

# Hematology Reference Intervals

Updated: August 2024

ANALYTE	AGE	Male		Female	
		LOWER	UPPER	LOWER	UPPER
<b>White Blood Cell count (WBC) (thou/cmm)</b>	0-14 days	8.0	15.4	8.2	14.6
	15-30 days	7.8	15.9	8.4	14.4
	31-60 days	8.1	15.0	7.1	14.7
	61 days-<6 months	6.5	13.3	6.0	13.3
	6 months-<2 years	6.0	13.5	6.5	13.0
	2-<3 years	5.1	13.4	4.9	13.2
	3-5 years	4.4	12.9	4.4	12.9
	6-17 years	3.8	10.4	3.8	10.4
	≥18 years	4.0	10.5	4.0	10.0
<b>Red Blood Cell count (RBC) (mill/cmm)</b>	0-14 days	4.10	5.55	4.12	5.74
	15-30 days	3.16	4.63	3.32	4.80
	31-60 days	3.02	4.22	2.93	3.87
	61 days-<6 months	3.43	4.80	3.45	4.75
	6 months-<2 years	4.03	5.07	3.97	5.01
	2-<3 years	3.89	4.97	3.84	4.92
	3-5 years	4.00	5.10	4.00	5.10
	6-10 years	4.10	5.20	4.10	5.20
	11-14 years	4.20	5.30	4.10	5.10
	15-17 years	4.30	5.70	3.80	5.00
	≥18 years	4.00	5.40	3.70	4.70
<b>Hemoglobin (HGB) (g/dL)</b>	0-14 days	13.9	19.1	13.4	20.0
	15-30 days	10.0	15.3	10.8	14.6
	31-60 days	8.9	12.7	9.2	11.4
	61 days-<6 months	9.6	12.4	9.9	12.4
	6 months -<3 years	10.5	12.7	10.5	12.7
	3-5 years	11.4	14.3	11.4	14.3
	6-8 years	11.5	14.3	11.5	14.3
	9-10 years	11.8	14.7	11.8	14.7
	11-14 years	12.4	15.7	11.9	14.8
	15-17 years	13.3	16.9	11.9	14.8
	≥18 years	12.5	17.0	11.5	14.5

ANALYTE	AGE	Male		Female	
		LOWER	UPPER	LOWER	UPPER
Hematocrit (HCT) (%)	0-14 days	39.8	53.6	39.6	57.2
	15-30 days	30.5	45.0	32.0	44.5
	31-60 days	26.8	37.5	27.7	35.1
	61 days-<6 months	28.6	37.2	29.5	37.1
	6 months-<2 years	30.8	37.8	30.9	37.9
	2-<3 years	31.0	37.7	31.2	37.8
	3-7 years	34.0	42.0	34.0	42.0
	8-11 years	35.0	43.0	35.0	43.0
	12-15 years	38.0	47.0	35.0	43.0
	16-17 years	40.0	50.0	35.0	43.0
	≥18 years	37.0	48.0	35.0	43.0
Mean Corpuscular Volume (MCV) (fL)	0-14 days	91	103	93	106
	15-30 days	89	100	90	103
	31-60 days	84	94	83	96
	61 days-<6 months	74	88	75	88
	6 months-<2 years	70	82	71	83
	2-<3 years	71	84	72	85
	3-5 years	77	90	77	90
	6-11 years	78	91	78	91
	12-14 years	80	93	80	93
	15-17 years	83	98	83	98
	≥18 years	80	100	80	100
Mean Corpuscular Hemoglobin (MCH) (pg)	0-14 days	31.3	35.6	31.1	35.9
	15-30 days	29.9	34.1	30.4	35.3
	31-60 days	27.8	32.0	28.0	32.5
	61 days-<6 months	24.4	28.9	24.4	29.5
	6 months-<2 years	22.7	27.2	23.2	27.5
	2-<3 years	23.7	28.3	23.7	28.6
	3-5 years	26.1	30.7	26.1	30.7
	6-15 years	26.3	31.7	26.3	31.7
	16-17 years	27.6	33.3	27.6	33.3
	≥18 years	27.0	36.0	26.0	34.0
	Mean Corpuscular Hemoglobin Concentration (MCHC) (g/dL)	0-14 days	33.0	35.7	33.4
15-30 days		32.7	35.1	33.2	35.0
31-60 days		32.3	34.8	32.5	34.9
61 days-<6 months		31.9	34.4	32.1	34.4
6 months-<2 years		31.6	34.4	31.9	34.2
2-<3 years		32.0	34.7	31.8	34.6

