

Hematology Laboratory Reference Ranges

Adult Reference Ranges

Parameter	Female	Male	Units
WBC	3.9 - 11.7	3.7 - 9.7	x 10 ⁹ cells/L
RBC	3.85 - 5.16	4.54 - 5.78	x 10 ¹² cells/L
HGB	12.0 - 15.0	13.3 - 17.2	g/dL
HCT	34.8 - 45.0	38.9 - 50.9	%
MCV	78.5 - 96.4	81.2 - 94.0	fL
MCH	25.6 - 32.2	25.7 - 32.2	pg
MCHC	30.5 - 34.0	30.9 - 35.5	g/dL
RDW-CV	11.3 - 14.7	11.5 - 14.1	%
RDW-SD	36.4 - 46.3	35.1 - 43.9	fL
PLT	172 - 440	179 - 373	x 10 ⁹ cells/L
MPV	8.7 - 12.3	8.7 - 12.1	fL
IPF	0.0 - 9.9	0.0 - 9.9	%
NEU#	1.9 - 7.9	2.0 - 6.7	x 10 ⁹ cells/L
LYM#	1.3 - 3.6	1.1 - 3.3	x 10 ⁹ cells/L
MONO#	0.3 - 0.7	0.2 - 0.7	x 10 ⁹ cells/L
EOS#	0.0 - 0.4	0 - 0.4	x 10 ⁹ cells/L
BASO#	0.0 - 0.1	0 - 0.1	x 10 ⁹ cells/L
nRBC%	0.0 - 0.20	0.0 - 0.20	% (/100WBC)
% Retic	0.9 - 2.6	0.8 - 2.5	%
Absolute Retic Count	0.0377 - 0.1222	0.0436 - 0.1305	x 10 ⁶ cells/mL
IRF	2.3 - 13.4	2.3 - 13.4	%
RET-He	32.1 - 39.1	32.1 - 39.1	pg

Hematology Laboratory Reference Ranges

Pediatric Reference Ranges

Parameter	Age	Male	Female
WBC 10e9/L	0 - 14day	8.0-15.4	8.2-14.6
	15-30day	7.8-15.9	8.4-14.4
	31-60day	8.1-15.0	7.1-14.7
	61-180day	6.5-13.3	6.0-13.3
	181d-<2yrs	6.0-13.5	6.5-13.0
	2-<6yrs	5.1-13.4	4.9-13.2
	6-<12yrs	4.3-11.0	4.3-11.4
	12-<18yrs	3.8-9.8	4.2-9.4

Parameter	Age	Male	Female
RBC 10e12/L	0 - 14day	4.10-5.55	4.12-5.74
	15-30day	3.16-4.63	3.32-4.80
	31-60day	3.02-4.22	2.93-3.87
	61-180day	3.43-4.80	3.45-4.75
	181d-<2yrs	4.03-5.07	3.97-5.01
	2-<6yrs	3.89-4.97	3.84-4.92
	6-<12yrs	3.96-5.03	3.90-4.96
	12-<18yrs	4.03-5.29	3.93-4.90

Parameter	Age	Male	Female
HGB g/dL	0 - 14day	13.9-19.1	13.4-20.0
	15-30day	10.0-15.3	10.8-14.6
	31-60day	8.9-12.7	9.2-11.4
	61-180day	9.6-12.4	9.9-12.4
	181d-<2yrs	10.1-12.5	10.2-12.7
	2-<6yrs	10.2-12.7	10.2-12.7
	6-<12yrs	10.7-13.4	10.6-13.2
	12-<18yrs	11.0-14.5	10.8-13.3

Parameter	Age	Male	Female
HCT %	0 - 14day	39.8-53.6	39.6-57.2
	15-30day	30.5-45.0	32.0-44.5
	31-60day	26.8-37.5	27.7-35.1
	61-180day	28.6-37.2	29.5-37.1
	181d-<2yrs	30.8-37.8	30.9-37.9
	2-<6yrs	31.0-37.7	31.2-37.8
	6-<12yrs	32.2-39.8	32.4-39.5
	12-<18yrs	33.9-43.5	33.4-40.4

Parameter	Age	Male	Female
MCV fL	0 - 14day	91.3-103.1	92.7-106.4
	15-30day	89.4-99.7	90.1-103.0
	31-60day	84.3-94.2	83.4-96.4
	61-180day	74.1-87.5	74.8-88.3
	181d-<2yrs	69.5-81.7	71.3-82.6
	2-<6yrs	71.3-84.0	72.3-85.0
	6-<12yrs	74.4-86.1	75.9-87.6
	12-<18yrs	76.7-89.2	76.9-90.6

