## ANTHROPOMETRIC DATA

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## Excerpts from :

Gordon, Claire C. et. al 1988 Anthropometric Survey of U.S. Personnel: Summary Statistics Interim Report. March 1989.

## Buttock Height

| Centimeters | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 88.74 | Mean | 34.94 |
| 4.71 | Std Dev | 1.85 |
| 111.40 | Maximum | 43.86 |
| 71.50 | Minimum | 28.15 |
|  | Percentiles |  |
| 78.43 | $1^{\text {st }}$ | 30.88 |
| 79.71 | $2^{\text {nd }}$ | 31.38 |
| 80.48 | $3^{\text {rd }}$ | 31.68 |
| 81.48 | $5^{\text {th }}$ | 32.08 |
| 82.98 | $10^{\text {th }}$ | 32.67 |
| 83.99 | $15^{\text {th }}$ | 33.07 |
| 84.79 | $20^{\text {th }}$ | 33.38 |
| 85.49 | $25^{\text {th }}$ | 33.66 |
| 86.13 | $30^{\text {th }}$ | 33.91 |
| 86.74 | $35^{\text {th }}$ | 34.15 |
| 87.32 | $40^{\text {th }}$ | 34.38 |
| 87.89 | $45^{\text {th }}$ | 34.60 |
| 88.47 | $50^{\text {th }}$ | 34.83 |
| 89.06 | $55^{\text {th }}$ | 35.06 |
| 89.66 | $60^{\text {th }}$ | 35.30 |
| 90.30 | $65^{\text {th }}$ | 35.55 |
| 90.99 | $70^{\text {th }}$ | 35.82 |
| 91.75 | $75^{\text {th }}$ | 36.12 |
| 92.61 | $80^{\text {th }}$ | 36.46 |
| 93.62 | $85^{\text {th }}$ | 36.86 |
| 94.93 | $90^{\text {th }}$ | 37.37 |
| 96.89 | $95^{\text {th }}$ | 38.14 |
| 98.15 | $97^{\text {th }}$ | 38.64 |
| 99.06 | $98^{\text {th }}$ | 39.00 |
| 100.46 | $99^{\text {th }}$ | 39.55 |



## Buttock-Knee Length

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 58.89 | Mean | 23.19 | 61.64 | Mean | 24.27 |
| 2.96 | Std Dev | 1.17 | 2.99 | Std Dev | 1.18 |
| 69.10 | Maximum | 27.20 | 72.30 | Maximum | 28.46 |
| 49.10 | Minimum | 19.33 | 50.60 | Minimum | 19.92 |
|  | Percentiles |  |  | Percentiles |  |
| 52.18 | $1^{\text {st }}$ | 20.54 | 55.07 | $1{ }^{\text {st }}$ | 21.68 |
| 53.03 | $2^{\text {nd }}$ | 20.88 | 55.81 | $2^{\text {nd }}$ | 21.97 |
| 53.54 | $3^{\text {rd }}$ | 21.08 | 56.28 | $3^{\text {rd }}$ | 22.16 |
| 54.21 | $5^{\text {th }}$ | 21.34 | 56.90 | $5^{\text {th }}$ | 22.40 |
| 55.20 | $10^{\text {th }}$ | 21.73 | 57.87 | $10^{\text {th }}$ | 22.78 |
| 55.87 | $15^{\text {th }}$ | 22.00 | 58.54 | $15^{\text {th }}$ | 23.05 |
| 56.39 | $20^{\text {th }}$ | 22.20 | 59.08 | $20^{\text {th }}$ | 23.26 |
| 56.85 | $25^{\text {th }}$ | 22.38 | 59.55 | $25^{\text {th }}$ | 23.45 |
| 57.27 | $30^{\text {th }}$ | 22.55 | 59.98 | $30^{\text {th }}$ | 23.62 |
| 27.66 | $35^{\text {th }}$ | 22.70 | 60.39 | $35^{\text {th }}$ | 23.77 |
| 58.04 | $40^{\text {th }}$ | 22.85 | 60.78 | $40^{\text {th }}$ | 23.93 |
| 58.41 | $45^{\text {th }}$ | 23.00 | 61.16 | $45^{\text {th }}$ | 24.08 |
| 58.78 | $50^{\text {th }}$ | 23.14 | 61.54 | $50^{\text {th }}$ | 24.23 |
| 59.15 | $55^{\text {th }}$ | 23.29 | 61.93 | $55^{\text {th }}$ | 24.38 |
| 59.54 | $60^{\text {th }}$ | 23.44 | 62.32 | $60^{\text {th }}$ | 24.54 |
| 59.95 | $65^{\text {th }}$ | 23.60 | 62.73 | $65^{\text {th }}$ | 24.70 |
| 60.38 | $70^{\text {th }}$ | 23.77 | 63.17 | $70^{\text {th }}$ | 24.87 |
| 60.85 | $75^{\text {th }}$ | 23.96 | 63.65 | $75^{\text {th }}$ | 25.06 |
| 61.39 | $80^{\text {th }}$ | 24.17 | 64.19 | $80^{\text {th }}$ | 25.27 |
| 62.01 | $85^{\text {th }}$ | 24.41 | 64.81 | $85^{\text {th }}$ | 25.52 |
| 62.81 | $90^{\text {th }}$ | 24.73 | 65.60 | $90^{\text {th }}$ | 25.83 |
| 63.98 | $95^{\text {th }}$ | 25.19 | 66.74 | $95^{\text {th }}$ | 26.28 |
| 64.72 | $97^{\text {th }}$ | 25.48 | 67.45 | $97^{\text {th }}$ | 26.56 |
| 65.24 | $98{ }^{\text {th }}$ | 25.69 | 67.95 | $98{ }^{\text {th }}$ | 26.75 |
| 66.02 | $99^{\text {th }}$ | 25.99 | 68.69 | $99^{\text {th }}$ | 27.04 |



