

Canine oxyhemoglobin dissociation curve*

| PO2 (mmHg) | SO2 (%) | Oxygen content (ml/dl) | | | PO2 (mmHg) | SO2 (%) | Oxygen content (ml/dl) | | | PO2 (mmHg) | SO2 (%) | Oxygen content (ml/dl) | | |
|---------------|------------|------------------------|---------|-------|---------------|------------|------------------------|-------|-------|---------------|------------|------------------------|-------|-------|
| | | Hb** | dslvd** | total | | | Hb | dslvd | total | | | Hb | dslvd | total |
| 20 | 24.4 | 4.90 | 0.06 | 4.96 | 71 | 90.7 | 18.23 | 0.21 | 18.44 | 102 | 96.6 | 19.41 | 0.31 | 19.72 |
| 22 | 28.7 | 5.77 | 0.07 | 5.84 | 72 | 91.0 | 18.30 | 0.22 | 18.51 | 103 | 96.7 | 19.43 | 0.31 | 19.74 |
| 24 | 33.2 | 6.68 | 0.07 | 6.75 | 73 | 91.3 | 18.36 | 0.22 | 18.58 | 104 | 96.8 | 19.45 | 0.31 | 19.76 |
| 26 | 37.8 | 7.60 | 0.08 | 7.68 | 74 | 91.7 | 18.42 | 0.22 | 18.64 | 105 | 96.8 | 19.47 | 0.32 | 19.78 |
| 28 | 42.3 | 8.51 | 0.08 | 8.59 | 75 | 91.9 | 18.48 | 0.23 | 18.71 | 106 | 96.9 | 19.48 | 0.32 | 19.80 |
| 30 | 46.8 | 9.40 | 0.09 | 9.49 | 76 | 92.2 | 18.54 | 0.23 | 18.77 | 107 | 97.0 | 19.50 | 0.32 | 19.82 |
| 32 | 51.0 | 10.25 | 0.10 | 10.35 | 77 | 92.5 | 18.59 | 0.23 | 18.82 | 108 | 97.1 | 19.51 | 0.32 | 19.84 |
| 34 | 55.0 | 11.06 | 0.10 | 11.16 | 78 | 92.8 | 18.64 | 0.23 | 18.88 | 109 | 97.2 | 19.53 | 0.33 | 19.86 |
| 36 | 58.8 | 11.82 | 0.11 | 11.93 | 79 | 93.0 | 18.69 | 0.24 | 18.93 | 110 | 97.2 | 19.54 | 0.33 | 19.87 |
| 38 | 62.3 | 12.53 | 0.11 | 12.64 | 80 | 93.2 | 18.74 | 0.24 | 18.98 | 112 | 97.4 | 19.57 | 0.34 | 19.91 |
| 40 | 65.6 | 13.18 | 0.12 | 13.30 | 81 | 93.5 | 18.79 | 0.24 | 19.03 | 114 | 97.5 | 19.60 | 0.34 | 19.94 |
| 42 | 68.5 | 13.78 | 0.13 | 13.90 | 82 | 93.7 | 18.83 | 0.25 | 19.08 | 116 | 97.6 | 19.62 | 0.35 | 19.97 |
| 44 | 71.3 | 14.32 | 0.13 | 14.46 | 83 | 93.9 | 18.87 | 0.25 | 19.12 | 118 | 97.7 | 19.65 | 0.35 | 20.00 |
