DO NOT DELEGATE WHAT YOU CAN EAT!

Evaluate

Assess

Teach

Don’t delegate Unstable patients
Initial Assessment, Teaching, IV drips, Evaluations only RN

AIRBORNE TRANSMISSION-BASED PRECAUTIONS: MTV

Measles

TB

Varicella-Chicken Pox/**H**erpes Zoster-Shingles

Private Room: Negative pressure with 6-12 air exchanges/hr

Mask: N95 for TB

DROPLET TRANSMISSION-BASED PRECAUTIONS: Think of SPIDERMAN!

Sepsis

Scarlet fever

Streptococcal Pharyngitis (Streptococcus group A/ Strep Throat): Can Lead to Glomerulonephritis & Rheumatic Fever.

Parvovirus B19

Pneumonia

Pertussis

Influenza/ Haemophilus influenza type B

Diphtheria (Pharyngeal): Serious bacterial infection.

Epiglottitis: Medial Emergency! No Throat Inspection.

Rubella/ German measles

Chips

Meningitis/ Neisseria Meningitidis

Mycoplasma/ Meningeal Pneumonia

An - Adenovirus

Private Room or Cohort	Surgical mask PRN for Procedures
Mask	3ft Distance

CONTACT PRECAUTION TRANSMISSION-BASED PRECAUTIONS: MRS.WEE

Multidrug resistant organism/ MRSA/ VRE

Respiratory infection

Skin infections

Wound infection

Enteric infection - Clostridium Difficile

Eye infection – Conjunctivitis

***MRSA -** Contact precaution ONLY. Use Chlorhexidine Wipe!

***VRSA -** Contact & Airborne precaution (Private room, door closed, negative pressure)

***SARS** (Severe Acute Resp Syndrome) Airborne & Contact (just like Varicella)

SKIN INFECTIONS- VCHIPS- CONTACT

Varicella Zoster

Cutaneous Diphtheria (Bacteria Infection in the Wound)

Herpes Simplex

Impetigo (Bacterial Skin Infection)

Pediculosis (Lice)

Scabies (Itchy Skin condition. Burrowing Trail of the Scabies Mite)

Middle East Respiratory Syndrome (MERS): Viral respiratory illness caused by Coronavirus (MERS-CoV).

SS: Fever, Cough, SOB, and Death. The Incubation Period is 5-6 days but can range from 2-14 days.

CDC: Standard (Gloves), Contact (Gown), Eye Protection (Goggles), Airborne Precautions (N95)

Negative room: **Negative** disease (TB, Disseminated Herpes Zoster)

Positive room: **Protect** the Patient (HIV, Cancer)

Addison's= hyponatremia, hypotension, decreased blood vol, hypoglycemia, hyperKalemia, HyperCalcemia.

Cushing's= HyperNatremia, HyperTension, Incr. Blood Vol, HyperGlycemia, hypokalemia, hypocalcemia.

Managing Stress in a patient with Adrenal Insufficiency (**Addison's**) is paramount, because if the Adrenal glands are stressed further it could result in Addisonian Crisis.

Addison's: Remember BP is the most Important assessment parameter, as it causes Severe Hypotension.

Addison's: (need to "add" hormone): Hypoglycemia, Dark pigmentation, Decr. Resistance to Stress, fractures, Alopecia, Weight Loss, GI distress. Vitiligo. Mood swings (Normal)

Need to Report S/S of Infection/ Fever (Addisonian Crisis)

Tx: Mineral Corticoids.

Addisonian Crisis: Hypoglycemia, Confusion, n/v, Abd Pain, Extreme Weakness, Dehydration, Decr. BP.

Cushings: (have extra "Cushion" of Hormones)**:** Hyperglycemia, prone to Infection, Muscle Wasting, Weakness, Edema, HTN, Hirsutism, Moonfaced/Buffalo Hump

Cause: Excessive production of Corticotropin (Hyperplasia of the Adrenal Cortex) & Cortisol-secreting Adrenal Tumor.

Prednisone Toxicity: Cushing's syndrome- Buffalo Hump, Moon face, Hyperglycemia, Hypertension.

Acetaminophen: 10-20. Max 4000mg per day.

Acetaminophen Poisoning: Possible Liver Failure for about 4 days. Close observation required.

Tx: (Antidote) n-AcetylCysteine/Mucomyst

AcetylSalicyclic Acid (ASA): Metabolic Acidosis.

S/S: Tinnitus, Coffee Ground Emesis (Old Blood), Black tarry stools (Melena), Bruising, Tachycardia, Hypotension, GI Ulcers.

Tx: Activated Charcoal, then IV Na^+ Carbonate.

Acromegaly: Coarse Facial feature. Assess Cardiac Problems (eg. S3, S4).

Acute Respiratory Distress Syndrome (ARDS):

The 1st Sign is Incr. Respirations. Later comes Dyspnea, Retractions, Air Hunger, Cyanosis.

Cardinal sign is Hypoxemia (Low O_2 level in tissues).

Refractory Hypoxemia is the hallmark of ARDS, a progressive form of acute respiratory failure that has a high Mortality rate. It can develop following a Pulmonary Insult (eg, aspiration, pneumonia, toxic inhalation) or nonpulmonary insult (eg, sepsis, multiple blood transfusions, trauma) to the Lung.

The Inability to improve Oxygenation With Incr. in O_2 concentration.

The insult triggers a Massive Inflammatory response that causes the lung tissue to release inflammatory mediators (leukotrienes, proteases) that cause damage to the alveolar-capillary (A-C) membrane. As a result of the damage, the A-C membrane becomes more permeable, and intravascular fluid then leaks into the alveolar space, resulting in a Noncardiogenic Pulmonary Edema.

The lungs become Stiff and Noncompliant, which makes Ventilation and Oxygenation less than optimal and results in increased work of breathing, tachypnea and alkalosis, atelectasis, and refractory hypoxemia.

ARDS (fluids in alveoli), DIC (Disseminated Intravascular Coagulation) are always Secondary to something else (another disease process). – Impaired Gas Exchange.

PreOxygenated with 100% O_2, and **Suction** should be applied for no more than 10 seconds to prevent hypoxia. The nurse must wait 1-2 minutes between passes to ventilate to prevent hypoxia.

Deep reBreathing should be encouraged.

The Suction catheter should be No more than half the width of the artificial airway and inserted without suction. Don Sterile gloves if it is not have a closed suction system.

suction should be set at Medium Pressure (100-120 mm Hg for adults, 50-75 mm Hg for children) as Excess pressure will traumatize the mucosa and can cause hypoxia.

Clients usually Cough as the catheter enters the trachea, and this helps loosen secretions. The catheter should be advanced until resistance is felt and then, to prevent mucosal damage, Retracted 1 cm before applying suction.

You will ask every **New Admission** if he has an Advance Directive, and if not you will explain it, and he will have the option to sign or not.

Alcohol: a Toxin that causes CNS Depression. Alcohol withdrawal generally starts within 8 hours after the last drink and peaks at 24-72 hours.

Acute alcohol intoxication: Confusion, Coordination Impairment, Drowsiness, Slurred Speech, Mood Swings, and Uninhibited actions. Hypoglycemia.

Chronic **Alcohol Abuse/Alcoholism:** Benzodiapepine (lorazepam, diazepam, chlordiazepoxide) – to Treat Gross Tremors, Seizures, Delirium symptom.

Chlordiazepoxide: For Alcohol withdrawal. Don't take with Alcohol (terrible N/V can occur)

Thiamine (B_1): to treat Wernicke *Encephalopathy*, a Serious complication that manifests as altered mental status, oculomotor dysfunction, and ataxia. Also can lead to death or neurologic morbidity (Korsakoff Psychosis). Give before or with IV Glucose.

Alzheimer's Disease: Chronic, progressive, degenerative cognitive disorder that accounts for more than 60% of All Dementias.

Memantine: Cognition Enhancing medication. It can treat Dementia associated with Alzheimer's disease.

Improve symptoms cognition, Daily function, Behavioral problems.

Donepezil: Cognition Enhancing medication.

Amyotrophic Lateral Sclerosis (ALS): a condition in which there is a Progressive, Degeneration of Motor Neurons in both the Upper & Lower Motor Neuron systems.

Upper Motor Neuron issue: Hyper Reflexes

Lower Motor Neuron issure: Absent Reflexes

S/S: Limb weakness, Dysarthria (difficulty speaking), and Dysphagia.

Iron:

IM: should be given Z-track so they don't leak into SQ tissues

IV: Iron Dextran (Imferon). Can cause hypersensitivity reaction (anaphylaxis), test dose needs to be given First.

PO: give with Vitamin C or on an Empty stomach or Btw Meals. Place it on the back of the Month (Stain teeth). Expect Black/Green Tarry Stools.

Take iron elixir with juice or water.... Never with milk (Vit D).

Iron Poisoning: GI Bleed.

Antidote: Deferoxamine

Iron Deficiency Anemia: Microcytic anemia.

S/S: Fatigue, Pallor, Fissures at the corner of the mouth, Spooning of the fingernail, Reduced exercise tolerance

Thalassemia Major (Cooley's Anemia)**:** Microcytic anemia.

S/S: Maxillary Hyperplasia, Frontal Bossing.

Caused by: Defects in both Beta-chains of the Hgb molecule.

Pernicious Anemia: Macrocytic anemia, Lack of required Intrinsic factor (B_{12} Deficiency)

S/S: Pallor, Tachycardia, Sore Red Tongue (Beefy tongue), Enlarged Liver that can lead to R-sided HF.

Take Vit. B_{12} for life.

Shilling Test: Test for Pernicious Anemia. How well one absorbs Vit B_{12}

Folate (Folic Acid) Deficiency: Macrocytic anemia.

Risk: Alcoholism or Diet Low in Vegetables.

S/S: Stomatitis, Ulcerations on the tongue. Dysphagia, Flatulence, watery Diarrhea

Aplastic Anemia: Normocytic Anemia. Decline in blood cell production r/t to Bone Marrow Depression.

Can cause an Extremely Low Hgb of 7 $^{g}/_{dL}$

Severe Anemia: (Female hgb 11.7 ~ 15.5) Tachycardia. SOB (Dyspnea). Pallor.

(Male hgb 13.2 ~ 17.3)

Anorexic: Absence of Menstruation leads to Osteoporosis**.**

Bulimia: Chipmunk Face.

Antibiotic:

Obtain Cultures before starting IV antibiotics.

IV push should go over at least 2 Minutes.

Always check for Allergies before Administering (especially PCN).

Make sure Culture & Sensitivity has been done before First dose.

Give Prophylactic Antibiotic therapy before any Invasive Procedure.

Aminoglycocide (_Mycin e.g. Vancomycin; except Erythromycin): Cause Nephrotoxicity and Ototoxicity.

Adverse Effects are Bean Shaped - Nephrotoxic to Kidneys & Ototoxic to Ears

Macrolide (Azithromycin, Erythromycin, Clarithromycin): can cause Prolonged QT interval. My lead to Torsade de Pointes (Life-threatening Arrhythmias).

Antacids will Limit the Absorption of the antibiotics.

Concurrent use of other prolong QT interval (Amiodarone, Sotalol, Haloperidol, Ziprasidone, Azole, Antifungals) will Incr. the risk.

Risk of Hepatotoxicity: when taken in High doses. Report Elevated AST and ALT.

Sulfamethoxazole/Trimethoprim: (Tx for UTI, PJP). Don’t take if Allergic to Sulfa drugs.

Drink plenty of fluids.

S/S: Diarrhea

Penicillin Allergy: No Cephalexin, Cephalosporin.

Amphotericin B: (antifungal) causes Hypokalemia. Premeditate Before giving. Pts will most likely get a Fever.

Mebendazole: (antiparasite) Take it with High Fat diet (increases absorption).

Anticholinergic Effects: Assessment

Blocks the action of Acetylcholine (Neurotransmitter), blocks involuntary muscle movement.

Many antihistamine (diphenhydramine) have anticholinergic effect.

Dry mouth (Xerostomia)- can't spit

Urinary retention- can't pee

Constipated- can't poop

Blurred vision- can't see

Decreased Acetylcholine is related to Senile Dementia.

Glucagon increases the effects of Oral **Anticoagulants** (Rivaroxaban).

Appendicitis: Pain is in RL quadrant with Rebound Tenderness. Continuous. Guarding. Anorexia. N/V.

McBurney's Point – pain in RLQ indicative of appendicitis.

Position on Right side with legs flexed After Appendectomy.

Risk for Peritonitis.

Peritonitis: Mucus in Ileal Conduit is expected.

Blumberg's Sign: Presence of rebound tenderness in the abdomen.

Aortic Dissection: Risk Factor: HTN

S/S: (Ascending)- Chest Pain, Radiate to the Back

(Descending)- Abrupt in Onset, “Worst Ever” “Tearing”, Ripping Pain, Moving Back Pain, Epigastric Pain

Abdominal Aortic Aneurysm (AAA): Definitive Diagnosis- CT scan.

Hypoactive BS for few days after the Surgery.

Computed Tomography (CT) Scan: Assess Allergies

Osteoarthritis: a Degenerative Disease, causing pain With Activity.

Inflammation occurs, but the joint does Not usually become swollen or red.

It commonly affects the Larger, weight-bearing joints and affects both genders equally.

Rheumatoid Arthritis: causes Pain and Inflammation After periods of rest.

It affects the Small joints (like fingers) and is more common in women.

Pain is usually the Highest Priority.

Heat for Chronic (Rheumatoid Arthritis): Warm Shower/Bath in the Morning.

Swimming is the Best.

Order of **Assessment**: Inspection, Palpation, Percussion and Auscultation. Except…

Abdomen Assessment: Inspect, Auscultate, Percuss then Palpate (Last, bc it may induce pain)

Assessment with Kids: Least invasive to Most invasive.

An example of when you would **Implement** Before going through a bunch of Assessments is when someone is experiencing Anaphylaxis. Get the Ordered Epinephrine in them STAT, especially if they clearly States the S/S (Difficulty Breathing, Increasing Anxiety, etc.)

Anaphylaxis is a Medical Emergency.

Epinephrine Injection is the Only option for treating anaphylaxis.

Asthma:

Wheezing on Expiration.

Coughing Without other s/s is suggestive of asthma. If they stop Wheezing; it could mean it is Worsening.

Hyperrsonance: Percussed over Hyperinflated (air) Lung (Asthma, Emphysema).

Asthma and Arthritis: Swimming Best

Avoid ASA, NSAID (ibuprofen), and Beta Blockers.

Asthma has Intercostal Retractions (be Concerned)

Exacerbation: Acute, Distress. Wheezing, Dyspnea, Sternal Retraction, Anxiety.

Status Asthmaticus: Acute, Prolonged, and Severe Asthmatic Attack that is unresponsive to usual treatment. Hospitalization is usually required.

When using a Bronchodilator inhaler in conjunction with a Glucocorticoid inhaler, administer the Bronchodilator First.

Theophylline (Bronchodilator): Therapeutic Drug level: 10-20

Tx: of Asthma or COPD

Increases the Risk of Digoxin Toxicity, Decreases the effects of Lithium and Phenytoin.

Causes GI upset, give with food.

Cromoglicic Acid (helps reduce Inflammation): an inhaler used to treat Allergy Induced Asthma.

Not for acute asthma attack.

Before Pulmonary Function Tests (PFT's): Hold the Bronchodilators. Stop Smoking for 4 hr prior.

Incentive Spirometry: 1) Sit upright 2) Exhale 3) Insert mouthpiece 4) Inhale for 3 sec., then Hold for 10 sec.

For Prevention of Atelectasis.

Atropine: used to Decrease Secretions

Atropine Blocks Acetylcholine (remember it reduces secretions).

Atropine Overdose: Hot as a Hare (Temp), Mad as a Hatter (LOC), Red as a Beet (Flushed face) and Dry as a Bone (Thirsty)

ADHD: Inattention, Hyperactivity, Impulsivity.

Methylphenidate/ Ritalin: Assess for Heart related side effects report immediately.

May need a Drug Holiday- it Stunts Growth.

Dextroamphetamine: may alter Insulin needs, Avoid taking with MAOI's, take in Morning (Insomnia possible side effect)

Atomoxetine: Norepinephrine-Specific Reuptake Inhibitor, and can be used for Depression.

Autonomic Dysreflexia/Hyperreflexia: Neuro T6 or above. Life-threatening emergency.

Uncompensated SNS stimulation (Inhibited Sympathetic Response)

Tigger by: Bladder distention and Bowel impaction

S/S: pounding/severe HA, profuse Sweating (Diaphoresis), Nasal Congestion, Bradycardia (30~40), Flushing, Piloerection (goose bumps), Nausea, Seizure, Uncontrolled HTN.

Can occur weeks to years after the injury.

Tx: Place client in sitting position (Elevate Hob) first before any other implementation.

High Fowler's (90^{o}): assist w/ventilation & prevention of HtN Stroke!

Loosen constrictive clothing (Decr. skin stimulation)

SBP> 300mmHg. Administer antihypertensive meds (may cause stroke, MI, seizure)

Most spinal cord injuries are at the Cervical or Lumbar regions.

Spinal Shock occurs Immediately after Spinal Injury

Halo: remember Safety First; have a Screwdriver nearby.

Myelogram: NPO 4-6hr, allergy hx, Phenothiazine, CNS depressants, and Stimulants withheld 48hr prior, table will be moved to various positions during test.