Buttock-Popliteal Length

|  | FEMALE $\mathrm{N}=2208$ |  |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 48.17 | Mean | 18.96 | 50.04 | Mean | 1970 |
| 2.66 | Std Dev | 1.05 | 2.66 | Std Dev | 1.05 |
| 57.80 | Maximum | 22.76 | 59.70 | Maximum | 23.50 |
| 39.40 | Minimum | 15.51 | 40.10 | Minimum | 15.79 |
|  | Percentiles |  |  | Percentiles |  |
| 42.10 | $1^{\text {st }}$ | 16.57 | 44.13 | $1{ }^{\text {st }}$ | 17.37 |
| 42.91 | $2^{\text {nd }}$ | 16.89 | 44.81 | $2^{\text {nd }}$ | 17.64 |
| 43.39 | $3{ }^{\text {rd }}$ | 17.08 | 45.24 | $3{ }^{\text {rd }}$ | 17.81 |
| 44.00 | $5^{\text {th }}$ | 17.32 | 45.81 | $5^{\text {th }}$ | 18.04 |
| 44.89 | $10^{\text {th }}$ | 17.67 | 46.70 | $10^{\text {th }}$ | 18.39 |
| 45.47 | $15^{\text {th }}$ | 17.90 | 47.30 | $15^{\text {th }}$ | 18.62 |
| 45.93 | $20^{\text {th }}$ | 18.08 | 47.79 | $20^{\text {th }}$ | 18.81 |
| 46.34 | $25^{\text {th }}$ | 18.24 | 48.21 | $25^{\text {th }}$ | 18.98 |
| 46.71 | $30^{\text {th }}$ | 18.39 | 48.59 | $30^{\text {th }}$ | 19.13 |
| 47.05 | $35^{\text {th }}$ | 18.52 | 48.95 | $35^{\text {th }}$ | 19.27 |
| 47.39 | $40^{\text {th }}$ | 18.66 | 49.29 | $40^{\text {th }}$ | 19.41 |
| 47.72 | $45^{\text {th }}$ | 18.79 | 49.63 | $45^{\text {th }}$ | 19.54 |
| 48.05 | $50^{\text {th }}$ | 18.92 | 49.96 | $50^{\text {th }}$ | 19.67 |
| 48.39 | $55^{\text {th }}$ | 19.05 | 50.30 | $55^{\text {th }}$ | 19.80 |
| 48.73 | $60^{\text {th }}$ | 19.19 | 50.65 | $60^{\text {th }}$ | 19.94 |
| 49.10 | $65^{\text {th }}$ | 19.33 | 51.01 | $65^{\text {th }}$ | 20.08 |
| 49.49 | $70^{\text {th }}$ | 19.49 | 51.39 | $70^{\text {th }}$ | 20.23 |
| 49.93 | $75^{\text {th }}$ | 19.66 | 51.81 | $75^{\text {th }}$ | 20.40 |
| 50.42 | $80^{\text {th }}$ | 19.85 | 52.28 | $80^{\text {th }}$ | 20.58 |
| 50.99 | $85^{\text {th }}$ | 20.07 | 52.83 | $85^{\text {th }}$ | 20.80 |
| 51.72 | $90^{\text {th }}$ | 20.36 | 53.53 | $90^{\text {th }}$ | 21.07 |
| 52.77 | $95^{\text {th }}$ | 20.78 | 54.55 | $95^{\text {th }}$ | 21.48 |
| 53.43 | $97^{\text {dh }}$ | 21.03 | 55.21 | $97^{\text {th }}$ | 21.74 |
| 53.88 | $98{ }^{\text {th }}$ | 21.21 | 55.68 | $98^{\text {th }}$ | 21.92 |
| 54.54 | $99^{\text {dh }}$ | 21.47 | 56.40 | $99^{\text {th }}$ | 22.21 |