ANALYTE	AGE	Male		Female	
		LOWER	UPPER	LOWER	UPPER
<b>Mean Corpuscular Hemoglobin Concentration (MCHC) (g/dL)</b> continued	3-5 years	32.4	34.9	32.4	34.9
	6-17 years	32.5	35.2	32.5	35.2
	≥18 years	32.0	37.0	32.0	37.0
<b>Red Cell Distribution Width (RDW) (%)</b>	0-14 days	14.8	17.0	14.6	17.3
	15-30 days	14.3	16.8	14.4	16.2
	31-60 days	13.8	16.1	13.6	15.8
	61 days-<6 months	12.4	15.3	12.2	14.3
	6 months-<2 years	12.9	15.6	12.7	15.1
	2-<3 years	12.5	14.9	12.4	14.9
	3-5 years	11.3	13.4	11.3	13.4
	6-17 years	11.4	13.5	11.4	13.5
	≥18 years	12.0	16.0	12.0	16.0
<b>Platelet count (PLT) (thou/cmm)</b>	0-14 days	218	419	144	449
	15-30 days	248	586	279	571
	31-60 days	229	562	331	597
	61 days-<6 months	244	529	247	580
	6 months-<2 years	206	445	214	459
	2-<3 years	202	403	189	394
	3-5 years	187	445	187	445
	6-9 years	187	400	187	400
	10-13 years	177	381	177	381
	14-17 years	139	320	158	362
	≥18 years	140	350	140	350
<b>Mean Platelet Volume (MPV) (fL)</b>	≥0 days	7.5	11.3	7.5	11.3
<b>Neutrophil, Absolute (thou/cmm)</b>	0-<15 days	1.6	6.1	1.7	6.8
	15-30 days	1.2	5.5	1.2	4.8
	31-60 days	0.8	4.2	1.0	4.7
	61 days-<6 months	1.0	5.5	1.0	7.2
	6 months-<2 year	1.2	7.2	1.3	7.2
	2-<3 years	1.5	7.9	1.6	8.3
	3-<6 years	1.6	7.8	1.6	7.8
	6-<17 years	1.4	6.1	1.5	6.5
	17-<18 years	1.8	7.2	2.0	7.4
	≥18 years	1.8	7.8	1.8	7.8

ANALYTE	AGE	Male		Female	
		LOWER	UPPER	LOWER	UPPER
<b>Lymphocyte, Absolute</b> (thou/cmm)	0-<15 days	2.1	7.5	1.8	8.0
	15-30 days	2.1	8.4	2.4	8.2
	31-60 days	2.5	8.0	2.3	9.1
	61 days-<6 months	2.5	8.9	2.1	9.0
	6 months-<2 year	1.6	7.8	1.5	8.1
	2-<3 years	1.1	5.5	1.3	5.8
	3-<6 years	1.6	5.3	1.6	5.3
	6-<12 years	1.4	3.9	1.4	3.9
	12-<18 years	1.0	3.2	1.0	3.2
	≥18 years	1.0	3.0	1.0	3.0
<b>Monocyte, Absolute</b> (thou/cmm)	0-<15 days	0.5	1.8	0.6	1.7
	15-30 days	0.3	1.4	0.4	1.2
	31-60 days	0.3	1.1	0.3	1.2
	61 days-<6 months	0.3	1.1	0.2	1.2
	6 months-<2 years	0.3	1.2	0.3	1.1
	2-<3 years	0.2	0.9	0.2	0.9
	3-<6 years	0.3	0.9	0.3	0.9
	6-<18 years	0.2	0.8	0.2	0.8
	≥18 years	0.3	1.0	0.3	1.0
<b>Eosinophil, Absolute</b> (thou/cmm)	0-<15 days	0.1	0.7	0.1	0.6
	15-30 days	0.1	0.8	0.1	0.8
	31-60 days	0.1	0.6	0.0	0.6
	61 days-<6 months	0.0	0.6	0.0	0.7
	6 months-<2 years	0.0	0.8	0.0	0.6
	2-<12 years	0.0	0.5	0.0	0.5
	12-<18 years	0.1	0.2	0.1	0.2
	≥18 years	0.0	0.5	0.0	0.5
<b>Basophil, Absolute</b> (thou/cmm)	≥0 days	0.0	0.1	0.0	0.1
<b>Reticulocyte, Percent</b> (%)	0-3 days	3.47	5.40	3.47	5.40
	4 days-<1 month	1.06	2.37	1.06	2.37
	1-<2 months	2.12	3.47	2.12	3.47
	2-<6 months	1.55	2.70	1.55	2.70
	6 months-<2 years	0.99	1.82	0.99	1.82
	2-<6 years	0.82	1.45	0.82	1.45
	6-<12 years	0.98	1.94	0.98	1.94
	12-<18 years	0.90	1.49	0.90	1.49
	≥18 years	0.42	2.23	0.51	2.17

ANALYTE	AGE	Male		Female	
		LOWER	UPPER	LOWER	UPPER
<b>Reticulocyte, Absolute</b> (mill/cmm)	0-3 days	0.1475	0.2164	0.1475	0.2164
	4 days-<1 months	0.0513	0.1104	0.0513	0.1104
	1-<2 months	0.0518	0.0779	0.0518	0.0779
	2-<6 months	0.0482	0.0882	0.0482	0.0882
	6 months-<2 years	0.0435	0.1111	0.0435	0.1111
	2-<6 years	0.0364	0.0680	0.0364	0.0680
	6-<12 years	0.0424	0.0702	0.0424	0.0702
	12-<18 years	0.0416	0.0651	0.0416	0.0651
	≥18 years	0.0188	0.1086	0.0230	0.0935