Post: Neuro q2-4, Water Soluble HOB Up.

Oil Soluble HOB Down (Lie Flat Supine, to prevent HA, and Leaking of CSF) oral analgesics for HA, encourage PO fluids, assess for Distended Bladder, Inspect Site.

Benign Prostatic Hyperplasia (BPH): Enlarged Prostate. Reduced size & force of urine.

Tamsulosin, Terazosin, Prazosin (Antitensive med): Alpha^{1} Antagonist: Cause Orthostatic Hypotension & Dizziness. Take it at Bedtime to avoid Syncope and Dizziness or Lightheadedness.

Water Intoxication will be Evidenced by Drowsiness and Altered Mental Status in a patient with TURP Syndrome, or as an Adverse Reaction to Desmopressin (for Diabetes Insipidus).

Benzodiazepine:

Alprazolam/ Xanax

Clonazepam/ Klonopin

Diazepam/ Distat/ Valium: Status Epilepticus & to treat Anxiety.

Lorazepam/ Ativan

Midazolam/ Versed: Surgery

Zolpidem/ Ambien

During **Continuous Bladder Irrigation** (CBI): Catheter is Taped to Thigh so Leg should be kept Straight.

No other positioning restrictions.

Maintain Urine that's Pale Pink-Tinged. Red would indicate Active Bleeding.

Bladder Cancer: Painless Hematuria

A patient with a Low Hemoglobin and/or Hematocrit should be evaluated for Signs of **Bleeding**, such as Dark Stools.

Blood Transfusion: Sign of Allergies in order:

1. Flank pain
2. Frequent swallowing
3. Rashes
4. Fever
5. Chills

Botox (Botulin Toxin):

Used with Strabismus (Patch the Good eye, so the Weaker eye can get stronger).

To relax Vocal Cords in Spasmodic Dysphonia.

Bowel Sounds: Normal: High-Pitched, Gurgling sounds.

Cardiovascular Bruits: (Swishing, Humming, Buzzing): usually indicate Arterial narrowing (Obstruction) or dilation (Aneurysm).

After Surgery, BS are Absent first 24-48 hrs. Return to the Small intestine in 24hr; Large intestine may delayed 3~5 days.

Borborygmi Sounds: are Loud, Gurgling sounds suggesting increased Peristalsis (Gastroenteritis, Diarrhea).

Obstructed Ileostomy (Bowel Obstruction):

S/S: N/V, Abd Distention, Decr. Stool.

Ileostomy: Liquid Stool (Bypass the Colon).

Low Fiber Diet: White rice, Pasta, Refined grains.

Avoid High Fiber (Popcorn, Coconut, Brown Rice, Multigrain bread), Stringy Veg (Celery, Broccoli, Asparagus), Seeds or Pits (Strawberry, Raspberries, Olives), Edible Peels (Apple, Cucumber, Dried fruit).

Colon: Fluid & Electrolyte Absorption, Vit K Production.

Don’t Fall for ‘reestablishing a normal bowel pattern’ as a priority with Small Bowel Obstruction.

Because the patient Can’t take in oral fluids ‘Maintaining Fluid Balance’ comes First.

Small Bowel Follow-Through (SBFT): Sequential X-ray images to visualize the Structure and Function. Barium is Ingested, and X-ray images are taken every 15-60 minutes to visualize the barium as it passes through

e small intestine. Using this technique, Decreased Motility (eg, Ileus), increased motility (eg, Malabsorption Syndromes), Fistulas, or Obstructions are identified.

Fast 8 hours Prior to the examination.

The test usually takes 60-120 minutes, but if obstruction or decreased motility is present, it can take longer.

Drink plenty of Fluids <u>After</u> the examination to facilitate barium Removal. Chalky stools may be present 24-72 hours after the examination. If brown stools do Not return after 72 hours or abdominal pain or fullness is present, contact the HCP.

Burns: <u>Rule of Nines</u>

Head and Neck= 9%

Each upper ext= 9%

Each lower ext= 18%

Front trunk= 18%

Back trunk= 18%

Genitalia= 1%

Assess for Smoke Inhalation/

Burns:

1st Degree - Red and Painful

2nd Degree - Blisters

3rd Degree - No Pain because of Blocked and Burned nerves.

<u>Tx</u>: High-Flow O_2 (100%) to displace CO & Cyanide from hgb.

(1^{st} 24 hour): Lactated Ringer's: $4^{mL}/_{kg}$

HyperCalcemia: muscle weakness, lack of coordination, abd pain, confusion, absent tendon reflexes, sedative effect on CNS

HypoCalcemia: <u>CATS</u> – Convulsions, Arrhythmias, Tetany, Spasms and Stridor.

Trousseau's & Chvostek's.

Ca^{2+} absorption is impaired when taken in excess of 500 mg per dose.

Taken within an hour of meals as food incr. Ca^{2+} absorption**.**

Constipation is a frequent side effect of Ca^{2+} supplements.

For Chronic Kidney Disease take Ca^{2+} supplements before meals, to reduce Phosphorus levels

Non-dairy sources of Ca^{2+}: Rhubarb, Sardines, Collard Greens.

Carbon Monxide (CO): More readily binds to Hemoglobin than O_2.

Pulse Oximeter: Can't Differentiate between O_2 & CO.

CO Poisoning: S/S: HA, Dizziness, Fatigue, Nausea, Dyspnea.

Tx: 100% O_2.

Serum CarboxyHemoglobin Test to Confirm Diagnosis.

Normal Value: < 5% Non Smoker.

< 10% Smoker.

Carbon Dioxide (CO_2) Narcosis: High K^+ (Expected- Hydrogen floods the cell forcing K^+ out).

Causes Increased Intracranial Pressure.

Cataract:

S/S: Painless Vision Loss, Cloudy, Blurry vision, Opacity of the lens. Worst at Night.

Tx: Lens Removal Surgery

After Cataract Surgery: Sleep on Unaffected side with a Night Shield for 1~4 weeks.

Celiac Disease: Barley, Rye, Oats, Wheat.

Cephalhematoma (**Caput Succinidanium**): Resolves on its own in a few days.

This is the type of Edema that Crosses the Suture lines.

Cerebral Palsy: Poor muscle control due to birth injuries and/or Decrease Oxygen to brain tissues.

Head Injury: Elevate HOB 30º to Decr. Intracranial Pressure.

No Nasotracheal Suctioning with Head Injury or Skull Fracture.

Basilar Skull Fracture: Otorrhea (discharge from the external ear)

Orbital Fracture: Battles Sign and Raccoons Eyes

Cushing Ulcer: Gastric ulcer associated with IICP. (r/t Brain Injury)

Mannitol: Head injury Medication (Osmotic Diuretic): Decr. Cerebral Edema, Decr. ICP, Incr. Urine Output

Crystallizes at Room Temp so Always use Filter needle.

TIA (Transient Ischemic Attack): Mini Stroke with No Dead Brain Tissue.

Short period of cerebral Ischemic.

S/S: Brief period of Loss of Vision, Hemiparesis and Slurred Speech.

CVA (CerebroVascular Accident): with Dead Brain Tissue. Permanent Deficits.

Horner Syndrome.

R-CVA: Left-sided hemiplegia, Impulsive, Lack Judgment

L-CVA: R-sided hemiplegia, Impairment in Speech and Language.

Broca's area (Frontal): Expressive Aphasia.

Wernicke's area (Parietal/Temporal): Receptive Aphasia.

TPA- Aminocaproic Acid

Stroke is Not considered Stabilized until approximate 48hr pass without changes.

Cerebral Angiogram:

Prep: well Hydrated, lie Flat, site Shaved, pulses Marked

Post: keep Flat 12-14hr, check Site & Pulses, force Fluids.

Subarachnoid Hemorrhage:

Emergent, Serious presentation often described as the "Worst Headache of My Life."

The onset is usually Abrupt due to rupture of the vessel; High Mortality from recurrent bleeding.

Chemotherapy:

S/S: Oral mucosa, n/v (GI), Decr. Blood cell count (Bone Marrow)

Neutropenic Precautions: No Yogurt (has Live Cultures), No Milk, No Fresh fruit or veggies.

Radiation Therapy: Risk for Leukopenia. Infection kills cancer patients.

Cisplatin: May cause Kidney injury.

Vincristine: For Leukemia (Risk for Epistaxis bc of Low Platelets) Given IV only.

Methotrexate: For RA & Psoriasis. Hepatotoxic Teratogenic. Immunosuppressant. Folate antimetabolite. (Risk for infection, No Live Vaccine).

Infliximab, Adalimumab, Ehanercept (Tumor Necrosis Factor Inhibitors): For RA, Crohn disease, Psoriasis. Risk for infection, No Live Vaccine. Test for TB every year while on the medication.

Cyclophosphamide**:** Complication: Hemorrhagic Cystitis (bladder inflammation/bloody urine).

Tx: Drink plenty of fluids or IV hydration.

Mesna: Detoxifying agent. Prophylactic agent in reducing the incidence of cyclophosphamide/ ifosfamide-induced Hemorrhagic Cystitis.

Asparaginase: Test For Hypersensitivity Before the administration.

Common sites for Metastasis: Liver, Brain, Lung, Bone, and Lymph.

Lymphedema: Complication from Cancer. When the Lymph System is Blocked or Damaged. Fluid builds up in soft body tissues and causes Swelling

Colorectal Cancer: Shouldn't have Cantaloupe before Fecal Occult Blood Test (FOBT), because Cantaloupe is high in vit C and vit C causes a False Positive for Occult Blood.

FOBT: Detect blood. 1. Apple Stool first then dry. 2. Then Solution.

Tamoxifen: For Breast cancer. Report changes in Visual Acuity, the Adverse effect could be Irreversible.

Risk for Endometrial Cancer (Heavy Period) & Thromboembolic Event.

Hemovac: used after Mastectomy. Empty when Full or q8hr, remove plug, empty contents, place on flat surface, cleanse opening and plug with Alcohol sponge, compress evacuator completely to remove air, release plug, check system for operation.

Don't place Immunosuppressed pt With Any pt with an Infectious disease or Open wound.

Basal Cell Carcinomas: Translucent, Raised, and Smooth. Rarely Metastasize or cause death. Most Common.

Squamous Cell Carcinomas: characterized by Local Invasion. Fast Growing and Infrequent Metastasis.

They are Red Nodules with Crust or Ulceration.

Malignant Melanomas: Appears Black or Brown with Irregular Borders. Often Metastasize. Most Deathly form of Skin Cancer. Least Common.

Chest Tube Drainage System: Placed in the Pleural space.

If chest tube is dislodged, immediate action should be to apply a Sterile Occlusive Dressing (eg, petroleum jelly dressing) taped on 3 sides. This permits air to escape on exhalation and inhibits air intake on inspiration.

Notify the HCP and arrange for the reinsertion of another chest tube.

Suction Control Chamber: Set at -20 cm H_2O to maintain Negative pressure in the system. Bubbling will occur when suction is applied.

Water Seal Chamber of the chest tube drainage system is filled with Sterile water and acts as a One-Way Valve preventing air from entering the client's chest cavity.

Tidaling: The water level in the water seal chamber Rises and Falls with Inspiration and Expiration. (Maintaining appropriate Negative pressure/ indicating Proper function of the chest tube drainage system)

Air Leak Gauge: (part of the Water Seal Chamber) allows for assessment of air leaks.

Continuous Bubbling: indicates an Air Leak in the system.

Drainage Collection Chamber: which Fluid from the client's Pleural Cavity will collect; the nurse will assess the color and amount and record the output.

Sucking Stab Wound: Immediately dress the wound and tape it on Three sides which allows air to Escape. Do not use an occlusive dressing, which could convert the wound from Open pneumo to Closed one.

Tension Pneumothorax: develops when air enters the pleural space but Cannot escape.

Increased intrapleural pressure and excessive accumulation of air can apply pressure to the heart and great vessels and drastically decrease cardiac output. An occlusive dressing taped on 4 sides would prevent the air in the pleural space from escaping on exhalation and would increase the risk for a tension pneumothorax.

Tension pneumothorax trachea shifts to Opposite side.

Tracheal Deviation: Reduce Cardiac Output & Hypotension.

After that get your Chest Tube Tray, Labs, IV.

Removal: Take a breath and hold it or Bare down by attempting to Exhale through the mouth and nose with your lips held Closed.

Cholecystitis: Limit Fatty foods. Fat stimulates the release of Bile form the Gallbladder. N/V, Restlessness, Diaphoresis. Referred to the R Scapula & Epigastric tenderness.

Murphy's Sign: Pain w/ palpation of Gallbladder (RUQ) area.

Cholera: Infection of the small intestine by some strains of bacterium Vibrio Cholerae.

Acute Diarrheal Disease; Rice Watery Stool.

Chronic Obstructive Pulmonary Disease (COPD): the Baroreceptors that detect the CO_2 level are destroyed. Therefore, O_2 level must be Low bc High O_2 Conc. blows the patient's Stimulus for Breathing.

2L Nasal Cannula or less (Hypoxic Not Hypercapnic drive), PaO_2 of ~60

Chronic CO_2 retainer: SaO_2 90% (Normal)

CO_2 causes Vasoconstriction.

Venti Mask for Distress COPD pt.

Tiotropium, Ipratropium, Benztropine.

Bronchitis:

Rhonchi: Continuous, Low-pitched Wheezes usually heard on Expiration that sound like moaning or snoring. The sound originates from air moving through large airways (Bronchi) filled with Mucus Secretions Tx: Medication, Mobilization of secretions.

Emphysema: Barrel-Chest.

The Stimulus to breathe is Low PO_2, Not Increased PCO_2 like the rest of us, so don't slam them with Oxygen. Encourage Pursed-Lip Breathing which Promotes CO_2 Elimination.

Encourage up to 3000mL/day Fluids, High-Fowlers and Leaning Forward.

Cognitive behavioral therapy (CBT): requires that the client learn about the disorder and engage in self-observation and monitoring, relaxation techniques, desensitization activities, and changing negative thoughts.

5 basic components:

Education about the client's specific disorder

Self-observation and monitoring - the client learns how to monitor anxiety, identify triggers, assess the severity

Physical control strategies – deep breathing and muscle relaxation exercises

Cognitive restructuring – learning new ways to reframe thinking patterns, challenging negative thoughts

Behavioral strategies – focusing on situations that cause anxiety and practicing new coping behaviors, desensitization to anxiety-provoking situations or events

Cranial Nerves:

Sensory=S Motor=M Both=B

Oh (Olfactory I) Some

Oh (Optic II) Say

Oh (Oculomotor III) Marry

To (Trochlear IV) Money

Touch (Trigeminal V) But

And (Abducens VI) My

Feel (Facial VII) Brother -Bell's Palsy

A (Auditory VIII) Says

Girls (Glossopharyngeal IX) Big -Swallowing & Gag reflex

Vagina (Vagus X) Bras - Swallowing & Gag reflex

Spinal (Accessory XI) Matter

Hymen (Hypoglassal XII) More

Assessing Extraocular Eye Movements: Check Cranial Nerves 3, 4, and 6.

Cystic Fibrosis: Salty Skin. Fatty Stools.

Diet: Low Fat, High Sodium, Fat Soluble Vitamins ADEK.

Pancreatic Enzymes are taken with each meal.

Respiratory Problems are the Chief concern: Treat with Aerosol Bronchodilators, Mucolytic.

Cystitis: Burning on Urination. Frequency, Urgency, Suprapubic Discomfort, Hematuria.

CytoMegaloVirus:

Ganciclovir: For CMV Retinitis.

Pt will need regular Eye exams, report Dizziness, Confusion, or Seizures Immediately.

DecortiCate: (Flexor) Toward the 'Cord'. Cortex involvement.

Problem with Cervical Spinal Tract or Cerebral Hemisphere.

DecerEbrate: (Extensor) The Other way (Out). Cerebellar, Brain Stem involvement.

Problem w/in Midbrain or Pons.

Weight is the Best indicator of **Dehydration**. 1kg = 1L

Diagnose of **Delirium:** Acute Mental Changes, Inattention with disorganized thinking, Altered Level of Consciousness, Hallucination.

Dengue Fever: Hemorrhagic. Petechiae or (+) Herman’s sign.

MonoAmine Oxidase Inhibitors (MAOI): Antidepressant.

Isocarboxazid

Phenelzine

Selegiline

Tranylcypromine

Avoid Tyramine containing foods

Don't take it with SSRI; at least 14 days in between.

Administered in the morning, as sleep dysfunction is common.

Increased risk for Suicidal Ideation, particularly children, adolescents, and young adults**.** The risk of suicidal thoughts can be more prevalent when Starting the medication or with dose Increases.

Feelings of hopelessness or despair must be evaluated to assess if suicidal ideation or thoughts of self-harm are present.

Safety over Nutrition with a severely depressed client.

Depression often manifests itself in Somatic (Relating to the Body) ways, such as Psychomotor retardation, GI complaints, and Pain.

Amitriptyline: Tricyclic Antidepressant.

Somatic Symptom Disorder (SSD): Mental disorder which manifests as physical symptoms but cannot explained fully by a general medical condition.

Selective Serotonin Reuptake Inhibitors (SSRIs):

Sertraline

Fluoxetine

Citalopram

Paroxetine

take about 3 weeks to Work.

Sertraline: Agitation, Sleep disturb, and Dry mouth

St John's Wort: used to treat Depression and Anxiety.

