

Normal Breathing (Adequate Breathing) Normal rate. Regular pattern. Clear and Equal Sounds. Regular and Equal Rise. Adequate Depth. Good skin color. Normal mental status. Complete sentences. Ask them, how they are breathing?	Respiratory Distress (Adequate Breathing) Typically elevated rate. Stridor, Wheezing or Coughing Accessory Muscles. Retractions Nasal flaring, seesaw breathing Normal or pale color. Sometimes Agitated or Anxious Mild tachycardia Slightly Labored	Respiratory Failure (Inadequate Breathing) Severely Labored. Too fast or too slow. Lethargy. Tough to rouse. Tachypnea with periods of bradypnea or agonal respirations Inadequate chest rise. Bradycardia. Shallow breathing. Pale or blue, maybe mottled Altered Mental Status Diminished Muscle Tone	Cheyne-Stokes +rate,depth,apnea Kussmaul rapid, shallow becomes deep, gasping, DKA, acidosis Biot quick, shallow followed by Apnea, head trauma Ataxic (irregular rate, pattern, volume with periods of apnea) Respiratory Arrest (Inadequate Breathing) No rate. No sounds. Pale or Blue. Unconscious or Rapidly Approaching.	Normal Adult Lung Total Capacity 5800ml Inspiratory Reserve 3000 ml Expiratory Reserve 1200ml Vital Capacity 4600ml Dead Space 150ml Tidal Volume 500ml
Adventitious Lung Sounds Rales - moist, crackling (GINGERales) CHF/Edema? Pneumonia? Rhonchi - low pitch expiration COPD? Pneumonia? Bronchitis? Stridor - Brassy, crowing on inspiration [strHiGHdor] Croup? Epiglottitis? Anaphylaxis (Late)	NRM, Nasal Cannula, CPAP	Mouth to Mask, BVM	BREATHING	ETC02 - should be 35-45 mm Hg Ventilation Rates BVM Sizes
Wheezes - Asthma? COPD? CHF/Edema? Pneumonia? Bronchitis? Anaphylaxis (Early)		Hyper < 35mm Hg	Adult 1 per 5 to 6s	Total Capacity 5800ml
Decreased, Absent - Asthma? COPD? Pneumonia? Pleural Effusion. Hemothorax: Shock?		Hypo > 45mm Hg	Child 1 per 3 to 5s	Inspiratory Reserve 3000 ml
Respiratory Distress? Pneumothorax: Fever, pleuritic pain. Atelectasis: Fever, low O2 sat.		If 0, tube not getting to lungs.	Ped 500 - 700	Expiratory Reserve 1200ml
			Infant 1 per 3 to 5s	Vital Capacity 4600ml
				Dead Space 150ml
				Tidal Volume 500ml

Basic Adjunct Oral +Unresponsive; +No gag reflex; +Apnea; +BVM in use; -Conscious; -Gag reflex present; [Size: Ear Lobe to Corner of Mouth]	AIRWAY Dislodged Obstructed Pneumothorax	Cylinder Size (L) D 350 Super D 500 E 625 M 3000 G 5300 H, A, K 6900	Const. Delivery Devices Nasal cannula Non-rebreathing mask BVM with reservoir Mouth to Mask Manually Triggered	Rate %02 1 to 6 L/min 24-44% 10 to 15 L/min 90% 15 L/min 100% 15 L/min 55% 15-40 L/min 100%
-Facial Trauma; -Severe head injury; -History of fractured nasal bone; [Size: Ear Lobe to Tip of Nose]	Equipment Equipment			
		Safe Pressure = 200 psi		
		(Gauge Pressure - Safe)		
		*Constant / Flow Rate = Duration of Flow		
			-Respiratory Arrest; -Pneumothorax or Chest Trauma; -Tracheostomy; -GI Bleed or Vomiting; -Patient not alert; CPAP +Follows commands; +Alert patient; +Moderate to severe distress; +Rapid breathing; +Pulse ox less than 90%; +PEdema; -Low BP; -GI Bleed; -Tracheostomy; -Pneumothorax;	

