

## CHEMISTRY CRITICAL VALUES

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
24 hour Urine Protein for O.B.			>300mg/24hr	Pre-eclampsia
Bicarbonate (Serum)	<10 MEG/L	Complex interwoven pattern of acidosis, alkalosis and anoxemia	>40 MEG/L	Complex interwoven pattern of acidosis, alkalosis and anoxemia
Bilirubin, Neonatal			≥ 15 mg/dl	
Calcium	<6 mg/dL	Tetany and convulsions	>14 mg/dL Newborn (0-3 mos.) >12 mg/dL	Coma
Ionized Calcium	<0.75 mmol/L		>1.57 mmol/L	
Glucose	<40 mg/dL (0-3 months) <54 mg/dL	Brain damage	>200 mg/dL Newborn (0-3 mos.) >500 mg/dL	Diabetic coma
Magnesium	<1 mg/dL	Tetany	>5 mg/dL	Increase in atrioventricular conduction
Phosphorus	<1.0 mg/dl	Coma	> 9.0 mg/dl	Tetany and convulsions
Potassium	<2.5 mEq/L	Muscle weakness, paralysis, cardiac arrhythmia's	>6.5 mEq/L Newborn (0-3 mos.) >7 mEq/L	Cardiotoxicity with arrhythmia's
Sodium	<120 mEq/L	Dehydration and vascular collapse	>160 mEq/L	Edema, hypervolemia, heart failure
pH (arterial capillary)	<7.2	Severe acidosis, life threatening	>7.6	Severe alkalosis, life threatening
pO <sub>2</sub> (arterial or capillary)	<40 mmHg	Complex interwoven pattern of acidosis, alkalosis, and anoxemia		
PCO <sub>2</sub> (arterial or capillary)	<20 mmHg Newborn (0-3 mos.) <30 mmHg	Complex interwoven pattern of acidosis, alkalosis, and anoxemia	>70 mmHg	Complex interwoven pattern of acidosis, alkalosis, and anoxemia
Qualitative HCG on Trauma Patients			Positive Borderline	
Vitamin D			>150 ng/ml	
Lactic Acid			≥ 4.0 ,mmol.L	
Troponin T			>50 ng/L	If none within the last 72 hrs

### THERAPEUTIC DRUG CRITICAL LEVELS

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
Carbamezapine			>20 ug/mL	
Digoxin			>3.0 ng/mL	Gastrointestinal and CNS symptoms, disturbance of cardiac rhythm
Dilantin (Phenytoin)			>40 ug/mL	
Gentamicin trough			>2 ug/mL	Hypoventilation, ototoxicity, nephrotoxicity
Lithium			>2.0 mmol/L	
Phenobarbital			>50 ug/mL	nausea, vomiting, diplopia, dizziness, ataxia, lethargy, coma
Theophylline			>24 ug/mL (>31 days) >15 ug/mL (0-31 days)	Nausea, insomnia, nervousness, headaches, arrhythmia's, seizures
Valproic Acid			>150 ug/mL	
Vancomycin trough			>35 ug/mL	
Vancomycin peak			>50 ug/mL	

### TOXICOLOGY DRUG CRITICAL LEVELS

	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
Acetaminophen			>150 ug/mL	(potentially toxic if >12 hours since ingestion)
Alcohol			>400 mg/dL	
Salicylate			>30 mg/dL	

### HEMATOLOGY CRITICAL LEVELS

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
Hemoglobin	□6 gm ≤8 (0-31 days old)	Heart failure and anoxemia	□20.0 ≥24 (0-31 days old)	
Hematocrit	≤18 ≤25 (0-31 days old)		≥70 (0-31 days old)	
Platelet Count	□20,000	Hemorrhage	□1,000,000	Hemorrhage, thrombosis
INR			□5.0 INR	Hemorrhage
PFA			ADP > 300	Hemorrhage

### OTHER SIGNIFICANT RESULTS

TEST	ACTION TAKEN
HIV from Source of Body/Blood fluid exposure	All are called to Deaconess Hospital Comp Center for DH/GWH exposures or to the phone number provided ASAP after screen results are obtained.
Hepatitis A Antibody	Positives are faxed to ordering physician and called to Infection Control (3449) on day shift Monday – Friday or to Vanderburgh County Health Department.
Hepatitis B Surface Antigen	Positives are faxed to the ordering physician Monday – Friday and are reported to Indiana State Department of Health (ISDH) weekly.
Hepatitis C Antibody	Positives are faxed to the ordering physician Monday – Friday and are reported to Indiana State Department of Health (ISDH) weekly.
HIV	Confirmed positives are faxed to ordering physician Monday – Friday and are reported to Indiana State Department of Health (ISDH) weekly.
BHCG (ER Trauma only)	Positives are called immediately to ER nurse.
WBC – (ED or OP once every 90 days)	Values ≤0.5 are called immediately to the ordering physician.
Absolute Neutrophil Counts (Evansville State Hospital)	Values ≤1.0 are called immediately to the State Hospital Laboratory personnel.

Updated:12/2021