

Test Name	Range Type	Reference Range	Units
Acetaminophen	Therapeutic	<20.0	ug/mL
Acute Kidney Injury (AKI) Algorithm	Patients <17 yrs.	Stage 1	
Albumin		3.5-5.0	g/dL
Alkaline Phosphatase	Male		
Alkaline Phosphatase	0-14 day	83-248	U/L
Alkaline Phosphatase	15 day - <1 yr.	122-469	U/L
Alkaline Phosphatase	1 - <10 yr.	142-335	U/L
Alkaline Phosphatase	10 - <13 yr.	129-417	U/L
Alkaline Phosphatase	13- <15 yr.	116-468	U/L
Alkaline Phosphatase	15 - <17 yr.	82-331	U/L
Alkaline Phosphatase	17- <19 yr.	55-149	U/L
Alkaline Phosphatase	>=19 yr.	40-129	U/L
Alkaline Phosphatase	Female		
Alkaline Phosphatase	0-14 day	83-248	U/L
Alkaline Phosphatase	15 day - <1 yr.	122-469	U/L
Alkaline Phosphatase	1 - <10 yr.	142-335	U/L
Alkaline Phosphatase	10 - <13 yr.	129-417	U/L
Alkaline Phosphatase	13- <15 yr.	57-254	U/L
Alkaline Phosphatase	15 - <17 yr.	50-117	U/L
Alkaline Phosphatase	>=17 yr.	35-117	U/L
ALT/SGPT, Alanine Transaminase	Female	6-37	U/L
ALT/SGPT, Alanine Transaminase	Male	6-45	U/L
Ammonia, NH3	Adults	12-48	umol/L
Ammonia, NH3	Infant Child (7 days to 6 months)	24-48	umol/L
Ammonia, NH3	Newborn (0 up to 7 days)	54-90	umol/L
Amylase		0-88	U/L
Amylase, Urine	Random, single sample	0-400	U/L
Amylase, Urine	Timed	0-15	U/Hr.
Anion Gap (formula without K+)		7-16	mmol/L
Anti-cardiolipin IgA		<20	APL units
Anti-cardiolipin IgG		<20	GPL units
Anti-cardiolipin IgM		<20	MPL units
Anti-Nuclear Antibody	Normal	<1:40	titer
Anti-Nuclear Antibody	Borderline	1:80 -1:160	titer
Anti-Nuclear Antibody	Abnormal	>1:160	
Anti-Streptolysin O Test	<13 yr.	<150	IU/mL
Anti-Streptolysin O Test	>13 yr.	<200	IU/mL
APT Downey Test	Maternal	Negative	
AST/SGOT, Aspartate Transaminase	Newborn to 1 month	20-80	U/L
AST/SGOT, Aspartate Transaminase	1 month to 13 years	8-60	U/L
AST/SGOT, Aspartate Transaminase	≥13 years & Adult	0-37	U/L
Base Excess		-2.5 – 2.5	mmol/L
Beta Hydroxybutyrate (Ketone)		0.02-0.27	mmol/L
Bilirubin, Direct		0.0-0.3	mg/dL
Bilirubin, Total	Adults and infants >3 mo.	0.0-1.2	mg/dL
Bilirubin, Total	Full term, up to 24 hrs.	2-6	mg/dL
Bilirubin, Total	Full term, up to 72 hrs. (3 days)	6-10	mg/dL
Bilirubin, Total	Full term, 3 days to 1 month	4-8	mg/dL

Test Name	Range Type	Reference Range	Units
Bilirubin, Total	Full term, 1 – 3 months	0.0-1.2	mg/dL
Blood Urea Nitrogen	0-1 yr.	4-19	mg/dL
Blood Urea Nitrogen	1-17 yr.	5-18	mg/dL
Blood Urea Nitrogen	18-60 yr.	6-20	mg/dL
BNP/ Pro B-Natriuretic Peptide	Male, <45 yr.	<93	pg/mL