Mimics the action of SSRI by Increasing available Serotonin in the brain. Taken in combination with an SSRI, may cause an Excess of Serotonin, resulting in Serotonin Syndrome.

Serotonin Syndrome: characterized by

Mental Status Changes (anxiety, agitation, disorientation)

Autonomic Dysregulation (hyperthermia, diaphoresis, tachycardia/hypertension)

Neuromuscular Hyperactivity (tremor, muscle rigidity, clonus, hyperreflexia)

Mydriasis (dilation of pupil)

Caused by: taking More Than One or an Overdose of Antidepressant med that incr. Serotonin levels.

Diabetes Mellitus (DM): Polyuria, Polydipsia, Polyphagia.

Metformin: Can't be Given w/Contrast for CT Scan (Kidney Injury). Hold for 48hr.

HbA1c - test to assess how well blood sugars have been controlled over the past 90-120 days.

4- 6 corresponds to a blood sugar of 70-110;

7 is ideal for a diabetic and corresponds to a blood sugar of 130.

Diabetic ketoacidosis (DKA): when body is breaking down fat instead of sugar for energy.

Fats leave Ketones (acids) that cause pH to decrease.

DKA is rare in diabetes mellitus type II because there is enough insulin to prevent breakdown of fats.

Serum acetone and serum ketones Rise in DKA. As you treat the Acidosis and Dehydration expect the potassium to Drop rapidly, so be ready, with K^+ Replacement.

While treating DKA, bringing the Glucose Down too far and too fast can result in Increased ICP due to water being pulled into the CSF.

Wherever there is Sugar (Glucose) Water Follows.

DKA: Kussmauls breathing (Deep Rapid RR), N/V, Abd Pain (Acidic Ketones). Can lead to Death.

Fluids are the most important intervention with **HHNS** as well as **DKA**, so get Fluids going first.

With HHNS there is No Ketosis, and No Acidosis.

Potassium is Low in HHNS (due to Diuresis).

Second Voided Urine most accurate when testing for Ketones and Glucose.

Oral Hypoglycemic:

Typical Adverse reaction: Rash, Photosensitivity

Extra Insulin may be needed for a patient taking Prednisone (Steroids cause Increased Glucose).

Diabetes Insipidus (decreased ADH): Thirst, Dehydration, Weakness, Excessive Urine Output (Diluted Urine)

Administer Pitressin

SIADH (increased ADH): Change in LOC, Decr. deep tendon reflexes, Tachycardia, n/v, HA,

No Urine Output (Conc. Urine). HypoNa^{+}, HypoCa^{2+}.

Administer Declomycin, Diuretics

Hemodialysis (HD): Solutes (e.g. Urea) are removed from the blood.

Complication: Dialysis Disequilibrium Syndrome (DDS)

Allen's Test: occlude both Ulnar and Radial artery until hand blanches then release ulnar. If the hand pinks up, ulnar artery is good and you can carry on with ABG/radial stick as planned. (To check for sufficient blood flow)

ABG: must be put on Ice and Whisked to the lab.

When drawing an ABG, you need to put the blood in a Heparinized tube, make sure there are no bubbles, put on ice immediately after drawing, with a label indicating if the pt was on room air or how many liters of O_2.

Peritoneal Dialysis (Cath Tenckhoff): Normal to have Abdominal Crap, Blood tinged outflow and Leaking around site if it was placed in the last 1-2 wks.

When Outflow is Inadequate**:** Turn pt from Side to Side before checking for kinks in tubing.

Monitor for Resp. Distress (e.g. Crackles)

Cloudy outflow (Infection)

Dialysis Disequilibrium Syndrome (DDS): Life-Threatening!

Solutes (e.g. Urea) are removed more quickly from the blood than from the brain cells and Cerebrospinal fluid, creating a Concentration gradient that can lead to Excess Fluid in the brain cells and Increased Intracranial Pressure (IICP).

Characteristic Neurologic manifestations include n/v, ha, restlessness, change in mentation, seizure, and Pupillary changes.

Can be prevented by Slow/Stop the Rate of dialysis.

Can progress to Coma and Death.

Tx: Decrease Cerebral Edema and manage symptoms. HCP should be contacted Immediately.

Diaphragm must stay in place 6 hours After intercourse. They are also fitted so must be refitted if you Lose or Gain a significant amount of Weight.

Acid Ash Diet: Bread, Cheese, Corn, Cranberries, Meat, Poultry, Plums, Prunes, Pastry.

Alk Ash Diet: Milk, Rhubarb, Salmon, Vegetables.

Diphtheria: Pseudomembrane formation.

Serious bacterial infection that can cause Organ Damage and Breathing problems.

Disseminated Herpes Zoster: Airborne Precaution

Localized Herpes Zoster: Contact Precaution

Nurse with a Localized herpes zoster can care for patients as long as the Patients are Not Immunosuppressed and the lesions must be Covered.

Diverticulitis: Inflammation of the Diverticulum in the Colon. Often in the Sigmoid Colon.

Pain is around LL quadrant.

Low Residue (Low Fiber), No Seeds, Nuts, Peas.

Complication: Peritonitis (LUQ Pain).

Down Syndrome: Protruding Tongue. Floppy muscle tone.

To Prevent **Dumping Syndrome** (Post-Operative ulcer/stomach surgeries): eat in Low-Fowler's during meals, lie Down after meals for 20-30 minutes (Decrease Peristalsis), Restrict Fluids during meals (wait 1hr), Low CHO and Fiber diet, Incr. Fat and Protein, Small frequent meals, Eat slowly.

S/S: Dizziness, Hypotension, Syncope, Generalized Sweating, Tachycardia, Palpitation, n/v, Diarrhea, Abd pain.

Gastrojejunostomy (Roux-En-Y Surgery): Risk for Dumping Syndrome. Iron Deficiency Anemia. Cobalamin Deficiency.

DVT (Homan's Sign): who need Enoxaparin, should not be Delegate.

Does Not Need to be on bed rest, unless they have Severe Edema or Leg Pain.

Edema: is in the Interstitial Space Not in the Cardiovascular Space.

Electrocardiogram (EKG):

Atrial Fibrillation:

Cardioversion: Anterior-Posterior Paddle Placement- One paddle is places just to the Right of the sternum at the Fourth Intracostal space and the Other paddle is placed between the scapulae on the Back. The Shock runs Diagonally through the chest.

Cardiac Output Decreases with Dysrhythmias. Dopamine increases BP.

Med of choice for Vtach is Lidocaine/ Amiodarone (antiarrhythmic).

Med of choice for SVT is Adenosine.

Med of choice for Bipolar is Lithium.

Med of choice for Asystole (no heart beat) is Atropine/ Epi

Med of choice for Paroxysmal Atrial Tachycardia is Adenosine.

Amiodarone is effective in both Ventricular and Atrial complications & Vfib/Vtach. V. Bigeminy.

Flecainide (an antiarrhythmic): Limit Fluids and Na^+ intake, because Na^+ increases Water Retention which could lead to Heart Failure.

PT/PTT are Elevated when patient is on Warfarin. No ASA & NSAID.

Warfarin- Vitamin K

Enoxaparin: LMWH. Monitor CBC to asses for Thrombocytopenia.

Electroencephalogram (EEG):

Before: Hold meds for 24-48 hrs prior, No Stimulants for 24hr Before, No caffeine or cigarettes for 24 hrs Prior, Can eat, pt Must Stay Awake night.

During: Pt may be asked to Hyperventilate (3-4min) and watch a Bright flashing light.

After: Assess pt for Seizures (Increased Risk)

After **Endoscopy** Check Gag Reflex.

Administration of **Enema:** position pt in Left side-lying (Sim's) with Knee Flexed.

Fleet Enema: To Stimulate defecation & Relieve Constipation.

Neomycin Enema: Administer before Bowel Surgery to decr. bacteria in the Colon.

Epiglottitis: No Throat Inspection.

Severe Inflammatory Obstruction. Drooling, Dysphonia (hoarse voice), Dysphagia (difficulty swallowing). Tripod Position. Inspiratory Stridor (Airway Distress).

Caused by: Hib w/O Vaccine.

Tx: Endotracheal Intubation w/ Tracheostomy Kit Standby.

Dealing with **Fire** in Inpatient Setting (**RACE)**:

Rescue

Activate the fire Alarm, Code Red

Confine/ Close the Doors/Windows

Extinguish the Fire. No Water.

Using the Extingusher (**PASS**)

Pull the Pin

Aim the Nozzle

Squeeze the Handle

Sweep back and forth over the fire.

Fractured Hip: S/S: External Rotation, Shortening, Adduction.

Fat Embolism: Blood tinged sputum (r/t Inflammation), Incr. ESR, Respiratory Alkalosis (Not Acidosis r/t Tachypnea), Resp. Distress, Altered Mental Status, Hypocalcemia, Incr. serum Lipids, "Snow Storm" Effect on CXR. Petechiae (Treated w/ Heparin) in the chest, axillae, soft palate.

Heparin Prevents Platelet Aggregation. No ASA & NSAID. Monitor PTT.

Antidote: Protamine sulfate

Reduce the Risk: Minimizing the move of a fractured long bone &early stabilization of the injury w/ surgery.

Tx?

Greenstick Fractures: usually seen in Kids bone breaks on one side and bends on the other

Compartment Syndrome: an Emergency situation. Paresthesia and Incr. Pain are classic symptoms. Neuromuscular Damage is Irreversible 4-6 hours After onset.

Cast: Petal the rough edges of a plaster cast with tape to avoid skin irritation.

Itching under cast area- cool air via blow dryer, ice pack for 10- 15 minutes. Never use anything to scratch area

Place **Wheelchair** Parallel to the bed on the side of Weakness.

"Step Up" when picturing a person going **Up Stairs** with crutches. The Good leg goes Up first, followed by the crutches and the bad leg. The opposite happens going Down. The Crutches go first, followed by the good leg.

COAL (Cane Walking)

Cane

Opposite

Affected

Leg

4 Point Gait:

Move the Right crutch forward.

Move the Left foot forward.

Move the Left crutch forward.

Move the Right foot forward.

GastroEnteritis (Stomach Flu)**:**

Trimethobenzaminde: Tx for Nausea associated with Gastroenteritis (Stomach Flu) and PostOp n/v

GastroEsophageal Reflux Disease (GERD): Barrett's Esophagus (Erosion of the Lower portion of the Esophageal Mucosa)

Patients should lay on their Left side with the HOB elevated 30 degrees. Weight Loss. Small Frequent Meals

Nonfat milk Reduces reflux by Incr. Lower Esophageal Sphincter Pressure. No Carbonated drink (Incr. Pressure).

Peptic Ulcers (Coffee-Brown Emesis) caused by H. *Pylori* (duodenal ulcer) are treated with Metronidazole (can cause dark-urine [Expected]), Clarithromycin, and Omeprazole.

Tx: Treatment Kills bacteria and Stops production of stomach acid, but does Not heal ulcer.

Cause: NSAID (Celecoxib, Naproxen)

Gastric Ulcer Pain: occurs 30 minutes to 90 minutes after eating, not at night, and doesn't go away with food.

Pantoprazole/ Protonix (PPI): given Prophylactically to Prevent Stress Ulcers.

Omeprazole (PPI): Take it Before breakfast (72 hour duration)

Combined with Warfarin (Take it at Evening), Can Incr. INR.

Metoclopramide/ Reglan (Antiemetic): prescribed for the GERD. Decr. Post-up Nausea by Promoting Gastric Emptying.

Common Side Effects: Sedation, Fatigue, Restlessness, HA, Sleeplessness, Dry mouth, Constipation, Diarrhea

Extrapyramidal adverse effects, including tardive dyskinesia (TD), especially in older adults w/ long-term use.

TD Symptoms: Call HCP if develops.

Protruding and twisting of the tongue

Lip smacking

Puffing of cheeks

Chewing movements

Frowning or blinking of eyes

Twisting fingers

Twisted or rotated neck (torticollis)

Cimetidine (H_2 antagonist): Antacid and Antihistamine. Take with Food. Caution with Elders. Interacts with a lot of things.

Aluminum Hydroxide/ Amphojel: Antacid and Phosphate Binders.

Tx of GERD and Kidney Stones.

Risk for Constipation.

Long term use leads to Weaker Bones (Decr. Phosphates, Incr. Ca^{2+} (from the Bones).

Sevelamer HCl (Phosphate Binder): Take with food.

Sucralfate (Antacid): Risk for Constipation.

t of Duodenal Ulcers. Coats the ulcer/Mucosal Barrier (take one hour Before meals to Coat the stomach). Create Viscous Substance Forms a Protective Barrier.

Misoprostol: Prevent Stomach Ulcers caused by NSAIDs.

Give Antacid to a Mechanically Ventilated patient w/ NG tube if the pH of the Aspirate is < 5.0, Checked at least every 12 hrs.

Glasgow Coma Scale	
Eye opening (Maximum = 4)	4 - Spontaneous (open with blinking at baseline)
	3 - To speech
	2 - To pain only
	1 - None
	(C - Not assessable [eg, trauma, edema])
Verbal response (Maximum = 5)	5 - Oriented
	4 - Confused (converses but confused, disoriented)
	3 - Inappropriate (inappropriate words)
	2 - Incomprehensible (sounds, no words)
	1 - None
	(T - Not assessable [intubated])
Motor response (Maximum = 6)	6 - Obeys commands for movement
	5 - Localizes to pain
	4 - Withdraws from pain
	3 - Flexion in response to pain (decorticate posturing)
	2 - Extension in response to pain (decerebrate posturing)
	1 - None

Use best response for each category (range, 3-15).

Coma: Does not open eyes, does not follow commands, and does not utter understandable words; GCS 3-8.

Head injury classification: Mild, GCS 13-15; moderate, GCS 9-12; severe, GSC ≤8. Below 8 you are in Coma. Intubated for Airway Protection.

Dysphagia: Difficulty Swallowing (Risk for Aspiration)

Dysarthria: Weakness of the Muscles for Speech (mumble, lisp)

Aphasia: Impaired Communication (Words don't make Sense)

Apraxia: Loss of ability to perform a movement (clipping, whistling)

Glaucoma: Intraocular Pressure is greater than the normal (22 mm Hg)

Painful, Vision Loss, Tunnel/gun barrel/halo Vision (Peripheral Vision Loss)

Pilocarpine/Miotics: to Constrict the pupils.

Acetazolamide: Don't take if allergic to Sulfa drug. Can cause HypoK^+. Also can treat High altitude sickness.

Timolol Maleate/Timoptic (Beta-adrenergic blocker): Eye drops.

No Atropine.

Primary Open-Angel Glaucoma: "Tunnel" Vision. Slow. Painless.

Primary Angel-Closure Glaucoma: Medical Emergency!

Apply eye drop to conjunctival sac and after wards apply pressure to nasolacrimal duct / inner canthus

OU- both eyes

OS- Left eye

OD- Right eye (dominant Right eye- just a tip to remember)

Gonorrhea is a Reportable Disease.

Goodpasture's Syndrome: Rare, Autoimmune Disease that affect's Kidneys & Lungs.

Gout:

Probenecid: Uric Acid Reducer (Uricosuric and renal tubular blocking agent)

Colchicine: Anti-inflammatory. (Pain improvement within 12 hours and subside within 24~48 hours)

Common S/S: G.I. issue, Diarrhea, Abd Pain, n/v

Allopurinol/Zyloprim: Uric acid reducer. It can also treat Kidney Stones.

Push Fluids with Allopurinol - flush the uric acid out of system. No Vitamin C.

Indomethacine: to reduce pain and inflammation during acute attacks.

Elevate the Inflamed Joints, Keep the area Bare, and apply Ice.

Encourage Gradual weight loss.

Guillain-Barre Syndrome (GBS): Ascending Paralysis. Ascending bilateral paralysis from segmental demyelination (remyelination eventually occurs).

If the current level of paralysis is at the Knees and is therefore not the priority as it has not yet reached the Diaphragm. Keep eye on Respiratory System (absence of reflexes). Muscle weakness can lead to Resp. muscle paralysis, patient Unable to Cough effectively (Risk for Aspiration).

Risk for Neuromuscular Respiratory Failure.

Heart Failure: Anytime you see Fluid Retention. Think Heart problems first.

Adding K^+ to a diet, especially when substituting it for sodium, can Decrease BP and fluid retention.

Avoid Sodium.

S3 sound is Normal in CHF, not in MI.

Fluid Volume Overload caused by IVC fluids infusing too quickly (or whatever reason)

Nitroprusside (vasodilator): monitor Thiocyanate (Cyanide).

Normal value should be 1**.** Greater than 1 is heading toward Toxicity

ACE Inhibitor: Med of choice for CHF.

Furosemide: May Cause Low K^+, can Cause Anorexia due to Reduced K^+.

Give it slowly to prevent Ototoxicity, when giving more than 120mg.

Digoxin (Cardiac Glycoside): check Pulse, Hold if hr < 60, (Children: Hold if hr <100).

Check Dig levels (0.5-2.0) and K^+ levels.

Patient on Dig and Furosemide: Low K^+ Potentiates Dig and can Cause Dysrhythmias.

Digitalis Increases Ventricular Irritability, and could Convert a rhythm to V-Fib following Cardioversion.

You better pick ‘Do Vitals’ Before administering that Dig. (Apical pulse for One full minute).

Avoid salt substitutes when taken Dig and K-Supplements because many are Potassium based

Antidote: Digoxin immune fab.