| 46 | 73.7 | 14.82 | 0.14 | 14.96 | 84 | 94.1 | 18.91 | 0.25 | 19.16 | 120 | 97.9 | 19.67 | 0.36 | 20.03 |
| 48 | 76.0 | 15.27 | 0.14 | 15.42 | 85 | 94.3 | 18.95 | 0.26 | 19.20 | 122 | 98.0 | 19.69 | 0.37 | 20.05 |
| 50 | 78.0 | 15.69 | 0.15 | 15.84 | 86 | 94.5 | 18.99 | 0.26 | 19.24 | 124 | 98.0 | 19.71 | 0.37 | 20.08 |
| 52 | 79.9 | 16.06 | 0.16 | 16.21 | 87 | 94.6 | 19.02 | 0.26 | 19.28 | 126 | 98.1 | 19.73 | 0.38 | 20.10 |
| 54 | 81.6 | 16.39 | 0.16 | 16.55 | 88 | 94.8 | 19.05 | 0.26 | 19.32 | 128 | 98.2 | 19.74 | 0.38 | 20.13 |
| 56 | 83.1 | 16.70 | 0.17 | 16.86 | 89 | 95.0 | 19.09 | 0.27 | 19.35 | 130 | 98.3 | 19.76 | 0.39 | 20.15 |
| 58 | 84.4 | 16.97 | 0.17 | 17.15 | 90 | 95.1 | 19.12 | 0.27 | 19.39 | 140 | 98.6 | 19.82 | 0.42 | 20.24 |
| 60 | 85.7 | 17.22 | 0.18 | 17.40 | 91 | 95.3 | 19.15 | 0.27 | 19.42 | 150 | 98.9 | 19.88 | 0.45 | 20.33 |
| 61 | 86.2 | 17.34 | 0.18 | 17.52 | 92 | 95.4 | 19.18 | 0.28 | 19.45 | 160 | 99.1 | 19.91 | 0.48 | 20.39 |
| 62 | 86.8 | 17.45 | 0.19 | 17.63 | 93 | 95.5 | 19.20 | 0.28 | 19.48 | 170 | 99.2 | 19.94 | 0.51 | 20.45 |
| 63 | 87.3 | 17.55 | 0.19 | 17.74 | 94 | 95.7 | 19.23 | 0.28 | 19.51 | 180 | 99.3 | 19.97 | 0.54 | 20.51 |
| 64 | 87.8 | 17.65 | 0.19 | 17.84 | 95 | 95.8 | 19.26 | 0.29 | 19.54 | 190 | 99.4 | 19.99 | 0.57 | 20.56 |
| 65 | 88.3 | 17.74 | 0.20 | 17.94 | 96 | 95.9 | 19.28 | 0.29 | 19.57 | 200 | 99.5 | 20.00 | 0.60 | 20.60 |
| 66 | 88.7 | 17.84 | 0.20 | 18.03 | 97 | 96.0 | 19.30 | 0.29 | 19.60 | 300 | 99.9 | 20.07 | 0.90 | 20.97 |
| 67 | 89.2 | 17.92 | 0.20 | 18.12 | 98 | 96.2 | 19.33 | 0.29 | 19.62 | 400 | 99.9 | 20.09 | 1.20 | 21.29 |
| 68 | 89.6 | 18.00 | 0.20 | 18.21 | 99 | 96.3 | 19.35 | 0.30 | 19.65 | 500 | 100.0 | 20.09 | 1.50 | 21.59 |
| 69 | 90.0 | 18.08 | 0.21 | 18.29 | 100 | 96.4 | 19.37 | 0.30 | 19.67 | 600 | 100.0 | 20.10 | 1.80 | 21.90 |
| 70 | 90.3 | 18.16 | 0.21 | 18.37 | 101 | 96.5 | 19.39 | 0.30 | 19.69 | 700 | 100.0 | 20.10 | 2.10 | 22.20 |

