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Birmingham & Solihull Pathology Services

Haematology Department

Reference Ranges for Neonates and Paediatrics

Full Blood Count

Courtesy of Great Ormond Street Hospital London

WBC (x10⁹/l)

0 – 7 days	10.0 – 26.0
8 days – 1Y	6.0 – 18.0
1Y – 8Y	5.0 – 15.0
8Y – 13Y	4.5 – 13.5
13Y – 19Y	4.0 – 11.0

RBC (x10¹²/l)

0 – 2days	3.9 – 5.3
2d – 4d	4.0 – 6.6
4d – 8d	3.9 – 6.3
8d – 3weeks	3.6 – 6.2
3w – 5w	3.0 – 5.4
5w – 9w	2.7 – 4.9
9w – 14w	3.1 – 4.5
14w – 3Y	3.7 – 5.3
3y – 7Y	3.9 – 5.3
7Y – 13Y	4.0 – 5.2
13Y – 19Y	Male 4.5 – 5.3 Female 4.1 – 5.1

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Full Blood Count

Courtesy of Great Ormond Street Hospital London

Hb (g/l)

0 – 2 days	135 – 195	
2d – 4d	145 – 225	
4d – 8d	135 – 215	
8d – 3 weeks	125 – 205	
3w – 5w	100 – 180	
5w – 9w	90 – 140	
9w – 2 years	100 – 135	
2Y – 3Y	105 – 135	
3Y – 7Y	115 – 145	
7Y – 13Y	115 – 155	
13Y – 19Y	Male 130 – 160	Female 120 – 160

HCT

0 – 1 day	0.42 – 0.60	
1d – 4d	0.45 – 0.67	
4d – 8d	0.42 – 0.66	
8d – 3weeks	0.39 – 0.63	
3w – 5w	0.31 – 0.55	
5w – 7w	0.34 – 0.40	
7w – 9w	0.28 – 0.42	
9w – 14w	0.29 – 0.41	
14w – 3 years	0.33 – 0.39	
3Y – 13Y	0.35 – 0.45	
13Y – 19Y	Male 0.37 – 0.49	Female 0.36 – 0.46

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Full Blood Count

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MCV (fl)

MCH (pg)

0 – 2 days	98 – 118	0 – 4 days	31 - 37
2d – 4d	95 – 121	4d – 5 weeks	28 - 40
4d – 8d	88 – 126	5w – 9w	26 - 34
8d – 3 weeks	86 – 124	9w – 14w	25 - 35
3w – 5w	85 – 123	14w – 3 years	23 - 31
5w – 9w	77 – 115	3Y – 7Y	24 - 30
9w – 14w	74 – 118	7Y – 13Y	25 - 33
14w – 3 years	70 – 86	13Y – 19Y	25 - 35
3Y – 7Y	75 – 87		
7Y – 13Y	77 – 94		
13Y – 19Y	78 – 98		

WBC Differential ($10^9/l$)

	Neuts	Lymphs	Monos	Eos	Baso
0 – 2 years	1.0 – 8.5	3.0 – 13.5	0.3 – 1.5	0.1 – 0.3	0 – 0.2
2Y – 6Y	1.5 – 8.5	2.0 – 9.5	0.3 – 1.5	0.3 – 0.8	0 – 0.2
6Y – 12Y	1.5 – 8.0	1.5 – 7.0	0.1 – 0.8	0.1 – 0.8	0 – 0.2
12Y – 16Y	1.8 – 8.0	1.5 – 5.2	0.1 – 0.8	0.1 – 0.8	0 – 0.2
16Y – 19Y	2.5 – 7.5	1.5 – 4.0	0.2 – 0.8	0.04 – 0.44	0.02 – 0.1

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Reference Ranges for Neonates and Paediatrics

Clotting Screen

	15 Days–4 Weeks	1–5 Months	6–11 Months	1–5 Years	6–10 Years	11–17 Years
Prothrombin Time (PT)	9.5-12.6 (11.2)	9.7-12.8 (11.0)	9.8-13.0 (11.8)	9.9-13.4 (11.3)	10-14.6 (11.7)	10.0-14.1 (11.8)
Activated Partial Thromboplastin Time (APTT)	27.6-45.6 (35.4)	24.8-40.7 (33.5)	25.1-40.7 (32.4)	24.0-39.2 (31.6)	26.9-38.7 (31.6)	24.6-38.4 (31.0)
Fibrinogen C (Clauss)	1.3-3.0 (2.4)	1.4 – 4.3 (2.1)	1.48-3.67 (2.3)	1.64-4.97 (2.6)	1.71-5.37 (2.76)	1.68-5.29 (2.48)

Courtesy of Werfen – Optimizing Paediatric Haemostasis Testing 2017, based on ACL TOP Hemostasis Testing Systems