Right-Sided HF: Systemic Venous Congestion.

Cor Pulmonale (Fluid Overload): caused by Pulmonary disease (Bronchitis/ Emphysema)

Juglar Venous Distension: Elevated Central Venous Pressure (CVP)

Hepatomegaly

Splenomegaly

Ascites

Edema: related to Sodium and Fluid Retention

Left-Sided HF: Pulmonary Congestion.

Cardiomegaly: Displaced PMI, S3 sound

Pulmonary Edema: Dyspnea, Orthopnea, Crackles

B-type Natriuretic Peptides (BNP): peptide that causes Natriuresis. Made, stored, and released primarily by the Ventricles. They are produced in response to Stretching of the Ventricles (blood volume and higher levels of extracellular fluid (Fluid Overload)). Elevation of BNP >100 $^{pg}/_{mL}$ helps to distinguish cardiac from respiratory causes of dyspnea.

Acute Decompensated Heart Failure (ADHF): marginally Low BP, Crackles in the Lungs, Low O_2 saturation, Jugular Venous Distension (JVD), and Peripheral Edema.

Beta blockers (LOL) can Cause the client to further Deteriorate. It can Worsen heart failure symptoms by Decr. normal compensatory Sympathetic Nervous System responses and Myocardial Contractility.

It is a Potentially Fatal Cause of Acute Respiratory Distress.

Tx: Sit Upright (to clear the lungs, facilitate O_2), Administer Dobutamine, Furosemide, Reduce Stress.

Pt w/ **Heat Stroke:** lie Flat w/ Legs Elevated

Hemophilia: X-linked. Mother passes disease to Son.

Hemophilia A: deficiency of Factor VIII (8)

Hemophilia B: deficiency of Factor IX (9)

Hemophilia C: deficiency of Factor XI (11)

Von Willebrand Disease: Deficiency of Von Willebrand Factor. (vWf helps release factor VIII),

Prolonged aPTT and Decr. Platelet adhesion. Risk for Bleeding.

Hepatitis:

Hep A: ends in a VOWEL, comes from the BOWEL (Contact Precautions).

Fecal-oral route. It is often spread by Contaminated Food.

During the Acute stage of Hep A, Gown and Gloves are required. In the Convalescent stage it is no longer contagious.

S/S: Anorexia, N/V, Weakness, Fatigue, Clay colored BM, Dark/Brown urine, Low-grade Fever, Jaundice.

Hep B: Blood and Bodily fluids (Standard Precautions)

Hep: C is just like B

Hodgkin's Lymphoma (HL): Cancer of lymph is very Curable in early stage.

Painless, Progressive Enlargement of Spleen & Lymph tissues, Reed-Stenberg Cells.

Huntington's Disease (Chorea): 50% Genetic, Autosomal Dominant Disorder.

S/S: Writing, Twisting, Movements of Face, Limbs and Body.

Gait Deteriorates to No ambulation

No Cure, just Palliative Care.

Iatrogenic: means it was Caused by Treatment, Procedure, or Medication.

Increased ICP: ⬆ BP (Hypertension), ⬇ Pulse (Bradycardia), ⬇ Resp.(Bradypnea)

LOC is Priority (think ICP or Hemorrhage). Slowed Cheyne-Stokes (Irregular) Resp.

Cushing's Triad: Systolic Hypertension with Widened Pulse Pressure, Bradycardia, Resp. Depression Should be Less than 2, Measure Head Circumference.

Infectious Mononucleosis: Hallmark- Sore Throat (Pharyngitis), Cervical Lymph Adenopathy (Node Swelling), Fever, Fatigue, Splenomegaly, Hepatomegaly.

Caused by: Epstein-Barr Virus (EBV).

Tx: Pain Control. Rest is Important.

Serious Complication: Spleen Rupture (LUQ Sudden Onset of Abd Pain).

Infective Endocarditis (IE): the Vegetation over the Valves can break off; Emboli to various Organs, resulting in Life-Threatening Complications.

Stroke - paralysis on one side

Spinal Cord Ischemia - paralysis of both legs

Ischemia to the Extremities - pain, pallor, and cold foot or arm

Intestinal Infarction - abdominal pain

Splenic Infarction - left upper-quadrant pain

Common S/S: Fever, Arthralgia (Joints Pains), Weakness, Murmur, Fatigue, Splinter hemorrhage, Osler's Node (painful, red raised lesions), Janeway Lesion.

Tx: IV Abx for 4-6 weeks. Fever may persist for several days after treatment is started.

Risk Factor: Hx of Mechanical Heart Valve Replacement, Rheumatic Fever, Dental Procedures, IV Drug Use, and Immunosuppression.

Irritable Bowel Syndrome:

Dicyclomine (Antispasmodic): Assess for Anticholinergic side effects.

Above Knee Amputation: Elevate for first 24 hours on pillow, position Prone daily to provide for hip extension. Do Not apply Lotions, Creams, or Oils.

Below Knee Amputation: foot of bed Elevated for first 24 hours, position Prone daily to provide for hip extension.

Phantom Limb Pain: if the pain is High, Prioritized it.

Total Knee Replacement: Common Complication is Blood Loss**.**

Hemoglobin level of 7 g/dL (70 g/L) is very Low. Assess for Active Bleeding.

For knee replacement use Continuous Passive Motion Machine.

Laparoscopy: CO_2 used to enhances visual, general anesthesia, foley.

Post: Walk patient to Decrease CO_2 build up used for procedure.

LaryngoTracheitis/ LaryngoTracheoBronchitis (Coup)**:** Upper Resp. Tract Symptoms followed by Hoarseness, Barking Cough, Stridor, and Resp. Distress. Inspiratory Stridor.

Caused by: Parainfluenza Virus.

Tx: Nebulized Racemic Epinephrine.

Latex Allergies: Assess for allergies to Apricots, Avocados, Bananas, Cherries, Chestnuts, Grapes, Kiwi, Passion fruit, Peaches, Tomatoes.

Lead Poisoning: Neurocognitive Impairment, Development Delays, Seizure, Kidney Damage.

Tx: Chleation Therapy.

Leprosy: Lioning face.

Liver Cirrhosis: Spider Angiomas (eg, small, dilated blood vessels with bright red centers), Gynecomastia, Testicular atrophy, and Palmar erythema are Expected findings in cirrhosis due to altered metabolism of hormone in the liver. Jaundice. Esophageal Varices. Itching (Can give Cholestyramine).

Decr. Protein & Decr. Albumin.

Albumin: (3.5 ~ 5 $^{g}/_{dL}$) Low Level. Pitting Edema. Periorbital Edema. Ascites.

Sengstaken-Blakemore Tube used for Tx of **Esophageal Varices** (to Stop Bleeding), Keep Scissors at bedside.

A patient w/ liver cirrhosis and edema May Ambulate, then sit with Legs Elevated to try to mobilize the edema.

Ascites: Portal Hypertension & Hypoalbuminemia.

Paracentesis: Semi-Fowlers or Upright on Edge of bed, Empty Bladder.

Post: VS, report Elevated Temp, Observe for signs of Hypovolemia.

Hepatic Encephalopathy (HE): frequent Complication of Liver Cirrhosis. It results from accumulation of ammonia (Elevated Ammonia levels) and other toxic substances in blood. 2~3 BM ok.

Precipitating factors: Hypokalemia, Constipation, Gastrointestinal Hemorrhage, and Infection.

S/S: Sleep disturbances (Early) to lethargy and coma. Mental status is altered.

Asterixis (Flapping Tremors of the hands). It is assessed by having the client extend the arms and dorsiflex the wrists.

Fetor Hepaticus (musty, sweet odor of the breath) from accumulated digestive byproducts.

Monitor for Dehydration, Incr. Na^{+}, Decr. K^{+}.

Antidote Ammonia: Lactulose.

Prior to **Liver Biopsy**: Important to be aware of the lab result for Prothrombin Time (9~12sec)

Administer Vit K^{+}, NPO Morning of exam 6hr, give Sedative.

During: Hold breath for 5-10 sec, Supine position, Lateral with Upper arms Elevated.

Post- Position: Lay on Right side, Frequent VS, Report Severe abd Pain STAT, No Heavy lifting 1 week.

Lyme Disease: found mostly in Connecticut.

S/S: Bull's Eye Rash (Circular outwardly expanding Rash).

Tx: Doxycycline (abx)

Macular Degeneration: (Age Related) Progressive, Incurable disease of the eye in which the Central Portion of the Retina, the macula, begins to deteriorate with Age.

S/S: Distortion (Blurred or Wavy disturbances) or Loss of the Central field of Vision; the Peripheral vision remains Intact.

"Dry" Macular Degeneration: occurs when the microvasculature supplying the macula is Blocked, causing Ischemia.

"Wet" Macular Degeneration: Abnormal blood vessels form and eventually Destroy the macula.

Magnetic Resonance Imaging (MRI): Claustrophobia, No Metal, assess Pacemaker.

Malaria: Step Ladder like Fever with Chills.

Koplick's Spots are red spots with blue center characteristic of Prodromal stage of **Measles**.

Usually in mouth.

Complications of **Mechanical Ventilation**: Pneumothorax, Ulcers.

Meniere's Disease: Administer Diuretics to Decr. Endolymph in the Cochlea, Restrict Na^+, lay on Affected ear
Triad: N/V, Tinnitus (Excess fluid inside the inner ear), Vertigo. Drop attacks. Aural Fullness.

Fall Precaution. Salt Restriction.

Meningitis: CSF- High Protein, Low Glucose. Nuchal Rigidity, Photophobia.

Kernig's Sign: Leg flex then leg Pain on extension.

Brudzinski Sign: Neck flex; Lower Leg flex.

Lumbar Puncture: pt is Positioned in Lateral Recumbent Fetal position.

Post: Lay Flat Supine (4~12 hrs as prescribed)**,** to prevent HA and Leaking of CSF. Sterile Dressing Applied, Frequent Neuro Assessments (q15-30 until stable). Encourage Fluids.

Metabolic Acidosis: Diarrhea (Poo Bases)

Metabolic Alkalosis: Vomitus (Throwing up Acids)

Respiratory Acidosis:

Respiratory Alkalosis: Hyperventilation (Blowing off CO_2)

In pH Regulation the Two Organs of concern are Lungs/Kidneys.

Methicillin-Resistant Staphylococcus Aurea (MRSA): use Chlorhexidine wipes.

1.3- 2.1 $^{mEq}/_{L}$

HyperMg: Depress CNS, Hypotension, Facial flushing, Muscle weakness, Absent deep tendon reflexes, Shallow respirations, Emergency (Can result in Cardiac Arrest!)

HypoMg: Tremors, Tetany, Seizures, Depression, Confusion, Dysphagia; Dig Toxicity, Dysrhythmias (Torsades de Pointes)

Multiple Myeloma (Blood Cancer)**:** Bence-Jones Protein in the Urine Diagnose & Confirms.

Forms from WBC (Plasma Cell) Malignant.

Multiple Sclerosis: Chronic, Progressive disease with demyelinating lesions in the CNS which affect the White matter of the brain and spinal cord.

Myelin Sheath Destruction, Disruption in nerve impulse conduction.

S/S: Charcot's Triad (NIS): Nystagmus, Intention tremor, Scanning or staccato speech.

Bowel and/or Bladder Incontinence or Retention Hyperactive deep tendon reflexes, Vision changes, Fatigue and Spasticity**.**

Motor S/S: limb weakness, paralysis, slow speech.

Sensory S/S: numbness, tingling, tinnitus.

Cerebral S/S**:** nystagmus, ataxia, dysphagia, dysarthria.

Munchausen Syndrome: Psychiatric Disorder that causes an individual to Self-Inflict Injury or Illness or to Fabricate symptoms of physical or mental illness, in order to receive medical care or hospitalization.

Munchausen by proxy (MSBP): an Individual, typically a mother, Intentionally Causes or Fabricates illness in a child or other person under her care.

Myasthenia Gravis: Disorder in the transmission of impulses from Nerve to Muscle Cell.

Worsens w/ Exercise (Fatigue of voluntary muscles), Improves with Rest. Muscle stronger in the morning AM.

Decrease in Receptor Sites for Acetylcholine. Since smallest concentration of ACTH receptors are in cranial nerves, expect fatigue and weakness in Eye, Mastication, Pharyngeal muscles.

Descending muscle weakness (Not enough Acetylcholine), Bulbar Signs (Difficulty speaking or swallowing)

Pyridostigmine: Incr. Muscle strength, give before meal AC.

Neostigmine: Give to pt about 45 min. Before eating, so it will help with Chewing and Swallowing.

Neostigmine/Atropine (anticholinergic)- Pancuronium Bromide (Antidote)

Edrophonium/ Tensilon: Prevents the breakdown of the chemical acetylcholine, a neurotransmitter that nerve cells release to stimulate your muscles. (Acetylcholinesterase Inhibitor)

Tensilon Test: To Confirm the Diagnosis; Positive if muscle is Improved.

Myasthenia Crisis: a Positive reaction to Tensilon--will improve symptoms (Edrophonium)

Cholinergic Crisis: Caused by Excessive medication (anticholinesterase).

Stop Med. Giving Tensilon will make it Worse.

Myocardial Infarction: Dead Heart Tissue Present.

Crushing stubbing pain which Radiates to left shoulder, neck, arms, Unrelieved by NTG.

Atypical symptoms (eg, Shoulder Pain, Nausea).

ST Elevation.

Unstable Angina: is Not relieved by NTG.

Myocardial Ischemia: ST Depression.

Angina: Low Oxygen to Heart Tissues (No dead heart tissues). Crushing stubbing pain Relieved by NTG.

Preload: affects amount of blood that goes to the R ventricle.

Afterload: the Resistance the blood has to overcome when leaving the L ventricle.

CABG Operation: when the Great Saphenous vein is taken, it is turned Inside Out due to the Valves that are inside.

Cardiac Catheterization: NPO 8~12hr, Empty bladder, Pt may feel heart palpitations or desire to cough with dye injection.

Post: VS, keep Leg Straight, bedrest 6~8hr.

with R side Cardiac Cath=look for Valve problems

with L side in adults look for Coronary Complications.

Dead tissues Cannot have PVC. If left Untreated PVC can lead to VF.

When AcetylSalicylic Acid (ASA) is given once a day it acts as an Antiplatelet.

Blood Tests for MI: Myoglobin, CK and Troponin.

COX-2 inhibitors (eg, Celecoxib) and NSAID (eg, ibuprofen, naproxen, and indomethacin) are associated with Increased risk of Cardiovascular events

Clopidogrel/Plavix: Platelet Aggregation Inhibitor- to prevent blood clot formation. Cause Thrombocytopenia.

The main Hypersensitivity reaction: is Bronchospasm (anaphylaxis).

Thrombocytopenia: Risk of Bleeding. (Platelet < 150,000)

Soft bristled toothbrush, No insertion of anything (Suppositories, Douche), No IM meds as much as possible.

Nitroglycerine: is administered up to 3 times (every 5 minutes). If chest pain does not stop go to hospital. Do Not give when BP is < 90/60.

NSAID: Decr. the effectiveness of Diuretic and Blood Pressure medications. Long-term use is also associated with Chronic Kidney disease and Peptic Ulcers.

Gastrointestinal (GI) toxicity - symptoms of GI bleeding such as black tarry stools should be reported. Gastrointestinal upset (eg, dyspepsia, pain) can be reduced if the medicine is taken with food.

kidney injury - long-term use is associated with kidney injury

Hypertension and heart failure - can cause fluid retention, which can exacerbate conditions such as heart failure, cirrhosis/ascites, and hypertension

Indomethacine: Tx of Arthritis (Osteo, Rhematoid, Gout), Bursitis, and Tendonitis.

Use Cold for Acute pain (eg. Sprain ankle) and Heat for Chronic (Rheumatoid Arthritis)

Guided imagery is great for Chronic Pain.

When patient is in Distress, medication administration is Rarely a good choice.

Statin (Anticholesterol med): must be given with Evening meal (most cholesterol is Synthesized by the Liver during the fasting state, at night). Contraindicated severe Liver or Muscle injury.

Simvastatin, for hyperlipidemia, take on Empty stomach to enhance absorption, report any unexplained muscle pain, especially if fever.

Ezetimibe: Inhibits the intestinal absorption of Cholesterol and is often Combined with a Statin to treat hyperlipidemia.

After **Myringotomy** (Ear Tube)**:** position on side of Affected Ear after surgery (allows drainage of secretions).

Nasogastric (NG) Tube: connect the main lumen of the NG tube (using an adaptor) to the suction apparatus and leave the blue pigtail lumen Open to air to facilitate gastrointestinal decompression.

Regular flushing of the NG tube with water prevents clogging and allows the suction apparatus a clear pathway to decompress the suction.

An **NG tube** can be Irrigated with Cola, and should be taught to family when a client is going Home with an NG tube. Flush and Aspirate the tube w/ Warm water. Then try it w/ Digestive Enzyme Solution.

Weighted Nasointestinal Tube: must float From Stomach to Intestine. Don't tape the tube right away after placement, may leave coiled next to pt on HOB. Position patient on Right to facilitate movement through Pylorus.

After **G-Tube placement:** the Stomach contents are Drained by Gravity for **24 hours** Before it can be used for feedings.

