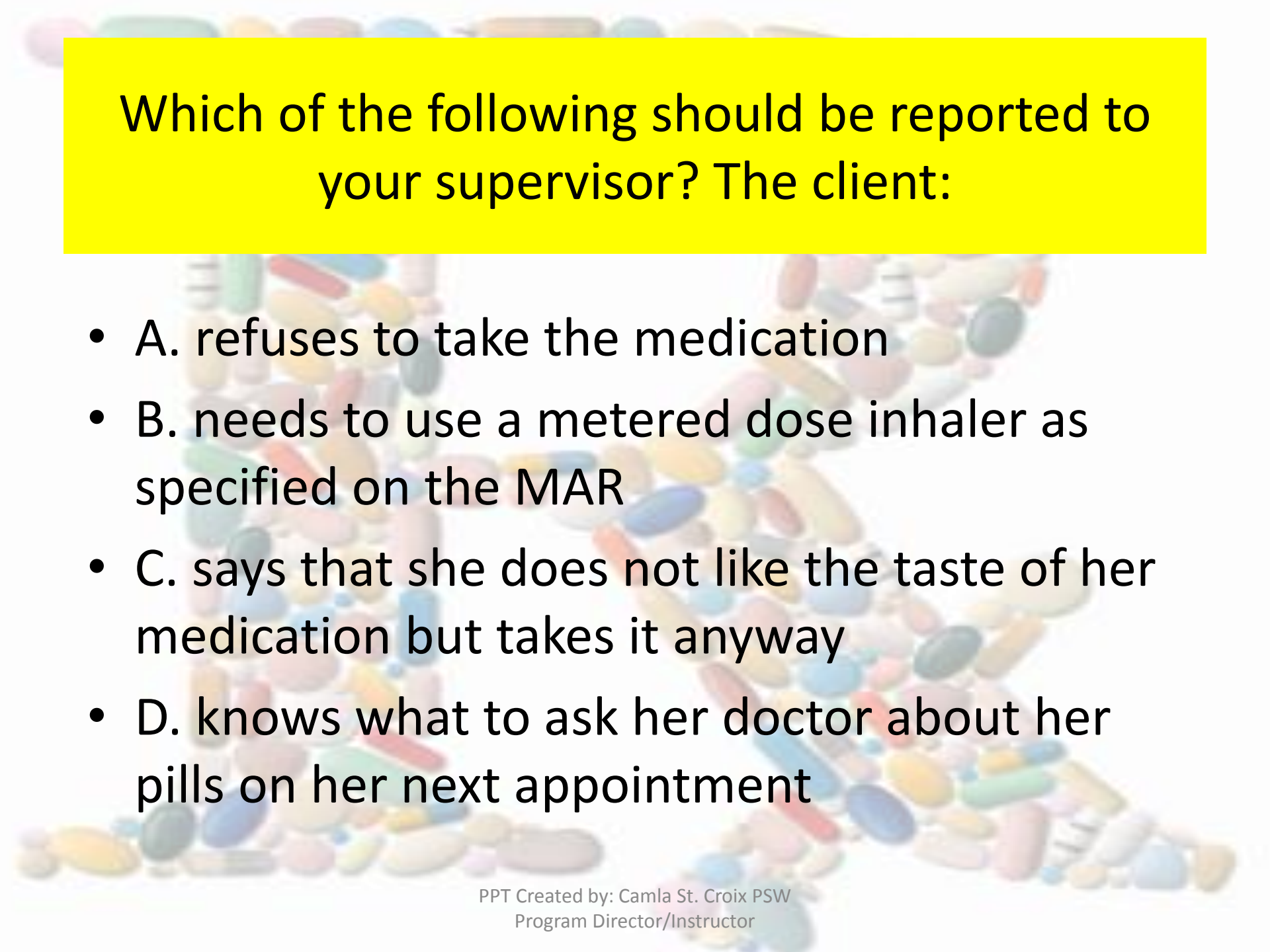
Which of the following is not one of the eight rights of assisting with medication?

