

**BLOOD SCIENCES
DEPARTMENT OF HAEMATOLOGY**

Title of Document: Reference Ranges for FBC
Q Pulse Reference N^o: HA/WE/003
Version N^o: 5
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Children's Reference Ranges for Routine Haematology Tests

| Age | Hb (g/L) | RBC (x10 ¹² /l) | Hct | Platelets (x10 ⁹ /l) | WBC (x10 ⁹ /l) | Neutrophils (x10 ⁹ /l) | Lymphocytes (x10 ⁹ /l) | Monocytes (x10 ⁹ /l) | Basophils (x10 ⁹ /l) | Eosinophils (x10 ⁹ /l) | Reticulocytes (x10 ⁹ /l) |
|--------------------|----------|----------------------------|-----------|---------------------------------|---------------------------|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|-----------------------------------|-------------------------------------|
| Birth | 140-240 | 3.7-6.5 | 0.47-0.75 | | 10.0-26.0 | 2.7-14.4 | 2.0-8.0 | 0-2.0 | <0.21 | <0.81 | 120-400 |
| 2 weeks | 134-198 | 3.9-5.9 | 0.41-0.65 | | 6.0-21.0 | 1.5-5.4 | 2.8-9.1 | 0.1-1.7 | <0.21 | <0.91 | 120-400 |
| 4 weeks | 134-198 | 3.2-5.9 | 0.41-0.65 | | 6.0-21.0 | 1.5-5.4 | 2.8-9.1 | 0.1-1.7 | <0.21 | <0.91 | 50-350 |
| 2-6 months | 94-130 | 3.1-4.3 | 0.28-0.42 | 150-400 | 5.0-15.0 | 1.0-5.0 | 4.0-10.0 | 0.4-1.2 | <0.21 | <0.81 | 40-100 |
| 6 months to 1 year | 111-141 | 4.1-5.3 | 0.33-0.41 | at all ages | 6.0-17.5 | 1.0-8.5 | 4.0-12.0 | 0.2-1.0 | <0.21 | <0.81 | 40-100 |
| 1-6 years | 115-140 | 3.9-5.3 | 0.34-0.40 | | 5.0-17.0 | 1.0-8.5 | 1.5-9.5 | 0.2-1.0 | <0.21 | <0.81 | 30-100 |
| 6-12 years | 115-155 | 4.0-5.2 | 0.35-0.40 | | 4.5-14.5 | 1.0-8.0 | 1.5-7.0 | 0.2-1.0 | <0.21 | <1.01 | 30-100 |
| 12-18 yrs Female | 120-160 | 4.1-5.1 | 0.36-0.46 | | 4.5-13.0 | 1.5-8.0 | 1.1-4.5 | 0.2-1.0 | <0.21 | <0.81 | 50-100 |
| 12 – 18 yrs Male | 130-170 | 4.5-5.3 | 0.37-0.49 | | 4.5-13.0 | 1.5-8.0 | 1.1-4.5 | 0.2-1.0 | <0.21 | <0.81 | 50-100 |

DERIVED RBC VALUES

| Age Group (y) | MCV (fl) | MCH (pg) | MCHC (g/L) |
|---------------|----------|-----------|------------|
| 1 | 72-84 | 25.0-29.0 | 320-360 |
| 2 | 71-83 | 23.1-28.2 | 320-359 |
| 3 | 74-87 | 24.8-28.9 | 313-352 |
| 4 | 71-85 | 23.4-29.1 | 319-356 |
| 5 | 73-87 | 24.0-30.0 | 320-348 |
| 6 | 74-91 | 24.5-29.6 | 323-360 |
| 7 | 73-87 | 23.6-31.0 | 319-369 |
| 8 | 78-97 | 26.0-29.4 | 327-358 |
| 9 | 73-89 | 25.3-29.8 | 323-361 |
| 10 | 76-88 | 24.9-30.2 | 317-355 |
| 11 | 77-95 | 25.0-33.0 | 310-370 |
| >12 | 80-100 | 27.0-32.0 | 310-350 |