HyperNatremia: increased temp, weakness, disorientation/delusions, hypotension, tachycardia, hypotonic solution

Skin flushed

Agitation

Low grade fever

Thirst

Hyponatremia: nausea, muscle cramps, increased ICP, muscular twitching, convulsion; osmotic diuretics, fluids

NephrOtic Syndrome: is caused by glomerular damage, which allows the Leakage of Proteins into urine.

S/S: Generalized edema, Weight gain (fluid overload), Hypotension, massive Proteinuria (urine looks dark and frothy), Hyperlipidemia, Albuminuria, Hypoalbuminemia.

WBC shift to the left in a patient with Pyelonephritis (Neutrophils kick in to fight infection)

Turn and Reposition (risk for impaired skin integrity)

Tx: Corticosteroids (In general are started at High Dose & Slowly Tapered to Reduce the Risk of Sudden Adrenal Crisis.

Glomerulonephritis: take VS q 4hr and daily weights. Consider BP to be your most important assessment parameter.

Dietary Restrictions: Fluids, Protein, Na^+, K^+.

Gross Hematuria (Expected)

IVP: requires Bowel Prep so they can Visualize the Bladder better. A Laxative is given the night before in order to better visualize the organs.

Acute Glomerulonephritis (AGN):

Caused by: Strep throat, Impetigo (bacterial infection of the skin caused by *Streptococcal Pyogenes*) with a latent period of 10 ~ 14 days in between.

Pyelonephritis: Inflammation of the Kidneys.

S/S: N/V, Fever & Chills, Flank Pain, Costovertebral Tenderness.

Pyelogram: Assess Allergies.

Renal Crisis: Life-Threatening. Malignance HTN Leads to Kidney/ Organ Failure.

Renal Impairment: serum Creatinine Elevated and Urine Clearance Decreased

Norm. Serum Creatinine: 0.8-1.8 (men), 0.5-1.5 (women)

Norm. Urine Clearance: 85-135

Low Mg^{2+} and High Creatinine- Signal Renal Failure.

Kidney Glucose Threshold is 180

Uremic Fetor: smell Urine on the breath (CKD).

Succinylcholine Chloride: is used for Short-Term **Neuromuscular** Blocking agent for procedures (Intubation and ECT).

Vercuronium Bromide: is for Intermediate or Long-Term (Surgery or Mechanical Ventilation).

Neurogenic Shock: Damage to the Nervous System that affects the Heart.

S/S: Hypotension, Decr. O_2 Delivery (Decr. Loc Organ Dysfunction), Bradycardia (only shock that's bradycardia), Warm Dry Skin, Pink.

Tx: IV Fluids (NS), Vasopressin, Atropine.

Opioid (Oxycodone, Hydrocodone, Heroin) **Withdrawal:** Related to increased SNS activity

S/S: Anxiety/Restlessness, N/V, Pupil Dilation, Tachycardia, Fever, Abd Cramps, Rhinorrhea, Watery Eyes

Antidote: Naloxone/Narcan

Methadone: an Opioid Analgesic used to detoxify/treat pain in Narcotic Addicts.

Tramadol: an Opioid Analgesic.

Constipation: Side effect of opioid.

Pruritus: Side effect of opioid. Treat it with Diphenhydramine.

Positive **Orthostatic Vital Signs**: Rise in Pulse > 20min, indicate incr. risk of Syncope and Falls.

Orthostasis is verified by a Drop in pressure with Increasing Heart rate (Rise in Pulse > 20/min)

Osteomyelitis: Infectious Bone. Get blood cultures and Antibiotics.

If necessary Surgery to Drain Abscess.

Paget's Disease of the Bone: Tinnitus, Bone pain, Enlargement of bone, Thick bones.

Risedronate: Bisphosphonate derivative that Inhibits osteoclast-mediated bone resorption and modulates bone metabolism. Can also Treat or Prevent Osteoporosis.

Pancreatitis: Fetal position. Epigastric (upper) abd pain. Painful Condition. Tachycardia. Steatorrhea (Fatty Stools).

Tx: NPO (gut rest), NGT (Suction out Gastric Secretion). Prepare antecubital site PICC- TPN/Lipids (Linoleic Acid).

Demerol is given. NOT Morphine sulfate Morphine causes Spasm of the Sphincter of Oddi.

Severe Epigastric pain radiating to the Back after an Alcohol Binge is most likely due to Acute Pancreatitis. It is a Serious condition but usually not immediately life-threatening.

Life-threatening Complication can occur after ERCP (Acute).

S/S: Acute Epigastric/LQ pain, often radiating to the back, rapid rise in pancreatic enzyme (Amylase, Lipase).

Can develop Respiratory Complications including Pleural Effusions, Atelectasis, and ARDS: often Due To activated Pancreatic Enzymes and Cytokines that are released from the pancreas into the circulation and Cause focal or systemic inflammation.

Chronic Pancreatitis, Pancreatic Enzymes are given with meals.

After pain relief, Cough and Deep breathe**.** Bc of fluid pushing up in the Diaphragm.

Beta Cells of pancreas produce Insulin.

TPN (Total Parenteral Nutrition): given in Subclavian line.

Turner's sign: flank grayish blue (turn around to see your flanks) pancreatitis.

Cullen's Sign: Ecchymosis in Umbilical area. (+) Grey turners spots.

ARDS is the most Severe form of these complications and can rapidly progress to respiratory failure within a few hours. The presence of Inspiratory Crackles in this client could indicate early ARDS and needs to be assessed further for progression.

Parkinson: (RAT): Rigidity, Akinesia (loss of muscle), Pill Rolling Tremors.

Carbidopa/Levodopa: Dry Mouth, Postural Hypotension, Psychosis, Reddish -brown Urine. Causes Drowsiness.

Contraindicated: Pt with glaucoma, Avoid B6. Also Contraindicated with MAOI's

Trihexyphenidyl: Treat Stiffness, Tremors, Spasms, Poor muscle control. Also Sedative effect.

Benztropine Injection: Extrapyramidal effects of other drugs.

Ropinirole, Pramipexole: Sleep attacks, Extreme Drowsiness.

Pemphigus Vulgaris (Autoimmune): Painful Blistering on the Skin and Mucous Membranes.

Nikolsky's Sign: Separation of epidermis caused by rubbing of the skin. (Blister)

Pericarditis: Inflammation of Visceral and/or Parietal Pericardium. Cardiac Output is Diminished.

S/S: Pericardial Friction Rub, Pleuritic Chest Pain (Sharp), Aggravated during Inspiration & Coughing, Fever, Leukocytosis, ST-segment Elevation.

Lean Forward: will pull the heart Away from the lungs, Preventing Pericardial Irritation caused by friction and contact with the lungs.

Tx: NSAID/ ASA & Colchicine (Gout med).

Pericardiocentesis: a procedure where fluid is Aspirated from the Pericardium. Positioned the pt Supine with the HOB $30^{O} \sim 60^{O}$.

Complication: Cardiac Tamponade (Paradoxical Pulse).

Cardiac Tamponade: (Beck's Triad) Hypotension, Muffled Heart Sounds, Distended Neck Veins.

Paradoxical Pulse: Stroke Volume or Sbp > 10mmHg during Inspiration.

PVD remember DAVE (Legs are Dependent for Arterial & for Venous Elevated)

Ele**V**ate **V**eins; d**A**ngle **A**rteries for better perfusion.

Pheochromocytoma (PCC) (Benign Tumor on the Adrenal Gland/Medulla): Hypersecretion of Epi/Norepi, persistent HTN, Tachycardia, Palpitations, Hyperglycemia, Diaphoresis, Tremor, Pounding HA;

Stress, Frequent rest breaks, Avoid Cold and Stimulating foods. Weight loss

Tx: Surgery to remove Tumor

Adrenal Medulla: Secrete Catecholamine (Epinephrine and Norepinephrine) and Dopamine.

Adrenal Cortex: Secrete Glucocorticoids (Cortisol), Mineralocorticoids (Aldosterone), Androgens (Testosterone)

Anterior Pituitary Gland: Prolactin, Growth Hormone, ACTH, Follicle-Stimulating Hormone (TSH), Thyroid-Stimulating Hormone (TSH), Luteinising Hormone (LH), Melanocyte-Stimulating Hormone (MSH).

Posterior Pituitary Gland: ADH and Oxytocin.

Removal of **Pituitary Gland**, watch for Hypocortisolim and Temporary Diabetes Inspidus.

Polycythemia: Elevated Hgb levels and Hct levels. Compensatory mechanism due to prolonged tissue hypoxia. Increase Blood Viscosity (risk for stroke or thromboembolism).

Tx: Hydration.

Polycythemia Vera (PV): Slow growing Blood Cancer. Chronic Myeloproliferative Disorder. Incr. RBC. Risk of Blood Clots (Heart Attack or Stroke).

Therapeutic Phlebotomy: 300~500mL.

Postoperative Cognitive Dysfunction (POCD):

Memory Impairment & Problems with Conc., Language Comprehensive social integration and emotional ability after Major Surgery.

Symptoms typically resolve after 4-6 weeks or when healing is complete.

No Pee, No **K^+** (do not give **Potassium** without adequate Urine Output).

Take it with Food.

Never give K^+ in IV Push.

Low Potassium Potentiates Dig Toxicity.

If every answer in front of you is an Abnormal value. If Potassium is there you can bet it is a problem they want you to identify, because values outside of normal can be Life-Threatening.

Even a bun of 50 doesn't override a Potassium of 3.0 in a renal patient in priority.

Hyperkalemia: (MURDER) – Muscle weakness, Urine (oliguria/anuria), Respiratory depression, Decr. cardiac contractility, ECG changes, Reflexes. Bradycardia, Diarrhea, Nausea.

Check Pulse first: Due to Dysrhythmias

May be Due to Inability of the Adrenal Gland to Secrete Aldosterone (K^+-Wasting Hormone)

Kayexalate (Na^+ Polystyrene Sulfonate)**:** Need to worry about Dehydration (K^+ has Inverse Relationship with Na^+)

Don't use Kayexalate if patient has Hypoactive Bowel Sounds.

Hypokalemia: Muscle weakness, Dysrhythmias.

K^+ Containing Food: Apricots, Bananas, Beans, Carrots, Celery, Citrus fruits, Oranges, Potatoes, Raisins.

Use ABC's & Maslow for **Priority** Need

Bleeding is part of the 'Circulation' assessment of the ABCD's in an Emergent Situation.

Therefore, if Airway and Breathing are accounted for, a compound fracture requires assessment before Glasgow coma scale and a neuro check (D=disability, or Neuro check)

Priapism: Painful Erection lasting longer than 6 hrs.

Promethazine (an antihistamine): used to treat Allergic reactions and to treat or prevent Nausea and Vomiting from illness or motion sickness. It is also used to make you Sleep before surgery, and to help treat Pain or Nausea after surgery.

AntiPsychotic Medications:

Typical: Chlorpromazine/Thorazine, Haloperidol, Thiothixene.

First Generation Med. Can cause Extrapyramidal Symptoms (Motor control). More Side Effects. Fewer Withdrawal.

Atypical: Aripiprazole/Abilify, Clozapine, Olanzapine, Quetiapine, Risperidone, Ziprasidone.

Clozapine: agranulocytosis, tachycardia and seizures. Tx Severe Schizophrenia.

Don't Mix antipsychotics with Caffeine and Apple juice.

Haloperidol: Preferred antipsychotic in Elderly. Monitor for early signs of EPS and give IM Benadryl.

Risperidone: Doses over 6mg can cause Tardive Dyskinesia, first line antipsychotic in Children

All Psych meds (except Lithium) side effects are the same as SNS but the BP is decreased.

SNS: Increase in BP, HR and RR (dilated bronchiole), dilated pupils (blurred vision), Decreased GUT (urinary retention), GIT (constipation), Constricted blood vessels and Dry mouth.

New Generation Med. Less likely to cause EPS. Less Side Effects. More withdrawal.

ExtraPyramidal Symptoms (Motor Control):

Parkinsonism, Dystonia, Akathisia (Motor restlessness), Tardive Dyskinesia (Protrusion of the tongue, Difficulty Swallowing)

Tardive Dyskinesia (Irreversible): Involuntary movements of the tongue, face and extremities, may happen after prolonged use of antipsychotics

Akathisia (Motor restlessness): Need to keep going, tx with antiparkinsons meds, can be mistaken for agitation.

Tx: With Anticholinergics (Benztropine, Trihexyphenidyl, and Diphenhydramine/ Antihistamine)

Neuroleptic Malignant Syndrome (NMS): Life-Threatening Condition!

S/S: Hyperpyrexia (High fever)**, S**tiff (increased muscle tone/ muscle rigidity), Diaphoresis, Incr. BP, Incr. pulse, Incr. respirations, Drooling, Altered mental status,

Caused by: Antipsychotic Meds.

Cognitive therapy: Counseling

Crisis intervention: Short term.

Five Interventions: Safety**,** Set limits**,** Establish trusting relationship**,** Meds**,** Least restrictive methods/environment.

Hallucinations: Redirect them; In Delusions Distract them.

Milieu therapy: Taking care of patient/environment

Obsession is to Thought. **Compulsion** is to Action

Phobic Disorder: use Systematic Desensitization.

Lithium: Mood Stabilizer. (Therapeutic affect is 0.6-1.2$^{mmol}/_{L}$). It is salt preparation & replaces Na^{+} in the cells.

Risk for Dehydration, Decr. Renal Function (elderly pt).

Drug-drug interactions (eg, NSAIDS and thiazide Diuretics).

Tx: Hydrate 2~3L of H_2O; Maintain Na^{+} 2~3$^{g}/_{day}$. Low Na^{+} diet will precipitate Li^{+} toxicity (> 1.5).

Chronic Toxicity (Toxic Level is **2-3**$^{mmol}/_{L}$): N/V, diarrhea

Neurologic manifestations: Ataxia, Confusion or Agitation, and Neuromuscular Excitability (Tremor, Myoclonic Jerks)

Nephrogenic Diabetes Insipidus: Polyuria and Polydipsia (increased thirst)

Tx: Mannitol and Acetazolamide

Pulmonary auscultation examination findings				
Condition	**Breath sounds**	**Tactile fremitus**	**Percussion**	**Mediastinal shift**
Normal lung	Bronchovesicular (hilar), vesicular (peripheral)	Normal	Resonance	None
Consolidation (eg, lobar pneumonia)	Increased (crackles & egophony present)	Increased	Dullness	None
Pleural effusion	Decreased or absent	Decreased	Dullness	Away from effusion (if large)
Pneumothorax	Decreased or absent	Decreased	Hyperresonant	Away from tension pneumothorax
Emphysema	Decreased	Decreased	Hyperresonant	None
Atelectasis (eg, mucus plugging)	Decreased or absent	Decreased	Dullness	Toward atelectasis (if large)

Atelectasis (Diminished Lung Sounds): Common Complication after Heart Surgery. Encourage Deep Breathing.

Fine crackles are a series of distinct, discontinuous, and high-pitched snapping sounds usually heard on inspiration. The sound originates as small atelectatic bronchioles quickly reinflate and can be expected in clients who have undergone abdominal surgery due to shallow breathing related to pain. Although the presence of fine crackles requires treatment (eg, ambulation, deep breathing).

Fremitus: Palpable vibration felt on the chest wall. Sound travels faster in solids (Consolidation) than in an aerated lung, resulting in increased fremitus in pneumonia. The presence of egophony, bronchophony, or whispered pectoriloquy also suggests a consolidative process. Fluid or air outside the lung interrupts the transmission of sound, resulting in decreased fremitus in Pleural effusion and Pneumothorax.

Hemothorax: Collection of Blood in the Pleural Space. Risk of Empyema.

Empyema: Infected pocket of Fluid (Pus) in the Pleural Space. Nonproductive cough.

Pleural Effusion is collection of fluid (>15-20 mL) in the pleural space between the parietal and visceral pleurae that prevents the lung from expanding fully; the lung under is compressed. This results in Decreased lung volume, Atelectasis, and Ineffective gas exchange.

S/S: Dyspnea on exertion**,** Non-productive Cough**,** Diminished/Absent Breath sounds, Dullness to percussion**,** Decr. Tactile Fremitus**.** Trachea (mediastinum) deviated (if the effusion is large).

Tx: Diuretics or Thoracentesis.

Thoracentesis Prep: Take VS, Shave area around needle insertion, Position patient with arms on pillow on over bed table or lying on side**,** No more than 1000mL at a one time.

Post: Listen for Bilateral Breath Sounds, Check Leakage, Sterile dressing, VS.

Diminished BS, Retractions, Dyspnea, Incr. RR, Cyanosis Could be Pneumothorax.

Pneumonia: Acute condition.

S/S: Fever and Chills. Rusty Sputum.

Complication: Pleurisy (S/S: Pleuritic Pain, Stabbing Pain, Inflamed Parietal and Visceral Pleurae Rubbing together).

Crackles: suggest Pneumonia, which is likely to be accompanied by Hypoxia, which would manifest itself as mental confusion, etc.

Can’t Cough: Ineffective Airway Clearance

Positioning: Lay On (Down) the Affected Side to Splint and Reduce Pain (Pleuritic Pain: Inflammation of the two layers of pleura).

Reduce Congestion the Sick lung goes Up.

For the Elderly: Confusion is often present.

Pulmonary/Air Embolism:

S/S: Chest Pain, Difficulty Breathing, Tachycardia, Pale/Cyanotic, Sense of Impending Doom

Position: Turn pt to Left side & Lower the HOB. Trendelenburg.

