

# Haematology CBC Reference Intervals 2017

(Pathology Associates - Pathlab BOP, Pathlab Waikato, Pathlab Whakatane and Laboratory Services Rotorua)

| Parameter<br>Unit<br>Age | WCC                   |       | Hb (Female) |       | Hb (Male) |       | RBC (Female)           |       | RBC (Male)             |       | HCT (Female) |       | HCT (Male) |       | MCV   |       | MCH   |       | MCHC  |       | RDW   |       | Platelets             |       | Retic                 |       |
|--------------------------|-----------------------|-------|-------------|-------|-----------|-------|------------------------|-------|------------------------|-------|--------------|-------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------|-------|-----------------------|-------|
|                          | x 10 <sup>9</sup> / L |       | g / L       |       | g / L     |       | x 10 <sup>12</sup> / L |       | x 10 <sup>12</sup> / L |       | L / L        |       | L / L      |       | fL    |       | pg    |       |       |       |       |       | x 10 <sup>9</sup> / L |       | x 10 <sup>9</sup> / L |       |
|                          | Lower                 | Upper | Lower       | Upper | Lower     | Upper | Lower                  | Upper | Lower                  | Upper | Lower        | Upper | Lower      | Upper | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper | Lower                 | Upper | Lower                 | Upper |
| Cord                     | 7.3                   | 25.8  | 124         | 192   | 124       | 192   | 3.53                   | 5.52  | 3.53                   | 5.52  | 0.37         | 0.56  | 0.37       | 0.56  | 99    | 119   | 32    | 39    | 305   | 345   | 15.0  | 19.0  | 150                   | 400   |                       |       |
| 1-6 Day                  | 9.4                   | 34.0  | 145         | 225   | 145       | 225   | 4.00                   | 6.60  | 4.00                   | 6.60  | 0.45         | 0.67  | 0.45       | 0.67  | 95    | 121   | 26    | 35    | 310   | 350   | 14.5  | 18.5  | 150                   | 400   |                       |       |
| 7-13 Day                 | 5.0                   | 21.0  | 135         | 215   | 135       | 215   | 3.90                   | 6.30  | 3.90                   | 6.30  | 0.42         | 0.66  | 0.42       | 0.66  | 88    | 126   | 26    | 35    | 305   | 355   | 14.5  | 18.5  | 150                   | 400   |                       |       |
| 14-29 Day                | 5.0                   | 20.0  | 125         | 205   | 125       | 205   | 3.60                   | 6.20  | 3.60                   | 6.20  | 0.39         | 0.63  | 0.39       | 0.63  | 86    | 124   | 26    | 35    | 305   | 355   | 14.5  | 18.5  | 150                   | 400   |                       |       |
| 1m                       | 5.8                   | 13.0  | 93          | 158   | 93        | 158   | 2.90                   | 4.80  | 2.90                   | 4.80  | 0.27         | 0.46  | 0.27       | 0.46  | 89    | 100   | 28    | 34    | 324   | 364   | 13.0  | 17.5  | 150                   | 650   |                       |       |
| 2-3m                     | 6.6                   | 15.0  | 97          | 130   | 97        | 130   | 3.30                   | 4.80  | 3.30                   | 4.80  | 0.29         | 0.38  | 0.29       | 0.38  | 72    | 91    | 24    | 32    | 323   | 361   | 11.5  | 17.5  | 150                   | 650   |                       |       |
