

Te Whatu Ora Health New Zealand Waikato	Type: <b>Procedure</b>	Document Reference: <b>HEM-2597.01</b>	Manual Classification: <b>Microscopy</b>
Title: <b>CBC reference intervals</b>			Effective Date: <b>14.11.2024</b>
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Age	RCC x10E12/L		Hb (Female) g/L		Hb (Male) g/L		HCT(Female) Ratio		HCT (Male) Ratio		MCV fl		MCH pg		RDW %		Platelets x10E9/L		Retic x10E9/L	
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Cord	3.53	5.52	124	192	124	192	0.37	0.56	0.37	0.56	99	119	32	39	15.2	19.0	150	400	70	250
1-6 Day	4.0	6.6	145	225	145	225	0.45	0.67	0.45	0.67	95	121	26	35	13.2	18.0	150	400	70	250
7-13	3.6	5.2	135	215	135	215	0.42	0.66	0.42	0.66	88	126	26	35	13.2	18.0	150	400	10	100
14-29	3.0	5.4	125	205	125	205	0.39	0.63	0.39	0.63	86	124	26	35	13.2	18.0	150	400	10	100
1 m	2.9	4.8	93	158	93	158	0.27	0.46	0.27	0.46	89	100	28	34	13.2	17.5	150	650	10	100
2-3 m	3.3	4.8	97	130	97	130	0.29	0.38	0.29	0.38	72	91	24	32	11.9	16.2	150	650	10	100
4-5 m	4.0	5.3	105	136	105	136	0.31	0.40	0.31	0.40	69	84	22	29	12.0	16.0	150	575	10	100
6-7 m	4.0	5.3	105	136	105	136	0.31	0.40	0.31	0.40	69	84	22	29	12.0	16.0	150	575	10	100
8-9 m	4.0	5.3	105	136	105	136	0.31	0.40	0.31	0.40	69	84	22	29	12.0	16.0	150	575	10	100
10-11 m	4.0	5.3	105	136	105	136	0.31	0.40	0.31	0.40	69	84	22	29	12.0	16.0	150	575	10	100
1 year	4.0	5.4	105	140	105	140	0.32	0.41	0.32	0.41	70	86	23	29	12.0	15.5	150	500	10	100
2 years	4.0	5.4	105	140	105	140	0.32	0.41	0.32	0.41	70	86	23	29	12.0	15.5	150	500	10	100
3 years	4.0	5.4	105	140	105	140	0.32	0.41	0.32	0.41	70	86	23	29	12.0	15.5	150	500	10	100
4 years	4.1	5.4	113	145	113	145	0.33	0.42	0.33	0.42	74	87	24	29	12.0	14.5	150	475	10	100
5 years	4.1	5.4	113	145	113	145	0.33	0.42	0.33	0.42	74	87	24	29	12.0	14.5	150	475	10	100
6 years	4.1	5.4	113	145	113	145	0.33	0.42	0.33	0.42	74	87	24	29	12.0	14.5	150	475	10	100
7 years	4.1	5.4	113	145	113	145	0.33	0.42	0.33	0.42	74	87	24	29	12.0	14.5	150	475	10	100
8 years	4.15	5.4	115	145	115	145	0.35	0.43	0.35	0.43	75	90	24	30	12.0	14.5	150	425	10	100
9 years	4.15	5.4	115	145	115	145	0.35	0.43	0.35	0.43	75	90	24	30	12.0	14.5	150	425	10	100
10 years	4.2	5.6	115	145	115	145	0.35	0.43	0.35	0.43	75	90	24	30	12.0	14.5	150	425	10	100
11 years	4.2	5.6	115	145	115	145	0.35	0.43	0.35	0.43	75	90	24	30	12.0	14.5	150	425	10	100
12 years	4.2	5.6	115	145	115	145	0.35	0.43	0.35	0.43	75	90	24	30	12.0	14.5	150	425	10	100
13 years	4.4	5.7	115	150	125	160	0.35	0.44	0.37	0.47	78	93	25	31	12.0	15.0	150	400	10	100
14 years	4.4	5.7	115	150	125	160	0.35	0.44	0.37	0.47	78	93	25	31	12.0	15.0	150	400	10	100
15 years	4.4	5.7	115	150	125	160	0.35	0.44	0.37	0.47	78	93	25	31	12.0	15.0	150	400	10	100
<b>16+Adult</b>	<b>4.3 M</b> <b>3.6 F</b>	<b>6.0 M</b> <b>5.6F</b>	<b>115</b>	<b>155</b>	<b>130</b>	<b>175</b>	<b>0.35</b>	<b>0.46</b>	<b>0.40</b>	<b>0.52</b>	<b>80</b>	<b>99</b>	<b>27</b>	<b>33</b>	<b>12.0</b>	<b>15.0</b>	<b>150</b>	<b>400</b>	<b>10</b>	<b>100</b>