- A. the right medication
- B. right colour
- C. The right person
- D. the right time



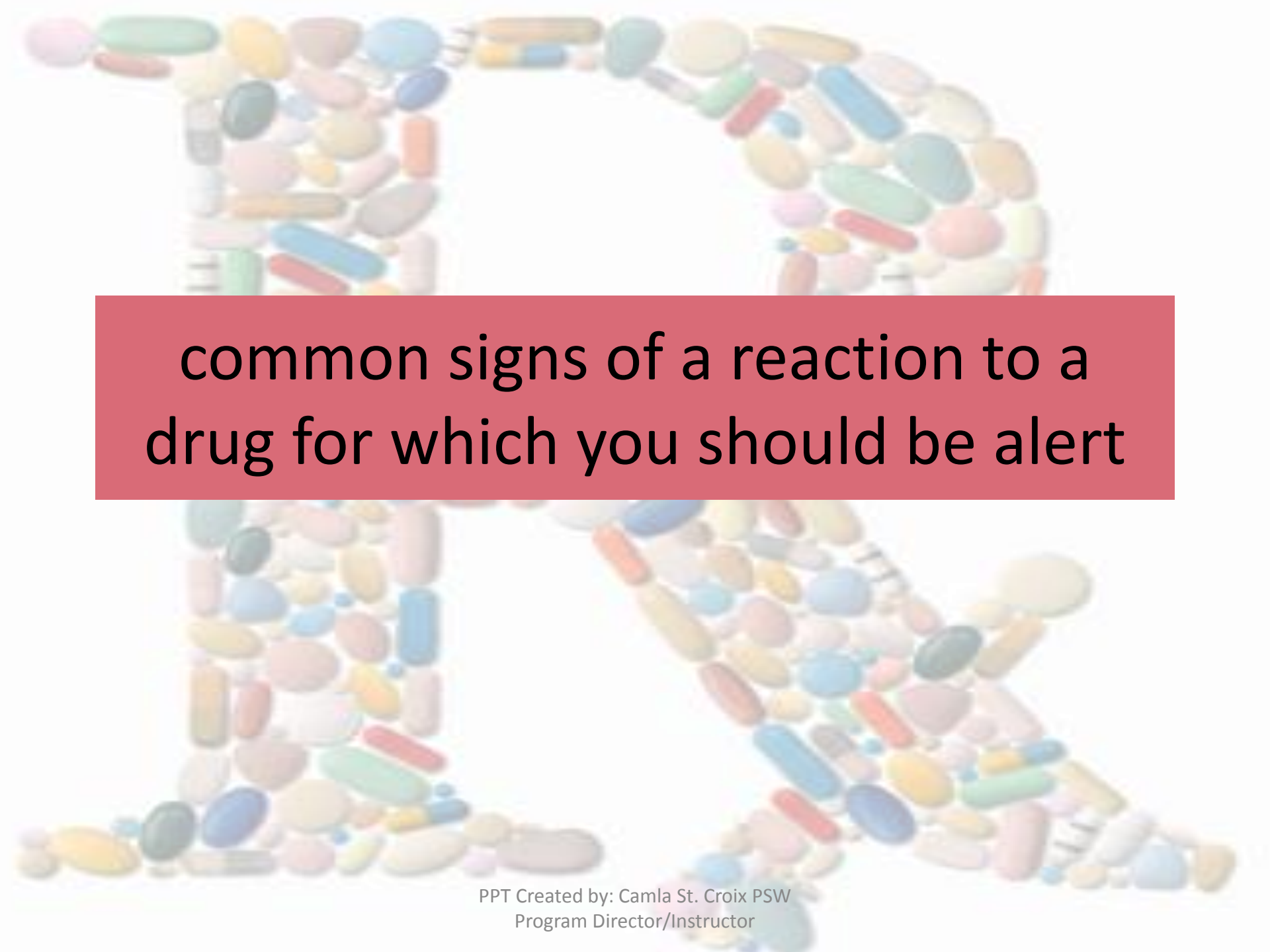
Mrs. Smith is asking for a headache pill that is not listed on her MAR. what should you do?

- A. phone her family doctor
- B. give it to her
- C. ask her daughter to give it to her
- D. check with your supervisor



Which of the following should be reported to your supervisor? The client:

