

## Peripheral Blood: Reference Ranges

Adapted from University of Washington Medical Center  
Prepared by Patients Against Lymphoma

*Reference ranges and unit measurements can vary per lab. And what is "normal" can also vary per person and race. If your lab results are outside the normal range, we suggest that you discuss with your doctor. Often it is not the result, but the change from a previous test that is most instructive. For best comparisons of lab results, the tests should be done in the same lab.*

Red Blood Count (RBC)	Age	Male	Female
(X106/uL)	6 mo - 2 yr	3.70 - 5.30	3.70 - 5.30
	2 yr - 6 yr	3.90 - 5.30	3.90 - 5.30
(Erythrocytes)	6 yr - 12 yr	4.00 - 5.20	4.00 - 5.20
Low levels cause anemia and are associated fatigue	12 yr - 18 yr	4.50 - 5.30	4.10 - 5.10
	18 yr +	4.40 - 5.60	3.80 - 5.00

  

Hemoglobin (Hgb)	Age	Male	Female
(g/dL)	6 mo -2 yr	10.5 -13.5	10.5 - 13.5
	2 yr - 6 yr	11.5 - 13.5	11.5 - 13.5
(Red blood pigment)	6 yr - 12 yr	11.5 - 15.5	11.5 - 15.5
Deficiency of iron and therefore of hemoglobin leads to anemia and decreased ability to carry oxygen to body tissues	12 yr - 18 yr	13.0 - 15.5	12.0 - 15.5
	18 yr +	13.0 - 18.0	11.5 - 15.5

  

Hematocrit (Hct)	Age	Male	Female
(%)	6 mo - 2 yr	33 - 39	33 - 39
	2 yr -6 yr	34 - 40	34 - 40
Percent of whole blood that is comprised of red blood cells; measure of both the number and size of red blood cells	6 yr -12 yr	35 - 45	35 - 45
	12 yr -18 yr	37 - 49	36 - 45
	18 yr +	38 - 50	36 - 45

  

Mean Corpuscular Volume (MCV)	Age	Male	Female
(fL)	6 mo -2 yr	70 - 86	=
	2 yr - 6 yr	75 - 87	=
Measures the size of red blood cells. Larger or smaller than normal red blood cells may indicate anemia.	6 yr - 12 yr	77 - 95	=
	12 yr - 18 yr	81 - 98	=
	18 yr +	81 - 98	=

  

Mean Corpuscular Hemoglobin (MCH)	Age	Male	Female
(pg)	6 mo - 2 yr	23.0 - 31.0	=
	2 yr - 6 yr	24.0 - 30.0	=
Estimate of the amount of hemoglobin in the average red cell. Low levels indicate anemia	6 yr -12 yr	25.0 - 33.0	=
	12 yr - 18 yr	25.0 - 35.0	=
	18 yr +	27.3 - 33.6	=

  

Mean Corpuscular Hemoglobin Concentration (MCHC)	Age	Male	Female
(g/dL)	6M - 2 yr	30.0 - 36.0	=
Estimate of the concentration of hemoglobin in the average red cell. Low levels indicate anemia	2 yr +	32.3 - 35.7	=

  

Platelets (Thrombocytes)	Age	Male	Female
(X103/uL)	0 – 1 mo	250 - 450	=
	1 mo - 1 yr	300 - 750	=
Helps blood clotting in order to stop bleeding from injury. Decreased platelet count is called thrombocytopenia.	1 yr - 3 yr	250 - 600	=
	3 yr - 7 yr	250 - 550	=
	7 yr - 12 yr	200 - 450	=
	12 yr +	150 - 400	=

<b>White Blood Count (WBC) (Leukocytes)</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
(x 103/uL)	6 mo - 2 yrs	6.0 - 17.0	=
	2 yr - 4 yrs	6.0 - 15.5	=
Low levels associated with risk of infection; high levels indicates possible infection.	4 yr - 6 yr	5.5 - 14.5	=
	6 yr - 14 yr	4.5 - 13.5	=
	14 yr +	4.3 - 10.0	=
<b>Neutrophils</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
(X103/uL)	6 mo - 1 yr	1.50 - 5.00	=
These cells provide primary defense against bacterial infection Range: 50-70% of White Blood Cells Bands: 2-6% of White Blood Cells	1 yr - 4 yr	1.50 - 5.00	=
	4 yr - 10 yr	1.50 - 7.50	=
	10 yr - 12 yr	1.80 - 7.00	=
	12 yr +	1.80 - 7.00	=
<b>Lymphocytes (B-cell, T-cells, and NK cells)</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
(X103/uL)	6 mo - 1 yr	3.00 - 7.00	=
Many kinds of immune cells; protect against pathogens (bacteria, virus, fungi) and cancer	1 yr - 4 yr	1.50 - 8.50	=
	4 yr - 10 yr	1.50 - 5.00	=
	10 yr - 12 yr	1.20 - 5.00	=
	12 yr +	1.00 - 4.80	=
Additional Lymphocyte information: (Adapted from Family Practice Notebook)			
ABS T cell - CD4		0.350 - 1.334	=
ABS T cell - CD8		0.147 - 0.812	=
T-cell ratio CD4 / CD8		0.84 - 3.05	=
Total T Lymphocytes		800-2200 / mmü	=
T helper Cells		>400 / mmü	=
T suppressors		250 – 750 / mmü	=
Ratio Helper cells to Suppressor cells		>0.9	=
% Lymphocytes of White Blood Cells		15-40%	=
% CD2 of lymphocytes		65-85%	=
% CD4 of lymphocytes:		45-75%	=
<b>Monocytes</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
(X103/uL)	6M-1 yr	0 - 0.60	=
Germ eating cells. A low number can increase risk of getting sick from an infection, particularly of bacteria type.	1 yr +	0 - 0.80	=
<b>Eosinophils</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
(X103/uL)	6 mo - 1 yr	0 - 0.80	=
A type of phagocyte that produces the anti- inflammatory protein histamine. A high number indicates allergies or parasitic infections.	1 yr +	0 - 0.50	=
<b>Basophils</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
(X103/uL)	6 mo +	0 - 0.20	=
Control inflammation and damage of tissues in the body.			