BNP/ Pro B-Natriuretic Peptide	Male, 45-54	<138	pg/mL
BNP/ Pro B-Natriuretic Peptide	Male, 55-64	<177	pg/mL
BNP/ Pro B-Natriuretic Peptide	Male, 65-74	<229	pg/mL
BNP/ Pro B-Natriuretic Peptide	Male, >75	<852	pg/mL
BNP/ Pro B-Natriuretic Peptide	Female, <45 yr.	<178	pg/mL
BNP/ Pro B-Natriuretic Peptide	Female, 45-54	<192	pg/mL
BNP/ Pro B-Natriuretic Peptide	Female, 55-64	<226	pg/mL
BNP/ Pro B-Natriuretic Peptide	Female, 65-74	<353	pg/mL
BNP/ Pro B-Natriuretic Peptide	Female, >75	<624	pg/mL
Caffeine (Neonatal ICU Treatment)	Therapeutic neonates	5.0-20.0	ug/mL
Calcium		8.6-10.3	mg/dL
Calcium, Ionized		4.5-5.3	mg/dL
Calprotectin (fecal)	Normal	<80	ug/g
Calprotectin (fecal)	Borderline	80-160	ug/g
Calprotectin (fecal)	Elevated	>160	ug/g
Cancer Antigen 125		<35.0	IU/mL
Carboxyhemoglobin	Non-Smoker	0-2.5	percent
Carboxyhemoglobin	Smoker	1.5-5.0	percent
Carboxyhemoglobin	Heavy Smoker	≤ 10	percent
Carcinoembryonic Antigen	(Roche) Non-smoker	0-3.0	ng/mL
Carcinoembryonic Antigen	(Roche) Smoker	0-5.0	ng/mL
Celiac - Deamidated GP IgA		< 15	U/mL
Celiac - Deamidated GP IgG		< 15	U/mL
Celiac - Tissue transglutaminase IgA		< 15	U/mL
Celiac - Tissue transglutaminase IgG		< 15	U/mL
Chloride		98-108	mmol/L
Chloride, Urine	Timed	100-250	mmol/24 hr.
Chol/HDL Ratio	Male 1/2 avg risk	3.4	ratio
Chol/HDL Ratio	Male average risk	5.0	ratio
Chol/HDL Ratio	Male Twice avg risk	9.5	ratio
Chol/HDL Ratio	Male three times avg risk	24.0	ratio
Chol/HDL Ratio	Female 1/2 avg risk	3.3	ratio
Chol/HDL Ratio	Female average risk	4.4	ratio
Chol/HDL Ratio	Female Twice avg risk	7.1	ratio
Chol/HDL Ratio	Female three times avg risk	11.0	ratio
Cholesterol	Desirable	<200	mg/dL
Cholesterol	Borderline High	200-239	mg/dL
Cholesterol	Elevated	>240	mg/dL
CO2 (Bicarbonate)		23-32	mmol/L
Complement C3		86-184	mg/dL
Complement C4		10-40	mg/dL
Cortisol	AM (0600-1000)	6.0-23.0	ug/dL
Cortisol	PM (1600-2000)	2.7-12.0	ug/dL

Test Name	Range Type	Reference Range	Units
C-Reactive Protein		<6.0	mg/L
Creatinine	Newborn, 0-4 days,	0.3-1.0	mg/dL
Creatinine	Infant/Child, 5 days to 12 yrs.	0.2-0.7	mg/dL
Creatinine	Adolescent 12 to 17 yrs.	0.5-1.0	mg/dL
Creatinine	Adult Female	0.6-1.1	mg/dL
Creatinine	Adult Male	0.7-1.3	mg/dL
Creatinine Clearance		90-130	mL/min
Creatinine Kinase	Male	<206	U/L
Creatinine Kinase	Female	<172	U/L
Creatinine, Urine 24 hr.	Male	1000-1900	mg/24 hr.
Creatinine, Urine 24 hr.	Female	800-1700	mg/24 hr.