PO2 = partial pressure of oxygen; SO2 = hemoglobin saturation; *from Reeves, J Appl Physiol 1982;53:87

$\left(\frac{38848}{(PO_2^3 + 202 \cdot PO_2 + 1.17 \cdot PO_2^2)} + 1\right)^{-1} \cdot 100$; **Hb = oxygen bound to hemoglobin; assumes a hemoglobin concentration of 15 gm/dl (Hb x 1.34 x saturation); ***dslvd = oxygen in solution (0.003 x PO2)

Feline oxyhemoglobin dissociation curve*

| PO2 (mmHg) | SO2 (%) | Oxygen content (ml/dl) | | | PO2 (mmHg) | SO2 (%) | Oxygen content (ml/dl) | | | PO2 (mmHg) | SO2 (%) | Oxygen content (ml/dl) | | |
|------------|---------|------------------------|---------|-------|------------|---------|------------------------|-------|-------|------------|---------|------------------------|-------|-------|
| | | Hb** | dslvd** | total | | | Hb | dslvd | total | | | Hb | dslvd | total |
| 20 | 19.9 | 2.94 | 0.06 | 3.00 | 71 | 89.7 | 13.23 | 0.21 | 13.44 | 102 | 95.5 | 14.08 | 0.31 | 14.39 |
| 22 | 23.7 | 3.50 | 0.07 | 3.56 | 72 | 90.1 | 13.28 | 0.22 | 13.49 | 103 | 95.6 | 14.10 | 0.31 | 14.41 |
| 24 | 27.8 | 4.10 | 0.07 | 4.18 | 73 | 90.4 | 13.33 | 0.22 | 13.55 | 104 | 95.7 | 14.11 | 0.31 | 14.42 |
| 26 | 32.2 | 4.74 | 0.08 | 4.82 | 74 | 90.7 | 13.37 | 0.22 | 13.60 | 105 | 95.8 | 14.12 | 0.32 | 14.44 |
| 28 | 36.6 | 5.40 | 0.08 | 5.48 | 75 | 91.0 | 13.42 | 0.23 | 13.64 | 106 | 95.9 | 14.13 | 0.32 | 14.45 |
| 30 | 41.1 | 6.06 | 0.09 | 6.15 | 76 | 91.3 | 13.46 | 0.23 | 13.69 | 107 | 95.9 | 14.14 | 0.32 | 14.46 |
| 32 | 45.5 | 6.71 | 0.10 | 6.81 | 77 | 91.6 | 13.50 | 0.23 | 13.73 | 108 | 96.0 | 14.15 | 0.32 | 14.48 |
| 34 | 49.9 | 7.35 | 0.10 | 7.45 | 78 | 91.9 | 13.54 | 0.23 | 13.77 | 109 | 96.1 | 14.16 | 0.33 | 14.49 |
| 36 | 54.0 | 7.96 | 0.11 | 8.07 | 79 | 92.1 | 13.58 | 0.24 | 13.81 | 110 | 96.2 | 14.17 | 0.33 | 14.50 |
| 38 | 57.9 | 8.53 | 0.11 | 8.65 | 80 | 92.3 | 13.61 | 0.24 | 13.85 | 112 | 96.3 | 14.19 | 0.34 | 14.53 |
| 40 | 61.5 | 9.07 | 0.12 | 9.19 | 81 | 92.6 | 13.64 | 0.24 | 13.89 | 114 | 96.4 | 14.21 | 0.34 | 14.55 |
| 42 | 64.9 | 9.57 | 0.13 | 9.70 | 82 | 92.8 | 13.68 | 0.25 | 13.92 | 116 | 96.5 | 14.23 | 0.35 | 14.57 |
| 44 | 68.0 | 10.03 | 0.13 | 10.16 | 83 | 93.0 | 13.71 | 0.25 | 13.95 | 118 | 96.6 | 14.24 | 0.35 | 14.60 |
| 46 | 70.9 | 10.45 | 0.14 | 10.58 | 84 | 93.2 | 13.73 | 0.25 | 13.99 | 120 | 96.7 | 14.26 | 0.36 | 14.62 |