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Age	WCC x10E9/L		Immature Granulocytes x10E9/L		Neutrophils x10E9/L		Lymphs x10E9/L		Monocytes x10E9/L		Eosinophils x10E9/L		Basophils x10E9/L	
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Cord	7.3	25.8	0.00	0.06	3.3	13.0	2.1	10.7	0.7	2.7	0.0	1.0	0.0	0.2
1-6 Day	9.4	34.0	0.00	0.06	5.0	26.4	2.0	11.5	0.5	1.7	0.2	0.7	0.0	0.2
7-13 d	5.0	21.0	0.00	0.06	6.5	16.5	2.0	17.0	0.3	1.3	0.2	0.8	0.0	0.2
14-29 d	5.0	20.0	0.00	0.06	1.0	13.0	2.0	17.0	0.5	1.8	0.2	0.6	0.0	0.2
1 m	5.8	13.0	0.00	0.06	0.5	3.9	3.7	8.0	0.5	1.5	0.0	0.9	0.0	0.2
2-3 m	6.6	15.0	0.00	0.06	0.8	4.7	4.2	10.6	0.4	1.3	0.0	0.9	0.0	0.2
4-5 m	6.4	17.0	0.00	0.06	0.9	5.9	3.5	11.5	0.3	1.5	0.0	0.9	0.0	0.2
6-7 m	6.4	17.0	0.00	0.06	0.9	5.9	3.5	11.5	0.3	1.5	0.0	0.9	0.0	0.2
8-9 m	6.4	17.0	0.00	0.06	0.9	5.9	3.5	11.5	0.3	1.5	0.0	0.9	0.0	0.2
10-11 m	6.4	17.0	0.00	0.06	0.9	5.9	3.5	11.5	0.3	1.5	0.0	0.9	0.0	0.2
1 year	5.0	14.5	0.00	0.06	1.0	7.0	2.0	8.0	0.3	1.3	0.0	0.9	0.0	0.2
2 years	5.0	14.5	0.00	0.06	1.0	7.0	2.0	8.0	0.3	1.3	0.0	0.9	0.0	0.2
3 years	5.0	14.5	0.00	0.06	1.0	7.0	2.0	8.0	0.3	1.3	0.0	0.9	0.0	0.2
4 years	4.5	12.0	0.00	0.06	1.5	8.0	1.4	5.7	0.3	1.0	0.0	1.0	0.0	0.2
5 years	4.5	12.0	0.00	0.06	1.5	8.0	1.4	5.7	0.3	1.0	0.0	1.0	0.0	0.2
6 years	4.5	12.0	0.00	0.06	1.5	8.0	1.4	5.7	0.3	1.0	0.0	1.0	0.0	0.2
7 years	4.5	12.0	0.00	0.06	1.5	8.0	1.4	5.7	0.3	1.0	0.0	1.0	0.0	0.2
8 years	4.3	12.0	0.00	0.06	1.5	7.0	1.4	4.5	0.3	0.9	0.0	0.9	0.0	0.2
9 years	4.3	12.0	0.00	0.06	1.5	7.0	1.4	4.5	0.3	0.9	0.0	0.9	0.0	0.2
10 years	4.3	12.0	0.00	0.06	1.5	7.0	1.4	4.5	0.3	0.9	0.0	0.9	0.0	0.2
11 years	4.3	12.0	0.00	0.06	1.5	7.0	1.4	4.5	0.3	0.9	0.0	0.9	0.0	0.2
12 years	4.3	12.0	0.00	0.06	1.5	7.0	1.4	4.5	0.3	0.9	0.0	0.9	0.0	0.2
13 years	4.2	10.0	0.00	0.06	1.8	7.0	1.4	4.0	0.3	0.9	0.0	0.8	0.0	0.2
14 years	4.2	10.0	0.00	0.06	1.8	7.0	1.4	4.0	0.3	0.9	0.0	0.8	0.0	0.2
15 years	4.2	10.0	0.00	0.06	1.8	7.0	1.4	4.0	0.3	0.9	0.0	0.8	0.0	0.2
<b>16+Adult</b>	<b>4.0</b>	<b>11.0</b>	<b>0.00</b>	<b>0.06</b>	<b>1.9</b>	<b>7.5</b>	<b>1.0</b>	<b>4.0</b>	<b>0.2</b>	<b>1.0</b>	<b>0.0</b>	<b>0.5</b>	<b>0.0</b>	<b>0.2</b>
<b>Antenatal</b>	<b>5.0</b>	<b>14.5</b>	<b>0.00</b>	<b>0.06</b>	<b>1.9</b>	<b>11.0</b>	<b>1.0</b>	<b>4.0</b>	<b>0.2</b>	<b>1.0</b>	<b>0.0</b>	<b>0.5</b>	<b>0.0</b>	<b>0.2</b>

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