CRP-High Sensitivity	Low Risk	< 1.0	mg/L
CRP-High Sensitivity	Average Risk	1.0-3.0	mg/L
CRP-High Sensitivity	Higher Risk	>3.0	mg/L
CRP-High Sensitivity	Evaluate for Infection	>10.0	mg/L
D-Dimer		<0.50	ug/mL
Depakene/Valproic Acid	Therapeutic	50.0-100.0	ug/mL
Dilantin/Phenytoin		10.0-20.0	ug/mL
Dilantin (Free)		1.0-2.0	ug/mL
Digoxin	Therapeutic	0.50-2.00	ng/mL
Estradiol	Men	27-52	pg/mL
Estradiol	Female: Follicular Phase	27-156	pg/mL
Estradiol	Female: Mid Cycle Peak	48-314	pg/mL
Estradiol	Female: Luteal Phase	33-298	pg/mL
Estradiol	Female: Post Menopause	<5-50	pg/mL
Estradiol	Female: Pregnant, 1st trimester	154-3065	pg/mL
Estradiol	Female: Pregnant, 2nd trimester	1561-18950	pg/mL
Estradiol	Female: Pregnant, 3rd trimester	10030->30000	pg/mL
Ethanol		Negative (<0.01)	g/dL
Ferritin	Male	30-400	ng/mL
Ferritin	Female	30-250	ng/mL
Folate (Folic Acid), Serum		≥ 4.0	ng/mL
Follicle Stimulating Hormone	Men	1.5-12.4	mIU/mL
Follicle Stimulating Hormone	Female: Follicular Phase	3.5-12.5	mIU/mL
Follicle Stimulating Hormone	Female: Mid Cycle Peak	4.7-21.5	mIU/mL
Follicle Stimulating Hormone	Female: Luteal Phase	1.7-7.7	mIU/mL
Follicle Stimulating Hormone	Female: Post Menopause	25.8-134.8	mIU/mL
Follicle Stimulating Hormone	Children <10 yr.	0.2-3.8	mIU/mL
Free T3		2.00-4.40	pg/mL
Free Thyroxine		0.8-1.7	ng/mL
GGT Gamma Glutamyl Transp.	Male	8-61	U/L
GGT Gamma Glutamyl Transp.	Female	5-36	U/L
Globulin		2.0-3.9	mg/dL
Glucose Tolerance	Contact Lab for details		
Glucose, Fasting	Adult normal	70-99	mg/dL
Glucose, Fasting	Adult, impaired	100-125	mg/dL
Glucose, Fasting	Adult, Abnormal	>125	mg/dL
Glucose, Fasting	Newborn to 3 months	41-115	mg/dL

Test Name	Range Type	Reference Range	Units
Glucose, Fasting	3-6 months	50-115	mg/dL
Glucose, Urine	Timed	<500	mg/24 hr.
Glucose, Urine	Random, single sample	1-15	mg/dL
Haptoglobin		30-200	mg/dL
HCO ₃		21-28	mmol/L
HCO ₃ , Arterial Cord Blood		14-28	mmol/L
HCO ₃ , Venous Cord Blood		15-25	mmol/L
HCG, Human Chorionic Gonadotropin	Male	<5	mIU/mL
HCG, Human Chorionic Gonadotropin	Female		
HCG, Human Chorionic Gonadotropin	Female: Non-Pregnant, Pre-Menopause	<5	mIU/mL
HCG, Human Chorionic Gonadotropin	Female: Post Menopause	<8	mIU/mL
HCG, Human Chorionic Gonadotropin	Female: Pregnant		mIU/mL
HCG, Human Chorionic Gonadotropin	Full weeks beginning with LMP		mIU/mL
HCG, Human Chorionic Gonadotropin	3	18	mIU/mL
HCG, Human Chorionic Gonadotropin	4	141	mIU/mL