Parameter	Age	Male	Female
MCH pg	0 - 14day	31.3-35.6	31.1-35.9
	15-30day	29.9-34.1	30.4-35.3
	31-60day	27.8-32.0	28.0-32.5
	61-180day	24.4-28.9	24.4-29.5
	181d-<2yrs	22.7-27.2	23.2-27.5
	2-<6yrs	23.7-28.3	23.7-28.6
	6-<12yrs	24.9-29.2	24.8-29.5
	12-<18yrs	25.2-30.2	24.8-30.2

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Pediatric Reference Ranges

Parameter	Age	Male	Female
MCHC g/dL	0 - 14day	33.0-35.7	33.4-35.4
	15-30day	32.7-35.1	33.2-35.0
	31-60day	32.3-34.8	32.5-34.9
	61-180day	31.9-34.4	32.1-34.4
	181d-<2yrs	31.6-34.4	31.9-34.2
	2-<6yrs	32.0-34.7	31.8-34.6
	6-<12yrs	32.2-34.9	31.8-34.6
	12-<18yrs	31.8-34.8	31.5-34.2

Parameter	Age	Male	Female
RDW %	0 - 14day	14.8-17.0	14.6-17.3
	15-30day	14.3-16.8	14.4-16.2
	31-60day	13.8-16.1	13.6-15.8
	61-180day	12.4-15.3	12.2-14.3
	181d-<2yrs	12.9-15.6	12.7-15.1
	2-<6yrs	12.5-14.9	12.4-14.9
	6-<12yrs	12.3-14.1	12.2-14.4
	12-<18yrs	12.4-14.5	12.3-14.6

Parameter	Age	Male	Female
PLT 10e9/L	0 - 14day	218-419	144-449
	15-30day	248-586	279-571
	31-60day	229-562	331-597
	61-180day	244-529	247-580
	181d-<2yrs	206-445	214-459
	2-<6yrs	202-403	189-394
	6-<12yrs	206-369	199-367
	12-<18yrs	175-332	194-345

Parameter	Age	Male	Female
MPV fL	0 - 14day	10.2-11.9	10.4-12.0
	15-30day	10.1-12.1	10.0-12.2
	31-60day	9.2-10.8	9.4-11.1
	61-180day	8.9-10.6	9.0-10.9
	181d-<2yrs	8.7-10.5	8.8-10.6
	2-<6yrs	9.0-10.9	8.9-11.0
	6-<12yrs	9.2-11.4	9.3-11.3
	12-<18yrs	9.6-11.8	9.6-11.7

Parameter	Age	Male	Female
IPF	0-180d	2.0-6.8	1.3-6.8
	6-<24mo	1.4-3.8	1.4-4.5
	2-<6 y	1.1-3.6	1.0-3.6
	6-<12yrs	1.0-4.9	1.0-4.7
	12-<18yrs	1.6-6.1	1.4-6.4

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Pediatric Reference Ranges

Parameter	Age	Male	Female
NEU # 10e9/L	0 - 14day	1.6-6.1	1.7-6.8
	15-30day	1.2-5.5	1.2-4.8
	31-60day	0.8-4.2	1.0-4.7
	61-180day	01.0-5.5	1.0-7.2
	181d-<2yrs	1.2-7.2	1.3-7.2
	2-<6yrs	1.5-7.9	1.6-8.3
	6-<12yrs	1.6-7.6	1.6-7.9
	12-<18yrs	1.5-7.0	1.8-7.5

Parameter	Age	Male	Female
LYM # 10e9/L	0 - 14day	2.1-7.5	1.8-8.0
	15-30day	2.1-8.4	2.4-8.2
	31-60day	2.5-8.0	2.3-9.1
	61-180day	2.5-8.9	2.1-9.0
	181d-<2yrs	1.6-7.8	1.5-8.1
	2-<6yrs	1.1-5.5	1.3-5.8
	6-<12yrs	1.0-4.0	1.2-4.3
	12-<18yrs	1.0-3.3	1.2-3.3

Parameter	Age	Male	Female
MONO# 10e9/L	0 - 14day	0.5-1.8	0.6-1.7
	15-30day	0.3-1.4	0.4-1.2
	31-60day	0.3-1.1	0.3-1.2
	61-180day	0.3-1.1	0.2-1.2
	181d-<2yrs	0.3-1.2	0.3-1.1
	2-<6yrs	0.2-0.9	0.2-0.9
	6-<12yrs	0.2-0.9	0.2-0.8
	12-<18yrs	0.2-0.8	0.2-0.7