| 48 | 73.4 | 10.82 | 0.14 | 10.97 | 85 | 93.4 | 13.76 | 0.26 | 14.02 | 122 | 96.8 | 14.27 | 0.37 | 14.63 |
| 50 | 75.8 | 11.17 | 0.15 | 11.32 | 86 | 93.5 | 13.79 | 0.26 | 14.05 | 124 | 96.9 | 14.28 | 0.37 | 14.65 |
| 52 | 77.9 | 11.48 | 0.16 | 11.63 | 87 | 93.7 | 13.81 | 0.26 | 14.07 | 126 | 97.0 | 14.29 | 0.38 | 14.67 |
| 54 | 79.8 | 11.76 | 0.16 | 11.92 | 88 | 93.9 | 13.84 | 0.26 | 14.10 | 128 | 97.0 | 14.30 | 0.38 | 14.69 |
| 56 | 81.5 | 12.01 | 0.17 | 12.17 | 89 | 94.0 | 13.86 | 0.27 | 14.13 | 130 | 97.1 | 14.31 | 0.39 | 14.70 |
| 58 | 83.0 | 12.23 | 0.17 | 12.40 | 90 | 94.2 | 13.88 | 0.27 | 14.15 | 140 | 97.4 | 14.36 | 0.42 | 14.78 |
| 60 | 84.3 | 12.43 | 0.18 | 12.61 | 91 | 94.3 | 13.90 | 0.27 | 14.18 | 150 | 97.6 | 14.39 | 0.45 | 14.84 |
| 61 | 85.0 | 12.53 | 0.18 | 12.71 | 92 | 94.5 | 13.92 | 0.28 | 14.20 | 160 | 97.8 | 14.42 | 0.48 | 14.90 |
| 62 | 85.6 | 12.61 | 0.19 | 12.80 | 93 | 94.6 | 13.94 | 0.28 | 14.22 | 170 | 98.0 | 14.44 | 0.51 | 14.95 |
| 63 | 86.1 | 12.70 | 0.19 | 12.89 | 94 | 94.7 | 13.96 | 0.28 | 14.24 | 180 | 98.1 | 14.46 | 0.54 | 15.00 |
| 64 | 86.7 | 12.78 | 0.19 | 12.97 | 95 | 94.8 | 13.98 | 0.29 | 14.26 | 190 | 98.2 | 14.47 | 0.57 | 15.04 |
| 65 | 87.2 | 12.85 | 0.20 | 13.05 | 96 | 94.9 | 14.00 | 0.29 | 14.28 | 200 | 98.3 | 14.49 | 0.60 | 15.09 |
| 66 | 87.7 | 12.92 | 0.20 | 13.12 | 97 | 95.1 | 14.01 | 0.29 | 14.30 | 300 | 98.8 | 14.56 | 0.90 | 15.46 |
| 67 | 88.1 | 12.99 | 0.20 | 13.19 | 98 | 95.2 | 14.03 | 0.29 | 14.32 | 400 | 99.0 | 14.60 | 1.20 | 15.80 |
| 68 | 88.6 | 13.05 | 0.20 | 13.26 | 99 | 95.3 | 14.04 | 0.30 | 14.34 | 500 | 99.2 | 14.62 | 1.50 | 16.12 |
| 69 | 89.0 | 13.11 | 0.21 | 13.32 | 100 | 95.4 | 14.06 | 0.30 | 14.36 | 600 | 99.3 | 14.64 | 1.80 | 16.44 |
| 70 | 89.4 | 13.17 | 0.21 | 13.38 | 101 | 95.5 | 14.07 | 0.30 | 14.37 | 700 | 99.4 | 14.65 | 2.10 | 16.75 |

PO2 = partial pressure of oxygen; SO2 = hemoglobin saturation; *derived by iterative processing of the data of Cambier Res Vet Sci 2004;77:83.
 $100 * ((((-2554.074) * (PO2)) + ((387.8873) * (PO2)^2) + ((-15.12568) * (PO2)^3) + ((PO2)^4)) / (((-437538.2) + ((58785.11) * (PO2)) + ((245.5008) * (PO2)^2) + ((-10.18485) * (PO2)^3) + ((PO2)^4)))$; **Hb = oxygen bound to hemoglobin; assumes a hemoglobin concentration of 11 gm/dl (Hb x 1.34 x saturation);
 ***dslvd = oxygen in solution (0.003 x PO2)