HCG, Human Chorionic Gonadotropin	5	1398	mIU/mL
HCG, Human Chorionic Gonadotropin	6	3339	mIU/mL
HCG, Human Chorionic Gonadotropin	7	39759	mIU/mL
HCG, Human Chorionic Gonadotropin	8	90084	mIU/mL
HCG, Human Chorionic Gonadotropin	10	85172	mIU/mL
HCG, Human Chorionic Gonadotropin	12	66676	mIU/mL
HCG, Human Chorionic Gonadotropin	14	34440	mIU/mL
HCG, Human Chorionic Gonadotropin	16	23930	mIU/mL
HCG, Human Chorionic Gonadotropin	18	19817	mIU/mL
HDL Cholesterol	Suggests Increased Risk	< 40	mg/dL
HDL Cholesterol	Acceptable	40-59	mg/dL
HDL Cholesterol	Suggests Decreased Risk	≥60	mg/dL
Hemoglobin	0-6 days	13.5-20.0	g/dL
Hemoglobin	7-14 days	12.5-19.5	g/dL
Hemoglobin	15-30 days	10.0-18.5	g/dL
Hemoglobin	1-6 months	9.0-15.0	g/dL
Hemoglobin	6 months-2 years	10.5-14.0	g/dL
Hemoglobin	2-6 years	11.0-14.0	g/dL
Hemoglobin	6-12 years	11.5-15.0	g/dL
Hemoglobin	>12 years, female	12.0-16.0	g/dL
Hemoglobin	>12 years, male	13.5-17.5	g/dL
Hemoglobin A1C, Glyco Hgb.		4.4-5.6	percent
Hemoglobin Electrophoresis	Hgb A1 (adult)	96.0-98.5	percent
Hemoglobin Electrophoresis	Hgb A2 (adult)	1.4-5.0	percent
IGA, Immunoglobulin A	Adult	69-309	mg/dL
IGA, Immunoglobulin A	Newborns	1-4	mg/dL
IGA, Immunoglobulin A	1-6 months	1-83	mg/dL
IGA, Immunoglobulin A	7-12 months	11-89	mg/dL
IGA, Immunoglobulin A	1-3 years	13-157	mg/dL
IGA, Immunoglobulin A	4-5 years	24-152	mg/dL
IGA, Immunoglobulin A	6-8 years	32-200	mg/dL
IGA, Immunoglobulin A	9-10 years	43-234	mg/dL
IGG, Immunoglobulin G	Adult	613-1400	mg/dL

Test Name	Range Type	Reference Range	Units
IGG, Immunoglobulin G	Newborns	611-1541	mg/dL
IGG, Immunoglobulin G	1-6 months	165-781	mg/dL
IGG, Immunoglobulin G	7-12 months	208-1026	mg/dL
IGG, Immunoglobulin G	1-3 years	331-1090	mg/dL
IGG, Immunoglobulin G	4-5 years	444-1187	mg/dL
IGG, Immunoglobulin G	6-8 years	608-1229	mg/dL
IGG, Immunoglobulin G	9-10 years	583-1509	mg/dL
IGM, Immunoglobulin M	Adult	53-334	mg/dL
IGM, Immunoglobulin M	Newborns	6-25	mg/dL
IGM, Immunoglobulin M	1-6 months	19-103	mg/dL
IGM, Immunoglobulin M	7-12 months	32-132	mg/dL
IGM, Immunoglobulin M	1-3 years	41-190	mg/dL
IGM, Immunoglobulin M	4-5 years	41-186	mg/dL
IGM, Immunoglobulin M	6-8 years	46-197	mg/dL
IGM, Immunoglobulin M	9-10 years	49-230	mg/dL
Immunofixation Electrophoresis	Contact Lab for details		
Insulin		0-22.7	uU/mL
Ionized Calcium		4.5-5.3	mg/dL
Iron	Male	80-160	ug/dL
Iron	Female	60-135	ug/dL
