

Critical Value List

Critical Values

A critical value is one that represents a pathophysiological state at such variance with normal as to be life-threatening unless something is done promptly, and for which some corrective action could be taken.

Wisconsin Diagnostic Laboratories has procedures for immediate notification to the provider or another member of the patient's care team. Phone notification includes 2 unique patient identifiers (name and medical record number or date of birth), critical value (test and test result), and name of person calling the result. Read-back of the information provided is required and documented.

CHEMISTRY				
Test	Age	Critical Low	Critical High	Units
Bicarbonate		≤12	≥40	mmol/L
Bilirubin, Direct	0 to 18 years		≥10	mg/dL
Bilirubin, Total	0 to 18 years		≥15	mg/dL
Calcium, Ionized	Female <18	≤1.10	≥1.5	mmol/L
	Female ≥ 18	≤0.75	≥1.5	mmol/L
	Male <20	≤1.10	≥1.5	mmol/L
	Male ≥ 20	≤0.75	≥1.5	mmol/L
Calcium, Total		≤6.0	≥12.0	mg/dL
	0 to 18 years	≤7.0	≥12.0	mg/dL
FCO-Hb (Carbon Monoxide)			≥15	%
Glucose		≤45	≥500	mg/dL
	Neonatal	≤45	≥150	mg/dL
Glucose, CSF		<40		mg/dL
Lactic Acid			≥4	mmol/L
Magnesium		≤1.2	≥5.0	mg/dL
pCO ₂		≤25	≥60	mmHg
pH, Arterial		≤7.25	≥7.55	
pO ₂ , Arterial		≤55		mmHg
Potassium		≤2.8	≥6.0	mmol/L
Sodium		≤125	≥155	mmol/L
	Neonatal	≤130	≥150	mmol/L
Troponin T			≥0.10	ng/mL

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COAGULATION

TEST	CRITICAL VALUE	
Fibrinogen	<100	mg/dL
Activated Partial Thromboplastin Time (APTT)	>100	Seconds
Prothrombin Time (PT)	>5.0	INR

HEMATOLOGY

Test	Age	Critical Low	Critical High	Units
Hemoglobin		≤6.0	≥19.0	g/dL
	0 days to 1 week	≤6.0	≥22.5	g/dL
	1 week to 1 month	≤6.0	≥20.5	g/dL
	1 month to 6 months	≤6.0	≥20.0	g/dL
Hematocrit		≤20	≥60	%
	0 days to 1 week	≤20	>67	%
	1 week to 1 month	≤20	>66	%
	1 month to 6 months	≤20	≥60	%
Platelet Count (Birth to Adult)		≤25.0 x 10 ³	≥1,000.0 x 10 ³	μL
PMN	0 days to 1 month	≤20		%
Reticulocyte	0 days to 1 month		≥15	%
White Blood Cell Count (Birth to Adult)		≤1.2 x 10 ³	≥40.0 x 10 ³	μL

MICROBIOLOGY

Test	Critical Result
Blood Culture	<ul style="list-style-type: none"> New patient positive New organism on previous positive patient Previously positive patient with last positive received over 1 week earlier
CSF Culture	<ul style="list-style-type: none"> New patient positive New organism on previous positive patient Previously positive patient with last positive received over 1 week earlier

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TOXICOLOGY

DRUG	TOXIC LEVEL	
Acetaminophen	≥150	mg/L
Acetone	≥50	mg/dL
Barbiturate Rapid Screen	≥0.3	mg/L
Benzodiazepines Rapid Screen	≥0.3	mg/L
Carbamazepine (Tegretol)	≥15	mg/L
Carbon Monoxide (Carboxyhemoglobin)	≥15%	saturation
Cyclosporin, Parent Compound	≥700	ng/mL
Cyclosporin, 2 Hour	≥2250	mg/mL
Digoxin	≥2.5	ng/mL
Ethanol	>0.30	g/dL
Ethylene glycol	≥10	mg/dL
Everolimus	≥15	ng/mL
Isopropanol	>10	mg/dL
Lead	<18 years ≥45 ≥18 years ≥70	μg/dL μg/dL
Lidocaine	≥6	mg/L
Lithium	≥1.5	mmol/L
Methanol	≥20	mg/dL
Methotrexate	>50	μmol/L
Oxycodone	≥100	ng/mL
Phenobarbital	≥40	mg/L
Phenytoin	≥25	mg/L
Procainamide + NAPA	≥30	mg/L
Procainamide	≥16	mg/L
NAPA	≥20	mg/L
Salicylate	≥30	mg/L
Sirolimus	≥20	ng/mL
Tacrolimus (FK506)	≥20	ng/mL
Theophylline	≥20	mg/L
Tricyclic Antidepressant Rapid Screen	≥300	ng/mL
Valproic Acid, Free	≥27	mg/L
Valproic Acid, Total	≥150	mg/L