| 4-5 m                    | 6.4                   | 17.0  | 105         | 136   | 105       | 136   | 4.00                   | 5.30  | 4.00                   | 5.30  | 0.31         | 0.40  | 0.31       | 0.40  | 69    | 84    | 22    | 29    | 315   | 353   | 11.5  | 16.0  | 150                   | 575   |                       |       |
| 6-7m                     | 6.4                   | 17.0  | 105         | 136   | 105       | 136   | 4.00                   | 5.30  | 4.00                   | 5.30  | 0.31         | 0.40  | 0.31       | 0.40  | 69    | 84    | 22    | 29    | 315   | 353   | 11.5  | 16.0  | 150                   | 575   |                       |       |
| 8-9m                     | 6.4                   | 17.0  | 105         | 136   | 105       | 136   | 4.00                   | 5.30  | 4.00                   | 5.30  | 0.31         | 0.40  | 0.31       | 0.40  | 69    | 84    | 22    | 29    | 315   | 353   | 11.5  | 16.0  | 150                   | 575   |                       |       |
| 10-11m                   | 6.4                   | 17.0  | 105         | 136   | 105       | 136   | 4.00                   | 5.30  | 4.00                   | 5.30  | 0.31         | 0.40  | 0.31       | 0.40  | 69    | 84    | 22    | 29    | 315   | 353   | 11.5  | 16.0  | 150                   | 575   |                       |       |
| 1 year                   | 5.0                   | 14.5  | 105         | 140   | 105       | 140   | 4.00                   | 5.40  | 4.00                   | 5.40  | 0.32         | 0.41  | 0.32       | 0.41  | 70    | 86    | 23    | 29    | 317   | 353   | 11.5  | 16.0  | 150                   | 500   |                       |       |
| 2 years                  | 5.0                   | 14.5  | 105         | 140   | 105       | 140   | 4.00                   | 5.40  | 4.00                   | 5.40  | 0.32         | 0.41  | 0.32       | 0.41  | 70    | 86    | 23    | 29    | 317   | 353   | 11.5  | 16.0  | 150                   | 500   |                       |       |
| 3 years                  | 5.0                   | 14.5  | 105         | 140   | 105       | 140   | 4.00                   | 5.40  | 4.00                   | 5.40  | 0.32         | 0.41  | 0.32       | 0.41  | 70    | 86    | 23    | 29    | 317   | 353   | 11.5  | 16.0  | 150                   | 500   |                       |       |
| 4 years                  | 4.5                   | 12.0  | 113         | 145   | 113       | 145   | 4.10                   | 5.40  | 4.10                   | 5.40  | 0.33         | 0.42  | 0.33       | 0.42  | 74    | 87    | 24    | 29    | 319   | 353   | 11.5  | 14.5  | 150                   | 475   |                       |       |
| 5 years                  | 4.5                   | 12.0  | 113         | 145   | 113       | 145   | 4.10                   | 5.40  | 4.10                   | 5.40  | 0.33         | 0.42  | 0.33       | 0.42  | 74    | 87    | 24    | 29    | 319   | 353   | 11.5  | 15.0  | 150                   | 475   |                       |       |
| 6 years                  | 4.5                   | 12.0  | 113         | 145   | 113       | 145   | 4.10                   | 5.40  | 4.10                   | 5.40  | 0.33         | 0.42  | 0.33       | 0.42  | 74    | 87    | 24    | 29    | 319   | 353   | 11.5  | 15.0  | 150                   | 475   |                       |       |
| 7 years                  | 4.5                   | 12.0  | 113         | 145   | 113       | 145   | 4.10                   | 5.40  | 4.10                   | 5.40  | 0.33         | 0.42  | 0.33       | 0.42  | 74    | 87    | 24    | 29    | 319   | 353   | 11.5  | 15.0  | 150                   | 475   |                       |       |
