



St. Michael's

DEPARTMENT OF LABORATORY MEDICINE
DIVISION OF HEMATOPATHOLOGY

Document Name: CBC Reference Intervals
Document #: 53888
Status: Current

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CBC REFERENCE INTERVALS

Purpose

A reference range or reference interval is the range of values for a physiologic measurement in healthy persons (for example, the number of platelets or lymphocytes in the blood. It is a basis for comparison (a frame of reference) for a physician or other health professional to interpret a set of test results for a particular patient.

The standard definition of a reference range (usually referred to if not otherwise specified) originates in what is most prevalent in a reference group taken from the population.

AGE	RETIC X 10E ⁹ /L	WBC X 10E ⁹ /L	NEUT X 10E ⁹ /L	LYMPH X 10E ⁹ /L	MONO X 10E ⁹ /L	EOS X 10E ⁹ /L	BASO X 10E ⁹ /L
*0-24 Hours	200-300	9.0-30.0	6.0-26.0	2.0-11.0	0.4-3.1	0.02-0.85	0.0-0.6
*2-6 Days	15-250	9.0-30.0	6.0-26.0	2.0-11.0	0.4-3.1	0.02-0.85	0.0-0.6
*7-13 Days	5-50	5.0-21.0	1.5-10.0	2.0-17.0	0.3-2.7	0.07-1.10	0.0-0.2
*14-29 Days	5-50	5.0-20.0	1.0-9.5	2.0-17.0	0.2-2.4	0.07-1.00	0.0-0.2
*30-59 Days	5-100	5.0-20.0	1.0-9.5	2.0-17.0	0.2-2.4	0.07-1.00	0.0-0.2
*60-89 Days	5-150	5.0-20.0	1.0-9.5	2.0-17.0	0.2-2.4	0.07-1.0	0.0-0.2
*90-179 Days	5-250	5.0-15.0	1.5-8.5	4.0-10.5	0.05-1.1	0.05-0.70	0.0-0.2
*180-364 Days	10-100	5.0-15.0	1.5-8.5	4.0-10.5	0.05-1.1	0.05-0.70	0.0-0.2
*1-4 Years	10-100	5.0-12.0	1.5-8.5	2.0-8.0	0.05-0.8	0.02-0.50	0.0-0.2
*5-9 Years	10-100	4.0-10.0	1.5-8.0	1.5-7.0	0.05-0.8	0.02-0.50	0.0-0.2
*10-13 Years	10-100	4.0-10.0	2.0-7.5	1.5-4.0	0.05-0.8	0.02-0.50	0.0-0.2
14-99 Years (M)	38-116	4.0-11.0	2.0-6.3	1.0-3.2	0.2-0.8	0.04-0.40	0.0-0.1
14-99 Years (F)	38-116	4.0-11.0	2.0-6.3	1.0-3.2	0.2-0.8	0.04-0.40	0.0-0.1

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AGE	RBC 10 ¹² /L	HGB g/L	HCT L/L	MCV fl	MCH pg	MCHC L/L	PLT 10 ⁹ /L
*0-24 Hrs	3.50-6.00	150-220	0.460-0.700	98-118	24-34	320-360	140-400
*2-6 days	3.50-6.00	150-220	0.460-0.700	98-118	24-34	320-360	140-400
*7-13 days	3.50-6.00	140-200	0.400-0.650	88-126	24-34	320-360	140-400
*14-29 days	3.50-6.00	140-200	0.400-0.650	86-124	24-34	320-360	140-400
*30-59 days	3.50-5.50	115-180	0.350-0.540	85-123	24-34	320-360	140-400
*60-89 days	3.50-5.50	90-135	0.270-0.400	77-115	24-34	320-360	140-400
*90-179 days	3.50-5.00	100-140	0.300-0.420	74-108	24-31	320-360	140-400
*180-364 days	3.50-5.00	100-140	0.300-0.420	74-108	24-31	320-360	140-400
*1-4 Years	4.00-5.00	110-140	0.350-0.420	70-86	24-31	320-360	140-400
*5 Years	4.50-5.50	120-160	0.360-0.480	70-86	24-31	320-360	140-400
*6-12 Years	4.50-5.50	120-160	0.360-0.480	77-96	24-31	320-360	140-400
*13 Years	4.50-5.50	120-160	0.360-0.480	80-100	24-31	320-360	140-400
14-99 Year (M)	4.30-5.60	130-170	0.380-0.480	82-97	27-32	320-360	140-400
14-99 Year (F)	3.80-5.20	115-155	0.370-0.480	82-97	27-32	320-360	140-400

ABS IG	0.0 – 0.07 x10E ⁹ /L age > 10 yr 0.0 – 0.04 x 10E ⁹ /L age ≤ 10 yr
IRF (M)	2.3 – 13.4 %
IRF (F)	3.0 – 15.9 %
IPF %	1.2 - 8.7 %
RET HE	29.3 - 35.8 pg

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References

* Sick Children's Hospital –Hematology Department, Toronto

[Sysmex Automated Hematology analyzer/Transport units XN series \(for XN-9000 system\)
Instructions for Use, North American Edition, Sysmex Corporation, Kobe Japan, November 2012](#)

Current IQMH Requirements

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