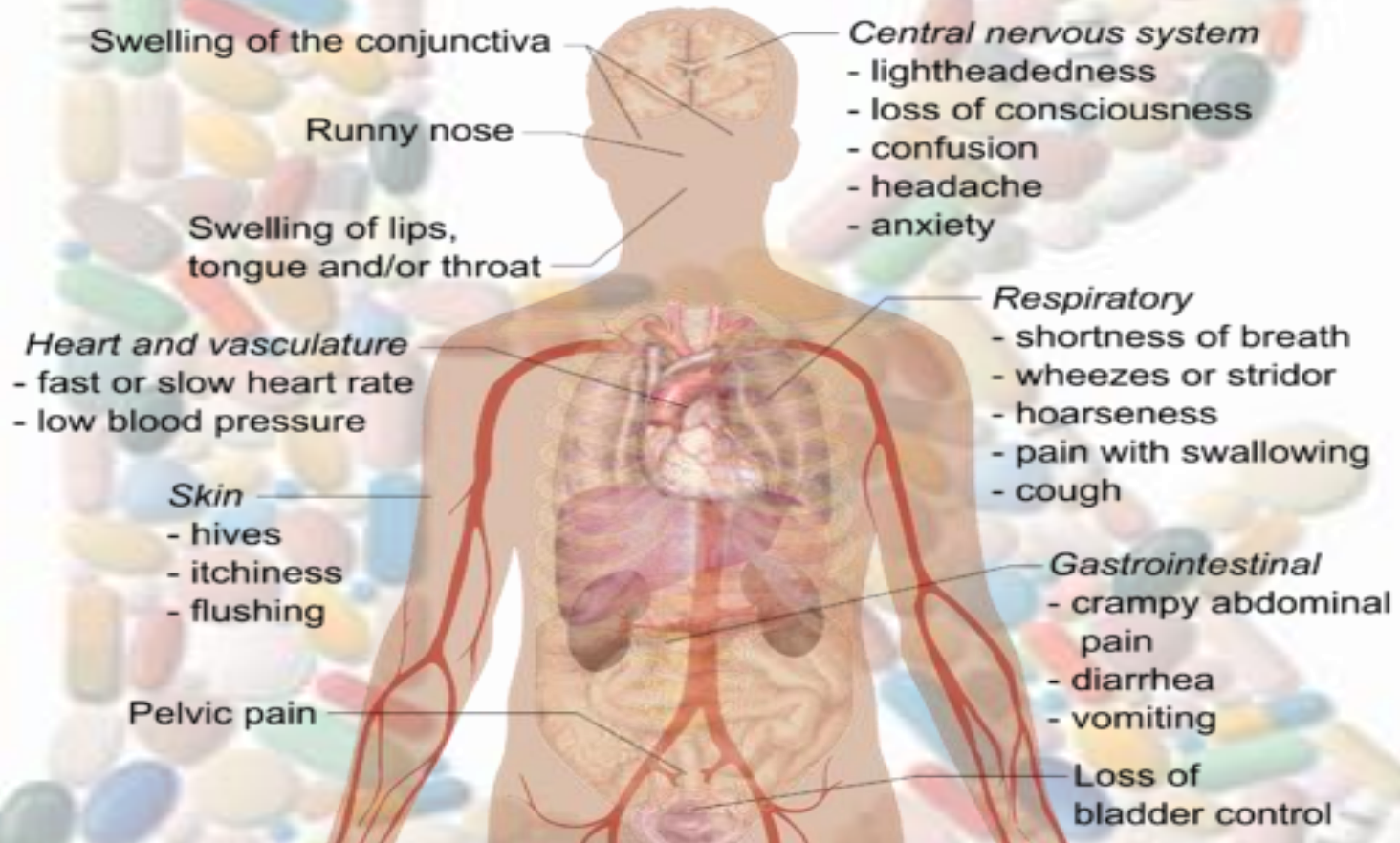
- A. refuses to take the medication
- B. needs to use a metered dose inhaler as specified on the MAR
- C. says that she does not like the taste of her medication but takes it anyway
- D. knows what to ask her doctor about her pills on her next appointment



common signs of a reaction to a
drug for which you should be alert

Answer

Signs and symptoms of Anaphylaxis



Read and interpret the following prescription for medication.

- Prescription: #3302
- Cefalexin 500 mg
- Philips, May
- Directions: Give two tablets every 12 hours for 14 days.
- Without food for 1 hr before taking.
- Expires: Jul/99
- Qty: 56
- 0 Refills

Case Study

Mrs. Silver age 89, lives in her own home. Each morning when she arises she takes her oral medications including: digoxin, hydrochlorothiazide and an antibiotic which she has recently been prescribed

One morning, while you are helping her get dressed you notice that her medications haven't been taken. She tells you that she feels good today and doesn't need them.

- Describe the steps you would take in order when giving two ear drops into the left ear of an adult.



Answer

- explain that she needs them every day
- encourage and assist
- report to supervisor - record



Case Study

PPT Created by: Camla St. Croix PSW
Program Director/Instructor