| 8 years                  | 4.3                   | 12.0  | 115         | 145   | 115       | 145   | 4.15                   | 5.40  | 4.15                   | 5.40  | 0.35         | 0.43  | 0.35       | 0.43  | 75    | 90    | 24    | 30    | 315   | 350   | 11.5  | 15.0  | 150                   | 425   |                       |       |
| 9 years                  | 4.3                   | 12.0  | 115         | 145   | 115       | 145   | 4.15                   | 5.40  | 4.15                   | 5.40  | 0.35         | 0.43  | 0.35       | 0.43  | 75    | 90    | 24    | 30    | 315   | 350   | 11.5  | 15.0  | 150                   | 425   |                       |       |
| 10 years                 | 4.3                   | 12.0  | 115         | 145   | 115       | 145   | 4.20                   | 5.60  | 4.20                   | 5.60  | 0.35         | 0.43  | 0.35       | 0.43  | 75    | 90    | 24    | 30    | 315   | 350   | 11.5  | 15.0  | 150                   | 425   |                       |       |
| 11 years                 | 4.3                   | 12.0  | 115         | 145   | 115       | 145   | 4.20                   | 5.60  | 4.20                   | 5.60  | 0.35         | 0.43  | 0.35       | 0.43  | 75    | 90    | 24    | 30    | 315   | 350   | 11.5  | 15.0  | 150                   | 425   |                       |       |
| 12 years                 | 4.3                   | 12.0  | 115         | 145   | 115       | 145   | 4.20                   | 5.60  | 4.20                   | 5.60  | 0.35         | 0.43  | 0.35       | 0.43  | 75    | 90    | 24    | 30    | 315   | 350   | 11.5  | 15.0  | 150                   | 425   |                       |       |
| 13 years                 | 4.2                   | 10.0  | 115         | 150   | 125       | 160   | 4.00                   | 5.35  | 4.40                   | 5.70  | 0.35         | 0.44  | 0.37       | 0.47  | 78    | 93    | 25    | 31    | 315   | 350   | 11.5  | 15.0  | 150                   | 400   |                       |       |
| 14 years                 | 4.2                   | 10.0  | 115         | 150   | 125       | 160   | 4.00                   | 5.35  | 4.40                   | 5.70  | 0.35         | 0.44  | 0.37       | 0.47  | 78    | 93    | 25    | 31    | 315   | 350   | 11.5  | 15.0  | 150                   | 400   |                       |       |
| 15 years                 | 4.2                   | 10.0  | 115         | 150   | 125       | 160   | 4.00                   | 5.35  | 4.40                   | 5.70  | 0.35         | 0.44  | 0.37       | 0.47  | 78    | 93    | 25    | 31    | 315   | 350   | 11.5  | 15.0  | 150                   | 400   |                       |       |
| 16+ Adult                | 4.0                   | 11.0  | 115         | 155   | 130       | 175   | 3.60                   | 5.60  | 4.30                   | 6.00  | 0.35         | 0.46  | 0.40       | 0.52  | 80    | 99    | 27    | 33    | 320   | 360   | 11.5  | 15.0  | 150                   | 400   | 10                    | 100   |
| Antenatal                | 5.0                   | 14.5  | 100         | 145   |           |       | 3.40                   | 5.00  |                        |       | 0.30         | 0.44  |            |       | 80    | 99    | 27    | 33    | 320   | 360   | 11.5  | 15.0  | 150                   | 400   |                       |       |