When O_2 Deprived: the Body Compensates by causing Hyperventilation (Resp. Alkalosis). Should the patient breathe into a paper bag? No. If the Pa O_2 is well below 80 they need O_2.

Look at all your ABG values. As soon as you see the words PE you should think Oxygen First.

First Sign of PE: is Sudden Chest Pain, followed by Dyspnea and Tachypnea.

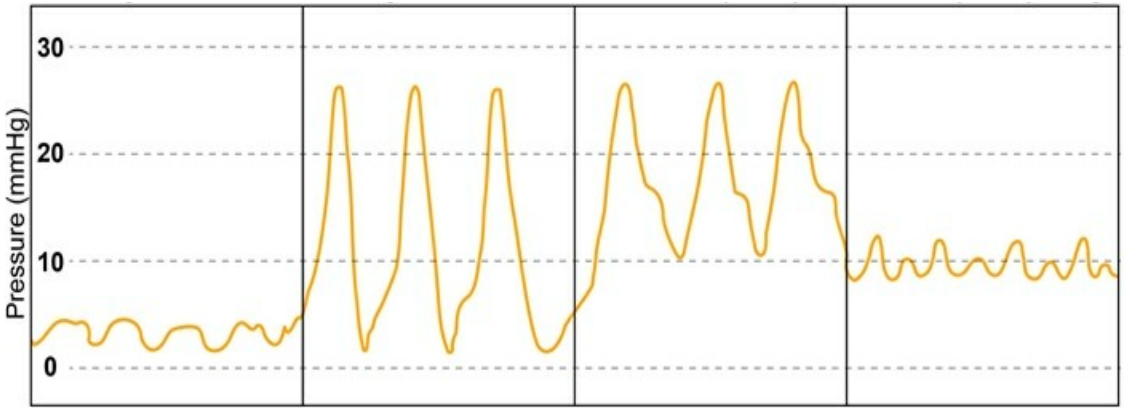
Clamp the Catheter to Prevent more air from Embolizing into the venous circulation.

Place the client in Trendelenburg position on the Left side, causing any existing air to rise and become trapped in the Right Atrium.

Administer O_2 if necessary to relieve dyspnea.

Notify the HCP or call an RRT to provide further resuscitation measures.

Stay with the client to provide reassurance and monitoring as the air trapped in the Right atrium is Slowly absorbed into the bloodstream over the course of a few hours.



Pulmonary Artery (PA) Catheter: When observed a spontaneously wedged waveform on the PA catheter monitor, the balloon port should be Deflated immediately and Locked to prevent accidental re-inflation.

The Waveform indicates a "wedged" position of the catheter, meaning that the balloon may be Inflated or the catheter has Advanced too far into the PA, occluding that branch of the PA**.**

PA Wedge Pressures are measured periodically to assess Left ventricular function or Left ventricular end diastolic pressure (Ventricular Preload). The balloon should be Inflated for only 10-15 seconds and then allowed to Deflate passively. A balloon that is Inflated for a Long Period may cause PA Rupture or Damage. Locking the balloon port of the PA catheter will prevent the balloon from being Accidentally Inflated**.**

The Pressure Bag should be 300 mm Hg.

Normal Pulmonary Artery Wedge Pressure (PAWP): 6-12 mmHg.

Normal Pulmonary Capillary Wedge Pressure (PCWP): Left Ventricular Preload. is 8-13. Readings of 18-20 are considered High.

Normal Central Venous Pressure (CVP): Right Ventricular Preload. 2-8 mmHg.

Normal Tidal Volume: 7 – $10^{mL}/_{kg}$

Ambient Air (Room Air) contains 21% oxygen.

Radial Arterial Line: Risk for hemorrhage, could lose a large amount of arterial blood in a short period of time.

Low Pressure Alarm: Could be Hypotension/ Disconnected Tubing.

Phlebostatic Axis: Midaxillary Line at 4th Intercostal Space.

If your Normally Lucid patient starts Seeing Bugs you better check his **Respiratory Status** First.

Signs of Hypoxia: Restless, Anxious, Cyanotic, Tachycardia, Increased Resp. (also monitor ABG's)

The First Sign of Hypoxia is Restlessness, followed by Agitation, and things go Downhill from there all the way to Delirium, Hallucinations, and Coma.

So check the O_2 Stat, and get ABG's if possible.

Lung Biopsy: Position pt Lying on Side of bed or with arms Raised up on pillows over bedside table, have pt Hold Breath in Midexpiration, Chest X-ray done Immediately Afterwards to check for Complication of Pneumothorax, Sterile Dressing Applied.

Pulmonary Sarcoidosis: leads to Right sided heart failure.

During **Internal Radiation:** on Bedrest while Implant in place.

Criteria for Activating **Rapid Response Team**: (Any Staff can Call) (Acute Change)

HR < $40/_{min}$ or > $130/_{min}$

SBP < 90_{mmHg}

RR < $8/_{min}$ or > $28/_{min}$

O_2 < 90% despite O_2

Urine Output <50_{mL} in 4 hours

Change in LOC

Recovery Position: for unconscious pt who is still breathing. Side Position (Prone) w/ top leg Flexed.

Detached Retina: area of detachment should be in the Dependent position.

S/S: Curtain appearing in the vision/ Shadow, loss of vision, Visual Floaters, Flashes of light

Rhabdomyolysis: breakdown of muscle tissue that leads to the release of myoglobin/ muscle fiber contents into the blood. These substances can be harmful to the Kidney. Medical Emergency.

Rapid IV Fluid Resuscitation to presume kidney function.

Rocky Mountain Spotted Fever: transmitted by Ticks.

Most common Rickettsial Disease

Start with a Fever, HA, Myalgia (muscle pain), a Maculopapular Rash (develops 2 ~ 6 after the onset of the fever) that begins on the wrists and ankles and spreads Centripetally to the trunk.

Rotavirus: Contagious Virus. Leading cause of Diarrhea (<5yo). Spread via Fecal-Oral Route. Breast feeding should be maintained.

Scabies:

Lindane/Kwell: tx of Scabies and Lice. Scabies- apply Lotion once and leave on for 8-12 hours.

Lice- use the Shampoo and leave on for 4 minutes with hair uncovered then rinse with warm water and comb with a fine tooth comb.

Scleroderma: Overproduction of Collagen. No Cure.

Tx: Control Symptoms. Prevent Further Complications.

Sedation:

Midazolam/Versed (Benzodiazepine): given for Conscious Sedation. Risk for Resp. Depression & Hypotension.

Diazepam (Benzodiazepine): commonly used tranquilizer given to reduce Anxiety before surgery.

Four Side-Rails Up: can be considered a form of restraint. Even in LTC facility when a client is a fall risk, keep lower rails down, and one side of bed against the wall, lowest position, wheels locked.

Seizure:

Phenytoin: Drug Level 10-20.

Should Not Stop abruptly.

Stop the feeding for 1 to 2 hours before and after administering phenytoin as products containing Ca^{2+} (eg, antacids, calcium supplements) and/or nutritional enteral tube feedings can Decr. absorption.

Flushing the tube with 30-50 mL of water before and after.

Can cause Liver damage. Monitoring of Liver function test. (Yellow of the skin)

Can cause Gingival Hyperplasia, maintain Oral hygiene.

Rash. Stop med.

Oral contraceptives effectiveness is Decr., use alternative birth control methods. Teratogenicity.

IV Phenytoin can cause Hypotension and Arrhythmias (Bradycardia)

Phenytoin Toxicity: Nystagmus, Diplopia, Slurred Speech, Rash, Dizziness, Nausea, Ataxia (Gait Unsteadiness & Coordination), Lethargy, Coma.

Carbamazepine: Can be used for Trigeminal Neuralgia (CN V) for Neuropathic Pain.

Associated w/ Agranulocytosis (Leukopenia). Risk for Infection.

Don’t take with Grapefruits

Valproic Acid: Seizure (epilepsy) and Bipolar med.

Common Side effect: N/V, Hair loss, Tremors, Vertigo, Fatigue, Thrombocytopenia, Edema, Weight Gain, Acne.

Rare Serious Adverse Effect: Hallucinations, HyperAmmonemia, Liver Failure, Encephalopathy.

Levetiracetam: antiEpileptic.

Sepsis:

SIRS: (2 or more)

Temp > 100.4 or < 96.8

HR > 90

RR > 20. pCO_2 < 32 mmHg

WBC > 12,000/$_{mm}^3$ or < 4,000/$_{mm}^3$, > 10% bands.

Sepsis and Anaphylaxis (along with the obvious Hemorrhaging): Reduce Circulating Volume by way of Increased Capillary Permeability, which leads to Reduced Preload (volume in the Left Ventricle at the End of diastole).

Silicosis: a long-term lung disease caused by Inhaling large amounts of Crystalline Silica Dust, usually over many years.

Simple Silicosis: Exposed to Low Conc. of Silica. Usually Asymptotic. Abnormalities are often detected on X-ray.

Acute Silicosis: Develops within few years after Exposure. S/S: Rapid Onset of Dyspnea, Cough and Weight Loss. X-ray Reveals a Ground-Glass Appearance.

Accelerated Silicosis: Characterized by Rapidly Progressing Symptoms and X-ray Changes.

Complicated Silicosis: Characterized by Severe Scarring and Fibrosis of lung tissue.

Status Epilepticus (Life Threatening): Most important assessment parameter, Level of Consciousness.

Treatment of choice: Benzodiazepine (Lorazepam, Diazepam, Midazolam)

Shock: ⬇ BP Hypotension, ⬆ Pulse Tachycardia, ⬆ Resp Tachypnea.

Bedrest with extremities Elevated 20º, knees Straight, head slightly/ Elevated (Modified Trendelenburg).

Anaphylactic Shock: has an acute onset, and manifestations usually develop quickly (20-30 minutes).

Caused by a systemic IgE-mediated hypersensitivity allergic reaction to drugs, foods, and venom.

Results hypotension and respiratory manifestations, including laryngeal edema (from inflammation) and bronchoconstriction (primarily from release of histamine); these can lead to cardiac and respiratory arrest.

Tx: Maintain Airway & Breathing (High Flow O_2). Elevate legs. Volume Resuscitation w/ IV Fluids. Albuterol. Antihistamine/ Diphenhydramine. Corticosteroids.

Epinephrine: Always given in TB Syringe (IM).

Norepinephrine: Vasopressor used to Increase Stroke Volume, Cardiac Output, and MAP. Titrating a norepinephrine infusion upward to maintain the MAP within normal limits ($\geq$65 mm Hg).

Remember the action of Vasopressin because it sounds like “Press In”, or VasoConstriction.

Hydroxyzine (Antihistamine): Use for itching or hives. Also used as a Sedative to treat Anxiety.

Give to PreOp (Commonly). S/S: Dry Mouth.

Basophils: release Histamine during an allergic response.

Sickle Cell Crisis:

Two Interventions to Prioritize: Fluids & Pain Relief & Folic Acid/ Blood Transfusion. Maintain Bed Rest.

Do Not give Demerol.

Hydroxyurea (chemotherapy drug): report GI symptoms immediately, could be Sign of Toxicity. Help to Prevent Formation of Sickle-Shaped RBC.

Vasocclusive Crisis: Leads to Ischemia & Severe Pain. Bilirubin released, results in Jaundiced brownish hue to the urine.

Stomas: Dusky stoma means Poor blood supply. Protruding means Prolapsed.

Mucus in Ileal Conduit is Expected. Change in color is always a Late sign.

Peritonitis: Sharp pain & Rigidity.

Pneumococcal Vaccine/ Pneumovax 23 gets administered **Post-Splenectomy** to prevent Pneumococcal Sepsis.

Streptococcal Pharyngitis (Strep Throat): can lead to Glomerulonephritis/ Rheumatic Fever.

24hr After Starting Antibiotic, can Return to school.

Rheumatic Fever: can Lead to Cardiac Valves Malfunctions.

Group A Strep Precedes Rheumatic Fever.

Chorea (Neurological Disorder) is part of this sickness (Grimacing, Sudden Body Movements, etc.) and it Embarrasses kids. They have Joint Pain.

Watch for Elevated AntiStreptolysin O (ASO).

Tx: Penicillin.

Systemic Lupus Erythematosus (SLE): Butterfly rashes. Leukopenia (WBC < 4,000) &

(Serious Complication) Thrombocytopenia Lupus Nephritis: Plat < 150,000 & Incr. Cr & Incr. BUN.

Hypertension: Secondary HTN have Identifiable causes.

A newly diagnosed hypertension patient should have BP assessed in Both arms.

Angiotensin II in the lungs: potent Vasodilator.

Aldosterone attracts Sodium.

Hydralazine (vasodilator): Tx of HTN or CHF. Report Flu-like symptoms, Rise slowly from sitting/lying position; Take with meals.

Verapamil (Ca^{2+} Channel Blocker): affects the Afterload.

Diltiazem Tx: HTN, Angina.

S/S: Constipation, Gingival Hyperplasia, Edema, Fatigue, Dizziness, HA.

For afib pt, to Decr. Ventricular Rate to Prevent Stroke.

Hypertension Emergency: SBP> 180mmHg, DBP> 120mmHg

Hypotension:

Dopamine (Intropine): Tx of Shock, Low Cardiac Output, Poor Perfusion to vital organs. Hypotension due to bradycardia.

Monitor EKG for Arrhythmias, Monitor BP.

Hypotension and Vasoconstricting Meds may alter the Accuracy of O_2 Saturation.

Tetanus: Risus Sardonicus (spasm of facial muscles, grinning), Trismus (Lockjaw), Spasms of the Jaw, and Arching of the back.

After **SupraTentorial Surgery** (incision Behind hairline): Elevate HOB 30-45 degrees

After **InfraTentorial Surgery** (incision at Nape of neck): position Flat and Lateral on either side.

Malignant HyperThermia:

S/S: Tachypnea, Tachycardia, Rigid Jaw (generalized rigidity), Muscle stiffness, Hypercapnia (excess), Incr. K^+, Incr. Temp.

Triggered by: PeriOperative setting in response to Anesthesia.

Dantrolene Sodium (Muscle Relaxant): for Spasticity, may take a Week or more to be effective.

HypoThermia: Medical Emergency. Alterations in acid-base balance, coagulation values, and cardiac function may also occur; can lead to Cardiac and Respiratory Failure and Coma.

Should anticipate a workup for Sepsis and various types of Shock.

S/S: Core Temp (eg, rectal) < 95 F (35 C), Mental status changes, Shivering, and Impaired coordination.

HyperThyroidism: Elevated T_4, Low TSH level.

Graves' Disease: Accelerated physical and mental function; sensitivity to heat. Fine/soft hair. Exophthalmos.

Elevated T4, and Low TSH (the pituitary gland will try to compensate for excess T3 and T4).

Thyroid Storm: Trigger by Stress Event. Life-Threatening!

S/S: Tachycardia, Fever, Cardia Dysrhythmia (A. Fib), n/v, Diarrhea, Altered Mental Status/Confusion, Seizure, and HTN (Thyrotoxicosis)

PropylThioUracil/PTU and Methimazole- prevention of Thyroid Storm. Reduce Iodine.

S/S: Agranulocytosis.

Lugol's Solution: To Decr. the Vascularity of the gland before thyroid surgery. Burning sensation in the mouth, and Brassy taste are Adverse Reactions. Need to Report to the Dr.

Pain. Could cause Hyperthyroidism.

Radioactive Iodine: Flush the substance out of the body with 3~4 L/day for 2 days. Flush the Toilet Twice after using for 2 days.

Limit contact w/ patient to 30 minutes/day. No Pregnant visitors/nurses and no kids.

HypoThyroidism: Diminished T_4

Myxedema Coma: Slowed physical and mental function, sensitivity to cold, dry skin and hair.

May report Somnolence (Decr. met rate, body is slow and sleepy).

Levothyrosine/Synthroid: May take several weeks to take effect. Notify doctor of chest

Take in the AM on Empty stomach.

No Antacids, Ca^{2+}, Fe. Ok during Pregnancy.

Insomnia is a side effect of Thyroid hormones. Increased met. rate, your body is Too busy to sleep.

Post-**Thyroidectomy:** Low or Semi-Fowler's, Support head, neck and shoulders (prevent neck flexion/hyperextension).

Trach at Bedside. Assess for Edema and Swelling of the airway. Bleeding behind the neck.

Risk injury in the Parathyroid Gland (Decr. Ca^{2+}).

S/S: tingling around mouth, fingers, toe; muscle twitch.

Ca^{2+} Gluconate should be kept available to treat Hypocalcemia.

Hyper-ParaThyroid: fatigue, muscle weakness, renal calculi, back and joint pain. Constipation. (Incr. Ca^{2+}).

Polyuria is common with the Hypercalcemia caused by Hyperparathyroidism.

[Low Ca^{2+}, High Phosphorus diet]

Hypo-ParaThyroid: [CATS] – Convulsions, Arrhythmias, Tetany, spasms, stridor (Decr. Ca^{2+}).

Acute: Positive Chvostek's & Trousseau's sign.

Chronic: Dry skin, Brittle nails/hair, Parkinsonian syndrome, Tooth enamel Hypoplasia.

The Parathyroid Gland relies on the presence of vitamin D to work.

[High Ca^{2+}, Low Phosphorus diet]

After **Total Hip Replacement:** don't Sleep on Operated side, don't Flex hip more than 45~60º, don't Elevate HOB more than 45o. Maintain hip Abduction by separating thighs with pillows.

