

## Normal Values

Hematologic values		Male	Female	Units
Hemoglobin		14.0 – 18.0	12.0 – 16.0	gm/dl
Hematocrit		41 – 50%	36 – 45%	
Erythrocytes (RBC)		4.7 – 6.1	4.2 – 5.4	M/ $\mu$ L
White Blood Cells (WBC)		4.8 – 10.8	4.8 – 10.8	K/ $\mu$ L
WBC Differential:	Neutrophils	50 – 75 %	45 – 70 %	
	Lymphocytes	20 – 45 %	20 – 45 %	
	Monocytes	0 – 10 %	0 – 10 %	
	Eosinophils	0 – 5 %	0 – 5 %	
	Basophils	0 – 5 %	0 – 5 %	
Platelets		140 – 440	140 – 440	K/ $\mu$ L
Sedimentation Rate		< 50 yr: 0 – 15 ≥ 50 yr: 0 – 20	< 50 yr: 0 – 20 ≥ 50 yr: 0 – 30	mm/hr
MCH	25 - 35 pg/cell			
MCV	78-100 $\mu$ m <sup>3</sup>			
MCHC	31-37 g/dl			
RDW	11.5 – 14.5 %			
<b>Iron/Transport Proteins:</b>				
Iron	60-150 $\mu$ g/dL			
TIBC	250-400 $\mu$ g/dL			
Serum ferritin	12-300 $\mu$ g/ml			
Transferrin saturation	20-45%			

Clotting Studies			Units
PT	Infant: 10.9 - 13.9	>30 days: 12.2 - 14.2	sec
aPTT	Infant: 34 - 51	> 30 days: 23 - 36	sec

<b>Lymphocytes in peripheral blood</b>	CD19	4 – 20%	96-421 cells/ $\mu$ L
	CD3	62 – 85%	700-2500 cells/ $\mu$ L
	CD2	70 – 88%	840-2800 cells/ $\mu$ L
	CD4	34 - 59%	430-1600 cells/ $\mu$ L
	CD8	16 - 38%	280-1100 cells/ $\mu$ L

Blood Gases		Units
pH	7.38 - 7.44	
pO <sub>2</sub>	80 - 100	mmHg
pCO <sub>2</sub>	35 - 45	mmHg
HCO <sub>3</sub>	21 - 28	mmol/L

Enzymes	Male	Female	Units
Aspartate Aminotransferase (AST)	10 - 40	9 - 25	U/L
Alkaline Phosphatase (ALP)	45 - 115	30 - 100	U/L
Alanine Aminotransferase (ALT)	10 - 55	7 - 30	U/L
Gamma glutamyl transferase (GGT)	1 - 94	1 - 70	U/L
Unit			
Lactate Dehydrogenase (LDH)	90 - 250	U/L	
Lipase	3 - 19	U/dL	
Serum amylase	53 - 123	U/L	
Plasma amylase	43 - 115	U/L	

## Normal Values

Blood Chemistries		Units
Sodium (Na)	135 - 144	mmol/L
Potassium (K):		
0 – 12 months:	3.5 - 6.0	mmol/L
> 12 months:	3.5 - 5.0	
Chloride (Cl)	98 - 107	mmol/L
CO <sub>2</sub>	22 - 32	mmol/L
BUN:		
0 – 7 days:	3 - 12	mmol/L
> 7 days:	8 - 20	
Creatinine (Cr):		
Male	0.7 – 1.3	mg/dL
Female	0.6 – 1.1	
Glucose (fasting):		
0 – 1 month	45 - 90	mg/dL
> 1 month	65 - 110	
Ammonia	20 - 120	µg/dL
Phosphorus	2.3 – 4.7	mg/dL
Calcium total	9.2 – 11.0	mg/dL
Calcium ionized	4.0 – 4.8	mg/dL
Magnesium	1.8 – 3.0	mg/dL
Serum bilirubin, Total:	0.2 - 1.3	mg/dL
Direct:	0.0 – 0.3	
Total Serum Protein:	6 - 8	g/dL
Pre-albumin	18 – 38	mg/dL
Albumin	3.9 – 5.0	g/dL
Globulin	2.3 – 3.5	g/dL
Alpha-fetoprotein	≤ 12.8	U/mL
Carcinoembryonic antigen (CEA):		
Non-Smokers:	0 – 4.9	ng/ml
Smokers:	0 – 9.9	
<b>OTHER</b>		
Total Urinary Protein:	0.050 - 0.100	gm/24 hrs
CSF Protein:	15 - 45	mg/dL
CSF Glucose:	50 - 75	mg/dL

Serum immunoglobulins (mg/dL)	IgG	IgA	IgM	IgE
Newborn	611-1542	1.4 – 3.6	5.9 – 24	<53 IU/mL
1 year – 2 year	331 -1164	13.9 – 105.0	41 – 164	<352 IU/ mL
3 year – 4 year	423 - 1090	22 - 157	45 – 190	<352 IU/ mL
Adult	723-1685	69 - 382	63 - 277	<379.0 IU/ mL
Serum C3:	80-180 mg/dL			
Serum C4:	20-58 mg/dL			
C1q binding assay:	≤4 mEq Heat-aggregated IgG/mL			

Mitogenic responses	[ <sup>3</sup> H] Thymidine (Tdr) incorp.
	mean ± s.d.
PHA	15,000 ± 6,000 cpm
Con A	10,000 ± 2,000 cpm
Response to PWM	
a.	IgG: 2-5 µg/10 <sup>6</sup> cells
b.	IgM: 3-12 µg/10 <sup>6</sup> cells