Food Intake	Insulin	Onset	Skin	Infection	Thirst	Hunger	Vomiting	Breathing	Odor	BP	Pulse	Conscious	Response	Hypovolemia
Hypoglycemia	Insufficient	Excessive	Rapid	Pale	Uncommon	Absent	Intense	Uncommon	Normal	Normal	Rapid	Irritability	Immediate	Hypoxia
Polydipsia	Polyuria	Polyphagia		Cool				Rapid		to low	Weak	Confusion		Hydrogen ion acidosis
				Moist								Seizure or coma		Hyper/hypo kalemia
Hyperglycemia	Excessive	Insufficient	Gradual	Warm	Common	Intense	Absent	Common	Rapid	Sweet	Normal	Rapid	Restlessness	Hypoglycemia
				Dry				Deep	Fruity	to low	Weak	Possible Coma		Hypothermia

<40 Hypoglycemic Crisis 80-120 Normal 120-400 Hyperglycemia 400-800 DKA or HHC >800 Hyperglycemic Crisis														6 H's, 5 T's
Pulmonary Embolism - Chest pain. Shortness of breath. Sweating. Cough. Leg pain or swelling. Clammy or discolored skin (cyanosis). Irregular heartbeat. Lightheadedness or dizziness. Myocardial Infarction - Chest pain (tightness, pressure, squeezing). Shortness of breath. Sweating. Nausea. Pain radiates arm, jaw, neck, back. Aortic Dissection - Severe pain, sudden onset. Tearing, stabbing, or sharp. Tension Pneumothorax - Chest pain. Mild breathlessness. Diminished breath sounds. Tachycardia. Tachypnea. Displacement of Windpipe. Esophageal Rupture - Severe retching and vomiting followed by excruciating retrosternal chest and upper abdominal pain. Odynophagia, tachypnea, dyspnea, cyanosis, fever, and shock develop rapidly thereafter.														Toxins
														Tamponade
														Tension pneumothorax
														Thrombosis
														Trauma

Activated Charcoal	Binds to poison to prevent absorption. May cause Nausea, Vomiting. [Stains. Black Stool.]	Need Med Control (in WI)	Six rights of meds
1g/kg +Oral Poisonings; +Overdose; -Caustic; -Corrosive; -Altered Mental Status; -Unable to swallow.			Right Drug
Albuterol (Nebulized)	Dilates bronchioles by relaxing smooth muscle. Beta 2. May cause +HR, Nausea, Tremors, Palpitations, Anxiety.		Right Dose
2.5mg, 1.25mg under 6 +Asthma; +Bronchospasm; +Difficulty Breathing; -Allergy; -Tachycardia; -MI; -Pulmonary Edema; -Pain during administration.			Right Route
Atrovent (Nebulized)	Reduces mucous (muscarinic). Dilates bronchioles. May cause dry mucosa, +HR, Nausea, Tremors, Palpitations.		Right Time
0.5mg +COPD; +Asthma; -Allergy to atrovent or atropine; -Under 12; -Pulmonary Edema;			Right Patient
Epinephrine	Dilates bronchioles, +BP, +HR. Alpha. Beta 1. Beta 2. May cause +HR, Pallor, Dizziness, Chest Pain, Nausea, Anxiety. May repeat 10-15 minutes. 0.3mg, 0.15mg Child +Severe Allergic; +Respiratory Failure; CAUTION -Elderly -Glaucoma -MI -Hypothermia -Hypertension		Right Documentation
-Pulmonary Edema -Pregnant; -Psych -Heart Disease -Psychosis -Hyperthyroidism [Works in 5]			Heart attack drugs
Nitroglycerin	Vasodilator. Decreases preload. Up to 3 doses. Repeat 3 to 5 minutes. Causes Hypotension, Headache. 0.4mg +Chest pain; +MI; +Angina; +PE; -Hypotension; -Viagra; -Head Injury; -SBP<100; -Pediatric;	DRUGS	Morphine
Aspirin	-anti-platelet. anti-inflammatory, anti-pyretic, anti-clotting. May cause Nausea, Upset stomach, 325mg +PE; +MI; +Angina; -Allergy; -Bleeding; -Trauma; -Under 18; -Ulcer; -Unable to Swallow; Vomiting.		Oxygen if <94%
Oral Glucose	-Increases blood sugar. +Low Blood Glucose; 15 grams, 1 tube +Follows Commands; -Altered LOC; -Nausea; -Vomiting; -Unable to Swallow; -Hyperglycemia.		Nitroglycerin
Glucagon	-Increases blood sugar. Releases glycogen from liver (converts to glucose). May cause Nausea, Hypotension, 1mg, 0.5mg child <20kg +Hypoglycemia -Hyperglycemia -Allergy -Adrenal gland tumor; -Weight < 44 lbs; Dizziness, Rash.		Aspirin