Alan Neal

*Alan Neal*



Lead of Speciality Haematology / Quality Manager | p +64 7 8580795 Ext 6824 | f +64 7 348 0793 | PO Box 9115 | Hamilton | 3240

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# Haematology CBC Reference Intervals 2017

(Pathology Associates - Pathlab BOP, Pathlab Waikato, Pathlab Whakatane and Laboratory Services Rotorua)

| Parameter | Neutrophils           |       | Lymphs                |       | Monocytes             |       | Eosinophils           |       | Basophils             |       |
|-----------|-----------------------|-------|-----------------------|-------|-----------------------|-------|-----------------------|-------|-----------------------|-------|
| Unit      | x 10 <sup>9</sup> / L |       | x 10 <sup>9</sup> / L |       | x 10 <sup>9</sup> / L |       | x 10 <sup>9</sup> / L |       | x 10 <sup>9</sup> / L |       |
| Age       | Lower                 | Upper | Lower                 | Upper | Lower                 | Upper | Lower                 | Upper | Lower                 | Upper |
| Cord      | 3.3                   | 13.0  | 2.1                   | 10.7  | 0.7                   | 2.7   | 0.0                   | 1.0   | 0.0                   | 0.2   |
| 1-6 Day   | 5.0                   | 26.4  | 2.0                   | 11.5  | 0.5                   | 1.7   | 0.2                   | 0.7   | 0.0                   | 0.2   |
| 7-13 Day  | 6.5                   | 16.5  | 2.0                   | 17.0  | 0.3                   | 1.3   | 0.2                   | 0.8   | 0.0                   | 0.2   |
| 14-29 Day | 1.0                   | 13.0  | 2.0                   | 17.0  | 0.5                   | 1.8   | 0.2                   | 0.6   | 0.0                   | 0.2   |
| 1m        | 0.5                   | 3.9   | 3.7                   | 8.0   | 0.5                   | 1.5   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 2-3m      | 0.8                   | 4.7   | 4.2                   | 10.6  | 0.4                   | 1.3   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 4-5 m     | 0.9                   | 5.9   | 3.5                   | 11.5  | 0.3                   | 1.5   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 6-7m      | 0.9                   | 5.9   | 3.5                   | 11.5  | 0.3                   | 1.5   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 8-9m      | 0.9                   | 5.9   | 3.5                   | 11.5  | 0.3                   | 1.5   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 10-11m    | 0.9                   | 5.9   | 3.5                   | 11.5  | 0.3                   | 1.5   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 1 year    | 1.0                   | 7.0   | 2.0                   | 8.0   | 0.3                   | 1.3   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 2 years   | 1.0                   | 7.0   | 2.0                   | 8.0   | 0.3                   | 1.3   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 3 years   | 1.0                   | 7.0   | 2.0                   | 8.0   | 0.3                   | 1.3   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 4 years   | 1.5                   | 8.0   | 1.4                   | 5.7   | 0.3                   | 1.0   | 0.0                   | 1.0   | 0.0                   | 0.2   |
| 5 years   | 1.5                   | 8.0   | 1.4                   | 5.7   | 0.3                   | 1.0   | 0.0                   | 1.0   | 0.0                   | 0.2   |
| 6 years   | 1.5                   | 8.0   | 1.4                   | 5.7   | 0.3                   | 1.0   | 0.0                   | 1.0   | 0.0                   | 0.2   |
| 7 years   | 1.5                   | 8.0   | 1.4                   | 5.7   | 0.3                   | 1.0   | 0.0                   | 1.0   | 0.0                   | 0.2   |
| 8 years   | 1.5                   | 7.0   | 1.4                   | 4.5   | 0.3                   | 0.9   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 9 years   | 1.5                   | 7.0   | 1.4                   | 4.5   | 0.3                   | 0.9   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 10 years  | 1.5                   | 7.0   | 1.4                   | 4.5   | 0.3                   | 0.9   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 11 years  | 1.5                   | 7.0   | 1.4                   | 4.5   | 0.3                   | 0.9   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 12 years  | 1.5                   | 7.0   | 1.4                   | 4.5   | 0.3                   | 0.9   | 0.0                   | 0.9   | 0.0                   | 0.2   |
| 13 years  | 1.8                   | 7.0   | 1.4                   | 4.0   | 0.3                   | 0.9   | 0.0                   | 0.8   | 0.0                   | 0.2   |
| 14 years  | 1.8                   | 7.0   | 1.4                   | 4.0   | 0.3                   | 0.9   | 0.0                   | 0.8   | 0.0                   | 0.2   |
| 15 years  | 1.8                   | 7.0   | 1.4                   | 4.0   | 0.3                   | 0.9   | 0.0                   | 0.8   | 0.0                   | 0.2   |
| 16+ Adult | 1.9                   | 7.5   | 1.0                   | 4.0   | 0.2                   | 1.0   | 0.0                   | 0.5   | 0.0                   | 0.2   |
| Antenatal | 1.9                   | 11.0  | 1.0                   | 4.0   | 0.2                   | 1.0   | 0.0                   | 0.5   | 0.0                   | 0.2   |

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