Don't stay in same position for more than 1 hour.

Buck's Traction (Skin traction/Knee immobility): Elevate foot of bed for counter-traction.

Back are q2hr (to prevent Pressure Sore). Trapeze to reduce friction and shear.

Dorsiflex the affect foot to test for peroneal nerve (foot drop). Positioning boot to prevent Foot Drop.

Place Apparatus First then place the weight when putting traction. No Weight on the Floor.

Never release traction UNLESS you have an order from the MD to do so.

Bryant's Traction: Children <3yo, <35 lbs with Femur Fx.

Dunlap Traction: Skeletal or Skin

Russell Traction: Femur or Lower Leg

Post-**Transplant** patient: Infection Control is Most important. Immunosuppressant therapy.

Trendelenburg Position: may Increase Cerebral Edema

Trendelenburg Test: To detect Gluteus Medius Tendon Tears or Weakness in the Hip Abductors.

For Varicose Veins: If they Fill Proximally = Varicosity.

Triage:

In an emergency, patients with Greater chance to live are treated First

Triage the person who is most likely to Not survive Last.

Red (Immediate): Injuries are Life-Threatening but survivable with Minimal intervention.

Ex: Hemothrax, Tension Pneumothorax, Unstable Chest and Abdominal Wounds, Incomplete Amputations, Open Fx's of Long Bones, Occluded Airway, Actively Bleeding. 2nd/3rd degree Burn w/ 15%-40% of total body surface.

Yellow **(**Delayed): Injuries are Significant, Require Medical Care, but can Wait Hours w/o Threat to Life/Limb.

Ex: Stable Abd Wounds w/o evidence of hemorrhage, Fx requiring open reduction, debridement, external fixation, most Eye and CNS injuries, Burns.

Green (Minimal): Injuries are Minor and Treatment can be Delayed to Hours or Days. Individuals in this group should be Moved Away from the main triage area.

Ex: Upper Extremity Fx, Minor Burns, Sprains, Small Lacerations, Behavior Disorders. "Walking Wounded"

Black (Expectant): Injuries are Extensive and Chances of Survival are Unlikely. Separate but Don’t Abandoned, Comfort Measures if possible.

Ex: Unresponsive, Spinal Cord Injuries, Wounds with Anatomical Organs, Seizures, Profound Shock with Multiple Injuries, No Pulse/ BP, Pupils Fixed or Dilated. Head Injury w/ Fixed Pupils. Broken neck w/ Agonal Breaths. 2nd/3rd degree Burn with 60% of body surface area.

DOA: Dead on Arrival

Orange: NON-Emergent Psych

Tuberculosis (TB):

If a TB patient is Unable/Unwilling to Comply with Tx they may need Supervision (Direct Observation).

TB is a public health risk.

PPD is positive if area of induration is:

>5 mm in an immunocompromised patient

>10 mm in a normal patient

>15 mm in a patient who lives in an area where TB is very rare.

Positive ppd Confirms Infection, not just exposure.

Sputum Test will Confirm Active Disease.

Pulmonary TB: Low-grade afternoon Fever.

Isoniazid (INH): Do Not give with Phenytoin. Can cause Phenytoin Toxicity. Monitor LFT's. (Hepatotoxic)

Can cause Peripheral Neuritis, take Vit B_6 with it. Hypotension will occur initially, then resolve.

Rifampin & Rifapenine: (Bactericidal) Red orange Tears and Urine, also Oral Contraceptives don't work as well. Take it with Meals.

Ethambutol: messes with your Eyes.

TB drugs are Liver Toxic. (Does your patient have hepB?) Adverse reaction is Peripheral Neuropathy.

Pulmonary TB: Low-grade Afternoon Fever.

Tube Feeding w/ **Decr. LOC:** position pt on Right side (promotes Emptying of the Stomach) w/ HOB Elevated (to Prevent Aspiration)

Critically Ill clients are at Increased risk for Aspiration of oropharyngeal secretions and gastric content; Administering Continual rather than Bolus tube feeding.

Other than Initially to Test Tolerance, G-tube and J-tube feedings are usually given as Continuous feedings.

Typhoid: Rose Spots in Abdomen.

Ulcerative Colitis: Recurrent Bloody Diarrhea

Varicella: Very Contagious disease caused by the Varicella-Zoster Virus (VZV). It causes a Blister-like Rash, Itching, Tiredness, and Fever. Vesicular Rash (Central to Distal) dew drop on rose petal

Ventilator Alarms: HOLD

High alarm- **O**bstruction due to Incr. Secretions, Kink. (pt Coughs, Gag or Bites)

Low press alarm- **D**isconnection or Leak in ventilator or in pt. airway cuff, pt. Stops Spontaneous Breathing

Fat Soluble Vitamins: are Vitamins A, D, E, K

Hypovolemia – increased temp, rapid/weak pulse, increase respiration, hypotension, anxiety, urine specific gravity >1.030

Hypervolemia – bounding pulse, SOB, dyspnea, rales/crackles, peripheral edema, HTN, urine specific gravity <1.010; Semi-Fowler's.

WBC:

Basophil- Allergic Response (AB)

Eosinophil- Parasitic Infestation (EP)

Lymphocyte- Viral Infection (LV)

Neutrophil- Bacterial Infection (BN)

William's Position (Williams Lumbar Flexion Exercises)**:** Semi-Fowlers with Knees Flexed (incr knee gatch) to Relieve Lower Back Pain.

Wilm's Tumor (Nephroblastoma)**:** usually Encapsulated Above the Kidneys causing Flank Pain.

Do Not Palpate Abdomen; could Disrupt the Tumor Cells (S/S: abdomen distention).

Herbal Supplement	**Uses**	**Side effects**

Ginkgo Biloba	Memory enhancement	Increased bleeding risk
Ginseng	Improved mental performance	Increased bleeding risk
Saw Palmetto	Benign prostatic hyperplasia	Mild stomach discomfort Increased bleeding risk
Black Cohosh	Postmenopausal symptoms (hot flashes & vaginal dryness)	Hepatic injury
St John's Wort	Depression Insomnia	Drug interactions: Antidepressants (serotonin syndrome), OCs, anticoagulants (↓ INR), digoxin Hypertensive crisis
Kava	Anxiety Insomnia	Severe liver damage
Licorice	Stomach ulcers Bronchitis/viral infections	Hypertension Hypokalemia
Echinacea	Treatment & prevention of cold & flu	Anaphylaxis (more likely in asthmatics)
Glucosamine	Improve Joint Function	Hypoglycemia may result when it is taken with Antidiabetic drugs
Ephedra	Treatment of cold & flu Weight loss & improved athletic performance	Hypertension Arrhythmia/MI/sudden death Stroke Seizure
MI = Myocardial Infarction; **OCs** = Oral Contraceptives.		

Hypertensive disorders of pregnancy	
Chronic hypertension	• Systolic pressure **≥140 mm Hg** &/or diastolic pressure **≥90 mm Hg** prior to conception or 20 weeks gestation
Gestational hypertension	• New-onset elevated blood pressure at ≥20 weeks gestation • No proteinuria or end-organ damage
Preeclampsia	• New-onset elevated blood pressure at ≥20 weeks gestation **AND** • Proteinuria **OR** signs of end-organ damage
Eclampsia	• Preeclampsia **AND** • New-onset grand mal seizures

Active Labor: First Action is to Listen to Fetal Heart Tone/Rate.

Never check the monitor or a machine as a first action. Always Assess the patient First.

Listen to the Fetal Heart Tones with a Stethoscope in NCLEX land. Sometimes it's hard to tell who to check on first, the mother or the baby; it's usually easy to tell the right answer if the mother or baby involves a machine. If you're not sure who to check first, and one of the choices involves the Machine, that's the Wrong answer.

Perform **Amniocentesis** Before 20 weeks gestation to check for Cardiac and Pulmonary abnormalities.

Amniotic Fluid is Alkaline, and turns Nitrazine paper Blue.

Urine and normal Vaginal Discharge are Acidic, and turn it Pink.

Yellow Amniotic Fluid with Particles: Meconium-Stained.

Betamethasone (Corticosteroid)**:** Causes Immature Fetus's Lungs to Produce Surfactant; to Speed up a preterm fetus's lung development.

Caput Succedaneum: Diffuse Edema of the Fetal scalp that Crosses the Suture lines. Swelling Reabsorbs within 1 to 3 days.

Patient with a **Vertical C-section** Surgery will more likely have another C-section.

Treatment for Torsades de Pointes and Seizures associated with **Eclampsia**: Mg^{2+}

Preeclampsia: Headache**,** Visual Disturbances**,** and Facial Swelling.

Complications of Preeclampsia may include Thrombocytopenia, Liver Dysfunction, and Renal Insufficiency.

HELLP Syndrome: Severe form of Preeclampsia. Hemolysis, Elevated Liver enzymes, Low Platelets.

S/S: RUQ Pain/ epigastric pain, n/v, malaise.

Complication: Placental Abruption, Liver failure, Stroke, Maternal/Fetal death.

Hypotension, Bradypnea, Bradycardia are Major Risks and **Emergencies**.

Epidural Anesthesia: Hydration Before Hand is Priority.

During the Procedure: Side-Lying Position.

When Administering: Aspiration of Clear Fluid < 1 mL confirms Correct Placement.

Posterior **Fontanelle** closes by 6 to 8 Weeks.

Anterior closes by 18 Months.

Glucose Tolerance Test: Result > 140 Needs further Evaluation.

Pathological (nature) **Jaundice:** occurs Before 24hrs and last7 days.

Physiological **Jaundice:** occurs After 24 hours.

Magnesium Sulfate $MgSO_4$ (Electrolyte)**:** used to Stop Preterm Labor.

Used to Prevent or Control Seizures in women with Preeclampsia or Eclampsia.

Contraindicated: if Deep Tendon Reflexes are Ineffective.

If patient Experiences Seizure During. Get the baby Out STAT (Emergency).

Antidote: Ca^{2+} Gluconate

Phenobarbital (Barbiturate): used to help you Sleep or may be used to help Control Seizures.

For Coma Induction. “Barb Coma”

Can be taken during Pregnancy

Phenytoin (anticonvulsant) is Contraindicated.

Pitocin: used for Uterine Stimulation.

Placental should be in Upper part of Uterus.

Placental Abruption (Emergency): Detachment/ Separation from the Uterus. Pain. but No Bleeding.

Need to Monitor Volume Status (I&O).

Placental Previa: Covers the Opening of the Cervix. No pain, there is Bleeding.

If the baby is a Posterior **Presentation**, the Sounds are heard at the Sides.

If the baby is Anterior, the Sounds are heard closer to Midline, between the Umbilicus and Sides.

If the baby is Breech, the Sounds are High up in the Fundus near the Umbilicus.

If the baby is Vertex, they are a little bit Above the Symphysis Pubis.

RhoGAM: given at 28 weeks & 72 hours Post Partum, IM. Only given to Rh Neg. Mother.

Rh^- mothers receive RhoGAM to Protect Next baby.

Positive Indirect Coomb's Test: Don't Need to give RhoGAM bc she has antibody.

Negative Coomb's Test: Need to Give.

Never get pregnant with a **German Measles** (**Rubella**). "bella" No MMR (Live Vaccine).

Shoulder Dystocia: baby Cannot make it down to canal.

Intrapartum fetal heart rate monitoring – VEAL CHOP	
Pattern	**Clinical significance**
Variable decelerations	**C**ord compression/prolapse; oligohydramnios
Early decelerations	**H**ead compression
Accelerations	**O**K (normal fetal oxygenation)
Late decelerations	**P**lacental insufficiency

Nursing actions to Improve **Fetal Perfusion** and **Oxygenation** include:

Discontinue Uterotonic Drugs (eg, oxytocin [Pitocin]) to Reduce Uterine Activity- First Action

Change the Maternal Position to the Left side to Relieve Compression of the Inferior Vena Cava

Administer Oxygen at 8-10 $^{L}/_{min}$ via nonrebreather face mask

ve prescribed intravenous (IV) bolus of Lactated Ringer's or Normal Saline

Notify the HCP

Woman in **Labor** w/ **Non-Reassuring FHR** (Late Decels, Decreased Variability, Fetal Bradycardia):

Turn On Left side (and give O_2, stop Pitocin, Increase IV fluids).

For **Cord Compression**, place the mother in the Trendelenburg Position because this Removes Pressure of the presenting part off the cord. (If her head is down, the baby is no longer being pulled out of the body by gravity).

Prolapsed Cord (Umbilical cord comes out of the Uterus)**:** Knee-Chest position or Trendelenburg. Cover it with Sterile Saline Gauze to Prevent Drying of the cord and to Minimize Infection.

If the Water Breaks and she is Any **Minus Station,** there is a Risk of Prolapsed Cord.

For **Late Decels**, turn the mother to her Left side, to allow More Blood flow to the Placenta.

For any kind of **Bad Fetal Heart Rate Pattern**, you give O_2, often by mask.

	2	**1**	**0**
Appearance (Color)	all pink	pink and blue	blue/pale
Pulse	>100	< 100	absent
Grimace	cough	grimace	no response
Activity/Reflex Irritability	flexed	flaccid	limp
Respirations	strong cry	weak cry	absent

Normal: 8~10

Give $O_{2:}$ 4~7

Require Rescue: 0~3

Babinski Sign: Toes fan out. Disappear around 1 years-old.

Bacterial Meningitis is inflammation of the meninges of the brain and spinal cord caused by infection.

General manifestations in infants and children age <2 include Fever, possible hypothermia, Restlessness, Irritability frequent Seizures, High-Pitched Cry, Poor Feeding and Vomiting, and Nuchal Rigidity.

Hydrocephalus (common acute complication): an increase in intracranial pressure (ICP) resulting from obstruction of cerebrospinal fluid flow. Increased ICP can progress to permanent hearing loss, learning disabilities, and brain damage.

Bossing Sign (Prominent Forehead), Bulging/Tense Fontanels, and Increasing Head Circumference are important early indicators of increased ICP in children.

Frequent assessment needed.

Ventriculoperitoneal Shunt: the child with will have a Small Upper Abdominal Incision.

This is where the shunt is guided into the Abdominal cavity, and tunneled under the skin up to the Ventricles. Watch for Abdominal Distention, since Fluid from the Ventricles will be redirected to the Peritoneum.

Also watch for Signs of Increasing ICP.

Signs: Irritability, Bulging fontanels, and High-pitched Cry in an Infant.

In a Toddler watch Lack of Appetite and Headache.

Bed Position After Shunt Placement: is Flat, so fluid doesn't reduce too rapidly.

Increasing ICP, then Raise the HOB to 15-30 degrees.

Risk: Status Epilepticus.

Tx: Diazepam or Lorazepam.

Brachial pulse: Pulse area CPR on an infant.

Breast Engorgement: Painful overfull of milk.

Tx: Frequent application of Ice packs, chilled, fresh Cabbage leaves, and NSAID. Cold Compresses to reduce comfort.

Breast milk production is a supply-and-demand process.

Expression of breast milk and stimulation of the breasts result in continued milk production and should be Avoid in clients who intend to exclusively formula feed.

Feed Upright to Avoid Otitis Media.

BronchoPulmonary Dysplasia (BPD): Dysplasia means Abnormality or Alteration.

Risk: Mechanical Ventilation. Premature newborns with immature lungs are ventilated and over time it damages the lungs.

Other Risk could be Infection, Pneumonia, or other conditions that cause Inflammation or Scarring.

Candidiasis: White Patches that Cannot be Remove from baby's Mouth. If you can, it is Formula.

It is always the Correct answer to Report Suspected Cases of **Child Abuse**.

Infant w/ **Cleft Lip:** position on Back or in infant Seat to prevent trauma to suture line.

While feeding, hold in Upright position.

Cryptorchidism: Undescended Testis

Risk Factor for Testicular Cancer Later in life.

Start teaching boys Testicular Self Exam around 12, because most cases occur During Adolescence.

First Sign of **Cystic Fibrosis** may be Meconium Ileus at Birth.

Baby is Inconsolable, Do Not Eat, Not Passing Meconium.

Voiding Cystourethrography:

Post: Drink a lot of fluids to flush the dye.

Intussusception: Common in kids with **CF**. Obstruction may Cause Fecal Emesis, Currant Jelly Like Stools (Blood and Mucus).

URQ. Ileum telescopes into Cecum. Sausage shaped mass, Dance Sign (empty portion of LRQ). Abd pain. Stool mixed with Blood & Mucus "Jelly Currant".

Barium Enema: may be used to Hydrostatically Reduce the Telescoping. Resolution is Obvious, with Onset of Bowel Movements.

Developmental:

2-3 months: turns Head Side to Side

4-5 months: Grasps, Switch & Roll

6-7 months: Sit at 6 and Waves bye-bye

8-9 months: Stands Straight at 8

10-11 months: Belly to Butt (phrase has 10 letters)

12-13 months: twelve and up, Drink from a Cup

Birth Weight: Doubles by 6 month and Triple by 1 year of age.

Head and Chest Circumference are Equal**.**

Able to sit down from a standing position WithOut assistance.

Lower Central Incisors usually between age 6-10 months.

The following is a quick assessment formula to calculate the expected # of teeth during the first 24 months:
Age of child (in months) – 6 = Expected number of teeth
A 12-month-old should have approximately 6 teeth, and by age 30 months all primary teeth (20) should have erupted.

Stranger Anxiety is greatest 7 - 9 months.