Naloxone	-Opiate antagonist. Rules out narcotic OD. Possibility of hypertension, pulmonary edema, cardiac arrest, agitation. Adult AMS 0.4-2mg Adult OD 0.4-1mg Child OD 0.01mg/kg +Respiratory Depression Secondary to Opiate Overdose; -Allergy;	Common OTC (Can't give in WI)	
Ibuprofen (anti-inflammatory)	+Mild Pain; +Fever; +Headache; +Muscle Ache; -Allergy; -Trauma;		Alpha Constrict arteries.
Diphenhydramine (anti-histamine)	[Give epinephrine first if severe] +Mild Allergic; -Asthma; -Glaucoma; -Pregnancy; -Hypertension; -Infant;		Beta 1 Increase heart rate.
Acetaminophen	(analgesic, anti-pyretic) [Weight of child important.] +Mild Pain; +Fever; +Headache; +Muscle Ache; -Allergy;		Beta 2 Open bronchioles.

Cullen's Sign	-edema/bruising around the umbilicus. Pancreatitis/bleeding in abdomen	Battle's Sign	-Indicates cranial fracture. Bruising over mastoid process.
Grey Turner Sign	-Bruising on flanks. Indicates bleeding behind peritoneum	Beck's Triad	-Indicates cardiac tamponade. Low Blood Pressure. Jugular Vein Distension. Muffled Heart Sounds. Narrowing pulse pressure.
Kehr's Sign	-pain in tip of shoulder when person lying down and legs elevated.	SIGNS	Cushing's Triad - Indicates increased cranial pressure. Increase systolic. Bradycardia. Irregular Respirations.
In left shoulder, sign indicates ruptured spleen.			
Blumberg Sign	-Indicates peritonitis. Pain upon removal of pressure on abdomen.		

Revised Trauma Score	START	Call out for walking wounded. If they can walk, MINOR. If they can't walk, check respiration. If not breathing, position airway. If they start breathing, IMMEDIATE. If not, EXPECTANT. If breathing, check respiratory rate. RR Over 30, IMMEDIATE. RR Under 30, assess perfusion: Check radial pulse. Check cap refill. Absent Radial Pulse or cap refill over 2 IMMEDIATE. Pulse Present Cap Refill Under 2. Check Mental Status: Follows Commands, DELAYED. Can't Follow Commands, IMMEDIATE.	TRIAGE
GCS	SBP	RR	Val
13-15	>89	10-29	4
9-12	76-89	>29	3
6-8	50-75	6-9	2
4-5	1-49	1-5	1
3	0	0	0
RTS START	12-Green	11-Yellow	10-3 Red
	11-Yellow	10-3 Red	3 - Black

IMPORTANT: This document is for educational purposes only, does not constitute medical advice, may be outdated and contain errors or omissions.