Parameter	Age	Male	Female
EOS# 10e9/L	0 - 14day	0.1-0.7	0.1-0.6
	15-30day	0.1-0.8	0.1-0.8
	31-60day	0.1-0.6	0.0-0.6
	61-180day	0.0-0.6	0.0-0.7
	181d-<2yrs	0.0-0.8	0.0-0.6
	2-<6yrs	0.0-0.5	0.0-0.5
	6-<12yrs	0.0-0.5	0.0-0.5
	12-<18yrs	0.0-0.4	0.0-0.3

Parameter	Age	Male	Female
BASO# 10e9/L	0 - 14day	0.0-0.1	0.0-0.1
	15-30day	0.0-0.1	0.0-0.1
	31-60day	0.0-0.1	0.0-0.1
	61-180day	0.0-0.1	0.0-0.1
	181d-<2yrs	0.0-0.1	0.0-0.1
	2-<6yrs	0.0-0.1	0.0-0.1
	6-<12yrs	0.0-0.1	0.0-0.1
	12-<18yrs	0.0-0.1	0.0-0.1

Parameter	Age	Male	Female
nRBC %	1-3day	0.1-8.3	0.1-8.3
	4-30day	0.0-0.0	0.0-0.0
	31-60day	0.0-0.0	0.0-0.0
	61-180 day	0.0-0.0	0.0-0.0
	181 day-<2yrs	0.0-0.0	0.0-0.0
	2-<6 yrs	0.0-0.0	0.0-0.0
	6-<12 yrs	0.0-0.0	0.0-0.0
	12-<18yrs	0.0-0.0	0.0-0.0

Hematology Laboratory Reference Ranges

Pediatric Reference Ranges

Parameter	Age	Male	Female
BASO# 10e9/L	0 - 14day	0.0-0.1	0.0-0.1
	15-30day	0.0-0.1	0.0-0.1
	31-60day	0.0-0.1	0.0-0.1
	61-180day	0.0-0.1	0.0-0.1
	181d-<2yrs	0.0-0.1	0.0-0.1
	2-<6yrs	0.0-0.1	0.0-0.1
	6-<12yrs	0.0-0.1	0.0-0.1
	12-<18yrs	0.0-0.1	0.0-0.1

Parameter	Age	Male	Female
nRBC %	1-3day	0.1-8.3	0.1-8.3
	4-30day	0.0-0.0	0.0-0.0
	31-60day	0.0-0.0	0.0-0.0
	61-180 day	0.0-0.0	0.0-0.0
	181 day-<2yrs	0.0-0.0	0.0-0.0
	2-<6 yrs	0.0-0.0	0.0-0.0
	6-<12 yrs	0.0-0.0	0.0-0.0
	12-<18yrs	0.0-0.0	0.0-0.0

Parameter	Age	Male	Female
Retic% %	0-3 day	3.5-5.4	3.5-5.4
	4--30day	1.1-2.4	1.1-2.4
	31-60day	2.1-3.5	2.1-3.5
	61-180 day	1.6-2.7	1.6-2.7
	181d-<2yrs	1.0-1.8	1.0-1.8
	2-<6yrs	0.8-1.5	0.8-1.5
	6-<12yrs	1.0-1.9	1.0-1.9

Parameter	Age	Male & Female
Retic ABS 10e6/ μ L	0-3 day	0.1475 - 0.2164
	4--30day	0.0513 - 0.1104
	31-60day	0.0518 - 0.0779
	61-180 day	0.0482 - 0.0882
	181d-<2yrs	0.0435 - 0.1111
	2-<6yrs	0.0364 - 0.0680
	6-<12yrs	0.0424 - 0.0702

Parameter	Age	New Peds-M	New Peds-F
Ret-He pg	0- 180 day	27.6-38.7	29.2-37.5
	6-<24mo	28.7-35.7	30.1-35.7
	2-<6 y	27.7-37.8	29.3-37.3
	6-<12year	32.4-37.6	30.4-39.7
	12-<18year	30.3-40.4	29.9-38.4

Parameter	Age	Male & Female
IRF %	0-3 day	30.5-35.1
	4--30day	14.5-24.6
	31-60day	19.1-28.9
	61-180 day	13.4-23.3
	181d-<2year	11.4-25.8
	2-<6year	8.4-21.7
	6-<12year	8.9-24.1
	12-<18year	9.0-18.7

Hematology Laboratory Reference Ranges

Critical Values

Tests	Critical Low	Critical High	Units	Comments
WBC	<=2.0	>=50.0	10e9/L	Called back on inpatient on the first occurrence within the current admission
HGB	<=7.0	>=20.0*	g/dL	* Does not include newborn infants.
HCT	<=20.0		%	Only if HGB is not reported
PLT	<=20	>=1,000	10e9/L	Critical High is called back on inpatients on the first occurrence within the current admission
CSF TNC		>=200	Cu mm	