Separation Anxiety peaks in **Toddlerhood:** Protest, Despair, Detachment.

Toddlers need to express Autonomy (Independence)

If you gave a Toddler a Choice about taking medicine and he says No, you should leave the room and come back in five minutes, because to a toddler it is another episode. Next time, don’t ask.

Years- old kids Cannot interpret Time. Need to explain time in relationship to a known Common Event (eg: "Mom will be back after supper").

School-age kids (**5** and up) are old enough, and should have an Explanation of what will happen a week before surgery such as tonsillectomy.

An Ill child Regresses in Behaviors

BSA is considered the Most Accurate Method for Medication dosing with kids

Interpersonal model (Sullivan):

Behavior motivated by need to Avoid Anxiety and Satisfy Needs

1. Infancy 0-18 months others will satisfy needs

2. Childhood >6yrs learn to delay need gratification

3. Juvenile 6-9 years learn to relate to peers

4. Preadolescence 9-12 yrs learns to relate to friends of opposite sex

5. Early adolescence12-14yrs:learn independence and how to relate to opposite sex

6. Late adolescence 14-21yrs: develop intimate relationship with person of opposite sex is this not about communication.

HR is <100 do not give **Digoxin** to children.

Duchenne's Muscular Dystrophy: Gowers' Sign. Use of hands to Push one's self from the floor.

Assess Resp.

Pull Pinna Down and Back for kids < 3 yrs. when Instilling **Eardrops**.

tal Alcohol Syndrome: Intellectual disability and Developmental delay. Growth deficiency (Small for Gestational age), Neurological symptoms (eg, Microcephaly), or specific facial characteristics (indistinct Philtrum, Thin upper lip, Epicanthal folds, Flat midface/nasal bridge, and Short palpebral fissures)

Greek Heritage: they put an Amulet or any other use of Protective Charms around their baby's neck to avoid "evil eye" or envy of others.

Heart defects.

Remember for Cyanotic -3T's (ToF, Truncus Arteriosus, Transposition of the great vessels). Prevent blood from going to heart.

If problem does not fix or cannot be corrected surgically, CHF will occur following by death.

CHF in an Infant: watch for Tachycardia, Not Cough.

Congenital Cardiac Defects result in Hypoxia which the body attempts to Compensate for (Influx of Immature RBC). Labs supporting this would show Increased Hematocrit, Hemoglobin, and RBC count.

Prolonged Hypoxemia is a likely Cause of Cardiac Arrest in a child.

In a Five-year old: Breathe once for every 5 compressions doing CPR.

Hypercyanotic Spell (Tet spells): Treated with Morphine, Calm the child, Oxygen.

Coarctation of the Aorta (Narrowed Aorta): Causes Incr. Blood Flow and Bounding Pulses in the arms.

Elevated Pulse Pressure in the Upper extremities. Diminished Pressure in the Lower extremities.

Patent Ductus Arteriosus (PDA): Machine like Murmur. Systolic. Poor feeding.

Tetralogy of Fallot: Children will exhibit Bluish skin during episodes of Crying or Feeding.

Ventricular Septal Defect: Excess blood to the Lungs.

Higher pressure (L) to Lower pressure (R), Incr. Pulmonary Blood Flow (Pulmonary Congestion)

Risk for CHF & Pulmonary HTN.

gns of Incr. Resp. Exertion. (Grunting), Diaphoresis during feedings, Heart Murmur, Poor Weight Gain, Tachypnea

Pulmonary Stenosis:

S/S: Knee-chest position (Incr. Preload & SVR), child drops to the floor or squats, Irritability, Cardiac murmur, Clubbing. Normally maintain Oxygen saturations of 65%-85% until the defect is surgically

Right Ventricular Hypertrophy

Overriding Aorta

Hemoglobin:

Neonates: 18-27

3 Months: 10.6-16.5

3 Years: 9.4-15.5

10 Years: 10.7-15.5

Heroin Withdrawal Neonate: Irritable Poor Sucking

Hip Developmental Dysplasia (HDD): a set of Hip Abnormalities ranging from Mild dysplasia of the hip joint to Full dislocation of the Femoral Head.

Barlow & Ortolani Maneuvers.

S/S: < 2~3 months old, Presence of Extra Inguinal or Thigh Folds, Laxity of the hip joint on the Affected side.

Disappear After 2~3 Months due to Development of Muscle Contractures.

Pelvic Tilt w/ Lordosis if Not Corrected.

Hirschsprung's Disease (HD): Megacolon. Diagnosed with Rectal Biopsy looking for Absence of Ganglionic Cells.

Cardinal Sign in Infants is Failure to Pass Meconium.

Later the Classic Ribbon-Like and Foul Smelling Stools.

Bile is Lower Obstruction. (Green Bilious Vomiting)

No Bile is Upper Obstruction (Pylorus Stenosis)

A Positive Western Blot in a child <18 months (presence of **HIV Antibodies**) indicates only that the mother is Infected.

Two or more Positive p24 Antigen Tests will confirm HIV in kids <18 months. The p24 can be used at Any Age.

PCR: in Infants.

After a **Hydrocele** Repair provide Ice Bags and Scrotal Support.

Impetigo: Not contagious after 24 hours of antibiotics.

IntraOsseous Infusion: Pediatric life-threatening Emergencies.

Temporary, life-saving measure. D/C after Venous Access is Obtained.

When IV Access cannot be obtained, an Osseous (Bone) Needle is hand-drilled into a bone (usually the Tibia), where Crystalloids, Colloids, Blood products and drugs can be administered into the Marrow.

Isoproterenol (a beta agonist): Cannot be administered by Intraosseous infusion.

Kawasaki Disease: causes Inflammation of Arterial walls (Basculitis). Coronary arteries are affected, can lead to scarring of the Coronary Arteries or development of Coronary Aneurysms. Not Contagious.

Acute - Sudden onset of High fever (report fever > 5 days) that does Not respond to Antibiotics or Antipyretics. The child becomes very Irritable (can last up to 2 months) and develops swollen red feet and hands. The lips become painfully swollen and cracked, and the tongue can also become Red (Strawberry Tongue)

Given soft foods and clear liquids.

Non-stimulating, quiet environment will help to promote rest.

Follow-up appointments for Cardiac evaluation are important.

Subacute - Skin begins to Peel from the hands and feet. The child remains very irritable.

Skin discomfort can be eased with Cool compresses and Lotions. No treatment is needed, but the new skin might be very tender.

Convalescent - symptoms disappear Slowly. The child's temperament returns to normal.

Systemic Vasculitis: Irritablity, Knee Pain, Skin Peeling.

Tx: IV Gamma Globulin (IVIG) and AcetylSalicylic Acid (ASA) to prevent Coronary Artery Aneurysms.

IVIG (IV Immunglobulin) creates high plasma oncotic pressure, and signs of fluid overload and pulmonary edema develop if it is given in large quantities. Monitored for symptoms of Heart Failure (eg, decreased urinary output, additional heart sounds, tachycardia, difficulty breathing).

No Live Vaccine 11 months after receiving IVIG.

AcetylSalicylic Acid (ASA) can cause Reye's syndrome (Encephalopathy- Swelling of the Liver and Brain), when given to Children.

Lead Poisoning Test: around 12 months of age.

Anemia with Milk-aholics: Too much Milk Reduces Intake of other Essential Nutrients, Especially Iron.

Mother should Not put anything But Water in that kid's bottle

During naps/over-night. Juice or milk will Rotten that kids Teeth right out of his head.

Watch out for questions suggesting a child drinks More than 3-4 cups of milk each day.

It is essential to Maintain **Nasal Patency** with children < 1 yr. because they are Obligatory Nasal Breathers.

Neonatal Abstinence Syndrome:

Autonomic Nervous System Symptoms: stuffy nose, sweating, frequent yawning and sneezing, tachycardia, and tachypnea.

Tx: swaddling and keeping nasal passages clear.

Central Nervous System Symptoms: irritability, restlessness, high-pitched crying, abnormal sleep pattern, and hypertonicity/hyperactive primitive reflexes.

Tx: medication and protecting the skin.

Gastrointestinal symptoms – poor feeding, vomiting, and diarrhea.

t. small, frequent feedings

With **Omphalocele** (Sealed by Peritoneal Layer) and **Gastroschisis** (No Peritoneal Layer): (Herniation of Abdominal Contents) Dress with Loose Saline Dressing covered with Plastic Wrap, and keep eye on Temp. Kid can Lose Heat quickly.

Parvovirus B19 (Contagious): Fifth disease causes a distinctive red rash on the face that makes a child appear to have a "slapped cheek.".

Pertussis (Whooping Cough): Highly Contagious Respiratory disease and requires Droplet Precautions.

Can be Deadly if contracted in infancy Before Vaccination is started. This client should be placed in Isolation Immediately to Prevent the spread of disease.

S/S: Paroxysms of Rapid Coughing that lead to Vomiting (can Last up to 6 weeks)

Tx: can be Prevent w/ DTaP. If pt already have Pertussis, treat with Abx Therapy.

Preterm Newborns:

Lanugo: fine, downy hair found mostly on the backs and shoulders of, begins disappearing around 36 weeks gestation.

Smooth, pink skin with visible veins as Skin is Thin and Transparent with Lack of Subcutaneous Fat.

Areolae are barely visible, with No raised breast buds.

Very smooth Soles with only Faint red marks or possibly a Single Anterior Transverse Crease.

Undescended Testes, palpable in the Upper Inguinal Canal.

Lungs are not fully developed. Incr. the Risk for Acute and Chronic Respiratory Illnesses.

Low Birth Weight. May cause Delays in growth patterns, must "catch up" in their developmental milestones.

PhenylKetonUria (PKU):

When Phenylalanine Increases, Brain problems occur.

No Phenylalanine with a kid Positive for PKU (no Meat, no Dairy, no Aspartame).

Guthrie Test: Tests for PKU, baby should have eaten source of protein first

Pyloric Stenosis: Olive Like Mass. Dehydration (Incr. Hgb, Incr. BUN), HypoK^+.

The First Sign in a baby is Mild Vomiting that Progresses to Projectile Vomiting.

Later you may be able to Palpate a Mass, the baby will seem Hungry Often (Excessive Hunger), and may Spit up After Feedings.

Tx: Fluid (Hydration).

Association between **Low-Set Ears** and **Renal Anomalies**: Kidneys and Ears develop around the same time in utero.

When doing an Assessment of a Neonate, if the Notices Low set or Asymmetrical Ears, Investigate Renal Functioning.

Infant Respiratory Distress Syndrome (Hyaline Membrane Disease)**:** Breathing disorder.

A Syndrome in Premature Infants caused by Developmental Insufficiency of Pulmonary Surfactant Production and Structural Immaturity in the Lungs.

S/S: RR > 60, Tachycardia, Chest wall retractions, Expiratory Grunting, Nasal flaring, Blue discoloration of the Skin during breathing efforts.

Kids with **Respiratory Syncytial Virus** (RSV): Very Contagious.

No Contacts or Pregnant Nurses in rooms where Ribavirin is being Administer by Hoot or Tent.

Ribavirin (Antiviral): can Treat Severe Lung Infections.

Oral form it can be used with an Interferon medicine to Treat Hepatitis C.

The biggest Concern with Cold Stress and the Newborn is **Respiratory Distress**.

Reye's Syndrome (Brain and Liver Damage)**:** No AcetylSalicylic Acid (ASA) with Kids.

Also No NSAIDs such as ibuprofen.

Give Acetaminophen.

RetinoBlastoma: (Common in Children) Rare Malignant Tumor of the Retina.

Cat's Eye: the Pupil appears White, the Red Reflex is Absent.

Complex Partial or Tonic-Clonic Seizures: Altered sensory perceptions (eg, awareness of odors [aura]), Postictal Confusion, and Incontinence.

Febrile Seizures: Never leave seizing clients Alone.

Main Objective: maintain Airway (Head tilt or Jaw thrust).

Monitor their Oxygen Saturation Levels

Treated with Ibuprofen or Acetaminophen. Do Not require Anti-Seizure Medications.

HypoSpadias: Abnormality in which Urethral Meatus is located on the Ventral (Back) surface of the penis anywhere from the Corona to the Perineum (Hypo means Low (for Lower side or Under side))

EpiSpadias: Opening of the Urethra on the Dorsal (Front) surface of the penis.

SIDS (Sudden Infant Death Syndrome): Lay the kid on his Back (Back To Sleep).

Infant w/ **Spina Bifida:** position **Prone,** so that Sac does Not Rupture.

Incr. the Risk while taking Valproic Acid During Pregnancy.

Esophageal atresia (EA) /Tracheoesophageal Fistula (TEF): consist of a variety of Congenital Malformations that occur when the Esophagus and Trachea do Not properly Separate or Develop (Surgical Emergency).

S/S: Frothy Saliva, **C**oughing, **C**hoking, and Drooling. Apnea and **C**yanosis During feeding.

Tx: NPO, Supine, HOB 30º, Suction Equipment.

Risk for Aspiration: NPO Until Surgery.

Ninety Ninety Traction: used in a School-Age kid with Femur or Tibial Fracture with Extensive Skin Damage. The name refers to the Angles of the Joints.

A pin is placed in the Distal part of the Broken bone, and the Lower Extremity is in a Boot Cast.

The rest is the Normal Pulleys and Ropes (Visualizing with Balanced Suspension).

Bryant's Traction: used for Femurs and Congenial Hip for young kids. (children <3yo, <35 lbs)

Hips should Clear the Bed.

Vaccinations:

MMR vaccine is given SQ not IM.

MMR and Varicella immunizations come Later (15 months).

Anaphylactic Reaction to Baker's Yeast is Contraindication for Hep B vaccine.

Ask for Anaphylactic Reaction to Eggs or Neomycin before MMR Check Egg Allergy Before Flu shot.

Age 4 to 5 yrs child needs DPT/MMR/OPV.

If kid has Cold, Can still give immunizations

HIV Kids Avoid OPV and Varicella vaccinations (Live), But give Pneumococcal and Influenza.

MMR is Avoided only if the kid is Severely Immunocompromised.

Parents should wear gloves for care, not kiss kids on the mouth, and not share eating utensils.

Vastus Lateralis: is IM administration site for 6 month infants

VentroGluteal: For toddlers Above 18 months

The Deltoid and Gluteus Maximus are appropriate sites for Children

Warm a Newborn: Skin to Skin Contact covered with a blanket on mom.

NCLEX TIPS

An answer that Delays care or treatment is ALWAYS wrong

Two of the answers are the exact Opposite, like bradycardia or tachycardia... One is probably the answer.

If two or three answers are Similar or are Alike, None is Correct.

When asking patients' questions NEVER use "why" questions. Eliminate all "why?" answer options.

If you have never heard of it… please don't pick it!

Always Deal with Actual problems or harm Before Potential problems.

Always select a "Patient Focused" answer.

An answer option that states "reassess in 15 minutes" is probably Wrong.

Small Frequent feedings are Better than Larger ones.

If the patient is Not a child an answer with family option can be Ruled Out easily.

To access Role Relationship pattern Focus on Image and Relationships With Others.

When getting down to Two answers, Choose the Assessment answer (Assess, Collect, Auscultate, Monitor, Palpate) Over the Intervention Except in an Emergency or Distress situation.

Read the hell of the question 2-3 times without looking the answers
Read the sentences Completely
Keep your 1st choice (don't change it unless you know is wrong)
Stick with what you know (no what if)
If you don't know the Adverse Effects of a drug- Choose the Worst or something related to Kidney, Liver, Immunosuppression.

If the question is reviewing Prescriptions, Look for Answers with Liver disease (Hepatitis) or Kidney diseases (Nepho-). Many drugs are Metabolized by them.

Do not use Why or I understand statement when Dealing with Patients
Answer the question to the Pt even if one of the options is a fact
If option of Restraints, Don't pick (Nclex lady doesn't like it)
Assume the Worse, what's going to Kill the patient (faster) in priority
When receiving nurse from Different unit, give her General Nursing need pt (Nothing rt w/ the specialty unit)
When accommodating pt choose similar dx, age for kids
If you have a smoke secession pick it or risk factor Choose smoking
Therapeutic response: focus on pt feelings, gather more info
Don't hold Oxygen for the death
Don't Pass the buck to another person
Do Something Before calling the Dr
Avoid: All, Always, None, Never.

ATA: stick with what you know (if you never heard of it, no one did)
When you don't know the answer: Assume the Worst (no happy questions)
If you don't know the dx or patho: choose the options with a Complication or things that we should not do
Don't ever Change doses or Advise patient.
Be the Nice nurse
If it sound Right to you- go for it
When giving meds: check time, labs, s/s try to look what is wrong

Take your time, read the question & answer before submitting it

Look carefully when you have no idea. In a word like rhabdomyosarcoma you can easily ascertain it has something to do with muscle (myo) cancer (sarcoma). The same thing goes for drug names. For example, if it ends in –ide it's probably a diuretic, as in Furosemide, and Amyloride.

If one Nurse discovers another nurse has made a Mistake it is Always Appropriate to speak to her Before going to management. If the situation persists, Then take it higher.

A guy loses his house in a fire. Priority is using community resources to find Shelter, before assisting with feelings about the tremendous loss. (Maslow).

Give NSAIDS, Corticosteroids, drugs for Bipolar, Cephalosporin, and Sulfonamides With food.

Best time to take Growth Hormone PM, Steroids AM, Diuretics AM, Aricept AM.