Iron (Transferrin) Saturation	Male	20-45	percent
Iron (Transferrin) Saturation	Female	15-45	percent
Lactic Acid (Lactate)		0.7-2.5	mmol/L
LDH, Lactate Dehydrogenase	Adult	94-250	U/L
LDH, Lactate Dehydrogenase	Infant, 0-4 day	290-775	U/L
LDH, Lactate Dehydrogenase	5-10 day	545-2000	U/L
LDH, Lactate Dehydrogenase	11 day - 24 month	180-430	U/L
LDL Cholesterol, Measured	Optimal Level	<100	mg/dL
LDL Cholesterol, Measured	Near Optimal	100-129	mg/dL
LDL Cholesterol, Measured	Borderline High	130-159	mg/dL
LDL Cholesterol, Measured	High	160-189	mg/dL
LDL Cholesterol, Measured	Very High	>190	mg/dL
Lipase		16-63	U/L
Lithium	Therapeutic (up to 59 years)	0.6-1.2	mmol/L
Lithium	Therapeutic (60 – 79 years)	0.4-0.8	mmol/L
Lithium	Therapeutic (≥80 years)	0.4-0.7	mmol/L
Luteinizing Hormone	Men	1.7-8.6	mIU/mL
Luteinizing Hormone	Female: Follicular Phase	2.4-12.6	mIU/mL
Luteinizing Hormone	Mid Cycle Peak	14.0-95.6	mIU/mL
Luteinizing Hormone	Luteal Phase	1.0-11.4	mIU/mL
Luteinizing Hormone	Post Menopause	7.7-58.5	mIU/mL
Magnesium		1.7-2.8	mg/dL
Magnesium, Urine	Timed	1-24	mg/24 hr.
Methemoglobin		0-2.0	percent
Methotrexate	Post-Dost (up to 24 hours)	≤5.00	umol/L
Methotrexate	Post-Dost (up to 48 hours)	≤0.50	umol/L
Methotrexate	Post-Dost (up to 72 hours)	≤0.05	umol/L
(micro) Albumin/Creatinine Ratio	Normal	<30	mg/g

Test Name	Range Type	Reference Range	Units
(micro) Albumin/Creatinine Ratio	Moderately Elevated	30-300	mg/g
(micro) Albumin/Creatinine Ratio	Severely Elevated	>300	mg/g
O2 Saturation, Arterial		95-99	percent
Oxyhemoglobin, Arterial		94-98	percent
Oxyhemoglobin, Arterial Cord Blood		18-51	percent
Oxyhemoglobin, Venous		40-70	percent
Oxyhemoglobin, Venous Cord Blood		39-75	percent
Osmolality, Serum		275-295	mOSM/kg
Osmolality, Urine		300-1100	mOSM/kg
Parathyroid Hormone, Intact		15.0-65.0	pg/mL
pCO2, Arterial		35-45	mmHG
pCO2, Arterial Cord Blood		28-73	mmHG
pCO2, Venous		41-51	mmHG
pCO2, Venous Cord Blood		25-57	mmHG
pH, Arterial		7.35-7.45	ph Units
pH, Arterial Cord Blood		7.13-7.41	ph Units
pH, Venous		7.32-7.42	ph Units
pH, Venous Cord Blood		7.21-7.47	ph Units
Phenobarbital	Therapeutic	15.0-40.0	ug/mL
Phosphorus		2.7-4.5	mg/dL
Phosphorus, Urine	Timed	900-1300	mg/24 hr.
pO2, Arterial		80-90	mmHG
pO2, Arterial Cord Blood		15-27	mmHG
pO2, Mixed Venous		25-40	mmHG
pO2, Venous Cord Blood		20-45	mmHG
Potassium		3.5-5.3	mmol/L
Potassium, Urine	Timed	0-80	mmol/24 hr.
Prealbumin		18-45	mg/dL
Pregnancy Test	Negative	HCG = <5	mIU/mL
Pregnancy Test	Borderline-repeat in 48 hrs.	HCG = 11-25	mIU/mL
Pregnancy Test	Borderline, repeat in 1 week	HCG = 5-10	mIU/mL
Pregnancy Test	Positive	>25	mIU/mL
Procalcitonin		<0.50	ng/mL
Progesterone	Men	0.0-0.1	mIU/mL
Progesterone	Female: Follicular Phase	0.1-0.9	mIU/mL
Progesterone	Ovulation Phase	0.1-12.0	mIU/mL
Progesterone	Luteal Phase	1.8-23.9	mIU/mL
Progesterone	Post Menopause	0.0-0.1	mIU/mL
Progesterone	Pregnant, 1st trimester	11-44	mIU/mL
Progesterone	Pregnant, 2nd trimester	25-83	mIU/mL
Progesterone	Pregnant, 3rd trimester	59-214	mIU/mL
Prolactin	Men	4.0-15.2	ng/mL
Prolactin	Female	4.8-23.3	ng/mL
Prostate Specific Antigen, PSA	<40 yr.	0-1.40	ng/mL
Prostate Specific Antigen, PSA	40-50 yr.	0.00-2.00	ng/mL
Prostate Specific Antigen, PSA	50-60 yr.	0.00-3.10	ng/mL
Prostate Specific Antigen, PSA	60-70 yr.	0.00-4.10	ng/mL
Prostate Specific Antigen, PSA	>70 yr.	0.00-4.40	ng/mL

Test Name	Range Type	Reference Range	Units
Protein Electrophoresis	Contact Lab for details		
Protein, Urine	Timed	<150	mg/24 hr.
Rheumatoid Factor		<14	IU/mL
Salicylate	Therapeutic	5.0-29.9	mg/dL
Sodium		135-145	mmol/L
Sodium, Urine	Timed	75-200	mmol/24 hr.
Spinal Fluid/CSF Lactic Acid	Neonates	1.1-6.7	mmol/L
Spinal Fluid/CSF Lactic Acid	3-10 days	1.1-4.4	mmol/L
Spinal Fluid/CSF Lactic Acid	>10 days	1.1-2.8	mmol/L
Spinal Fluid/CSF Lactic Acid	Adults	1.1-2.4	mmol/L
Spinal Fluid/CSF Glucose		50-75	mg/dL
Spinal Fluid/CSF Protein		15-45	mg/dL
Sweat Chloride	Normal	0-29	mmol/L
Sweat Chloride	Borderline	30-59	mmol/L
Sweat Chloride	Abnormal	≥60	mmol/L
Tegretol/Carbamazepine	Therapeutic	4.0-12.0	ug/mL
Testosterone	Men, 18-49 yrs.	249 - 836	ng/dL
Testosterone	Men, ≥ 50 yrs.	193 - 740	ng/dL
Testosterone	Female, 18-49 yrs.	8.4 - 48.1	ng/dL
Testosterone	Female, ≥ 50 yrs.	2.9 - 40.8	ng/dL
Testosterone	Children: See tanner stage		
Theophylline	Therapeutic	10.0-20.0	ug/mL
Thyroid Stimulating Hormone	Children, 0-1 yr.	1.36-8.80	mIU/mL
Thyroid Stimulating Hormone	Children, 1-6 yrs.	0.85-6.50	mIU/mL
Thyroid Stimulating Hormone	Children >6 yr. and Adult	0.27-4.20	mIU/mL
Total Iron Binding Capacity (TIBC)		254-457	ug/dL
Total Protein	Newborn	4.6-7.0	g/dL
Total Protein	1 week to 7 months	4.4-7.6	g/dL
Total Protein	7 months - 1 year	5.1-7.3	g/dL
Total Protein	1-2 years	5.6-7.5	g/dL
Total Protein	3 – 18 years	6.0-8.0	g/dL
Total Protein	Adults (ambulatory)	6.4-8.3	g/dL
Transferrin		200-360	mg/dL
Triglyceride		<150	mg/dL
Troponin-T (High Sensitivity)	Male	<22	ng/L
Troponin-T (High Sensitivity)	Female	<14	ng/L
Urea Nitrogen, Urine	Timed	10-20	g/24 hrs.
Uric Acid		2.5-8.0	mg/dL
Urine Drug Screen Tests:			
Amphetamine/Methamphetamine		NEGATIVE	
Barbiturate		NEGATIVE	
Benzodiazepine		NEGATIVE	
Buprenorphine		NEGATIVE	
Cannabinoid (THC)		NEGATIVE	
Cocaine		NEGATIVE	
Oxycodone		NEGATIVE	
Fentanyl		NEGATIVE	