## Elbow Rest Height, Sitting

|  | FEMALE $N=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 22.05 | Mean | 8.68 | 23.06 | Mean | 9.08 |
| 2.68 | Std Dev | 1.05 | 2.72 | Std Dev | 1.07 |
| 30.20 | Maximum | 11.89 | 31.10 | Maximum | 12.24 |
| 12.40 | Minimum | 4.88 | 14.00 | Minimum | 5.51 |
|  | Percentiles |  |  | Percentiles |  |
| 15.80 | $1^{\text {st }}$ | 6.22 | 16.75 | $1^{\text {st }}$ | 6.60 |
| 16.49 | $2^{\text {nd }}$ | 6.49 | 17.35 | $2^{\text {nd }}$ | 6.83 |
| 16.94 | $3{ }^{\text {rd }}$ | 6.67 | 17.78 | $3{ }^{\text {rd }}$ | 7.00 |
| 17.57 | $5^{\text {th }}$ | 6.92 | 18.41 | $5^{\text {th }}$ | 7.25 |
| 18.56 | $10^{\text {th }}$ | 7.31 | 19.44 | $10^{\text {th }}$ | 7.65 |
| 19.24 | $15^{\text {th }}$ | 7.57 | 20.17 | $15^{\text {th }}$ | 7.94 |
| 19.77 | $20^{\text {th }}$ | 7.87 | 20.74 | $20^{\text {th }}$ | 8.17 |
| 20.24 | $25^{\text {th }}$ | 7.97 | 21.24 | $25^{\text {th }}$ | 8.36 |
| 20.65 | $30^{\text {th }}$ | 8.13 | 21.69 | $30^{\text {th }}$ | 8.54 |
| 21.03 | $35^{\text {th }}$ | 8.28 | 22.09 | $35^{\text {th }}$ | 8.70 |
| 21.39 | $40^{\text {th }}$ | 8.42 | 22.47 | $40^{\text {th }}$ | 8.85 |
| 21.74 | $45^{\text {th }}$ | 8.56 | 22.83 | $45^{\text {th }}$ | 8.99 |
| 22.08 | $50^{\text {th }}$ | 8.69 | 23.19 | $50^{\text {th }}$ | 9.13 |
| 22.42 | $55^{\text {th }}$ | 8.83 | 23.53 | $55^{\text {th }}$ | 9.27 |
| 22.77 | $60^{\text {th }}$ | 8.96 | 23.88 | $60^{\text {th }}$ | 9.40 |
| 23.12 | $65^{\text {th }}$ | 9.10 | 24.23 | $65^{\text {th }}$ | 9.54 |
| 23.49 | $70^{\text {th }}$ | 8.25 | 24.59 | $70^{\text {th }}$ | 9.68 |
| 23.89 | $75^{\text {th }}$ | 9.41 | 24.98 | $75^{\text {th }}$ | 9.83 |
| 24.33 | $80^{\text {th }}$ | 9.58 | 25.40 | $80^{\text {th }}$ | 10.00 |
| 24.84 | $85^{\text {th }}$ | 9.78 | 25.88 | $85^{\text {th }}$ | 10.19 |
| 25.49 | $90^{\text {th }}$ | 10.03 | 26.48 | $90^{\text {th }}$ | 10.43 |
| 26.44 | $95^{\text {th }}$ | 10.41 | 27.37 | $95^{\text {th }}$ | 10.78 |
| 27.06 | $97^{\text {th }}$ | 10.65 | 27.96 | $97^{\text {th }}$ | 11.01 |
| 27.52 | $98{ }^{\text {th }}$ | 10.83 | 28.41 | $98{ }^{\text {th }}$ | 11.19 |
| 28.24 | $99^{\text {th }}$ | 11.12 | 29.16 | $99^{\text {th }}$ | 11.48 |



Elbow Rest Height, Standing

|  | FEMALE $\mathrm{N}=2208$ |  |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |  |
| 99.79 | Mean | 39.29 | 107.25 | Mean | 42.22 |  |
| 4.48 | Std Dev | 1.76 | 4.81 | Std Dev | 1.89 | - |
| 118.50 | Maximum | 46.65 | 126.10 | Maximum | 49.65 | , - |
| 85.60 | Minimum | 33.70 | 88.80 | Minimum | 34.96 | , ${ }^{3}$, |
|  | Percentiles |  |  | Percentiles |  | -15 |
| 89.51 | $1^{\text {st }}$ | 35.24 | 96.18 | $1^{\text {st }}$ | 37.87 | - |
| 90.80 | $2^{\text {nd }}$ | 35.75 | 97.56 | $2^{\text {nd }}$ | 38.41 | () |
| 91.58 | $3^{\text {rd }}$ | 36.06 | 98.40 | $3^{\text {rd }}$ | 38.74 | 0 - |
| 92.63 | $5^{\text {th }}$ | 36.47 | 99.52 | $5^{\text {th }}$ | 39.18 | $1 \times$ |
| 94.20 | $10^{\text {th }}$ | 37.09 | 101.21 | $10^{\text {th }}$ | 39.85 | - |
| 95.24 | $15^{\text {th }}$ | 37.50 | 102.34 | $15^{\text {th }}$ | 40.29 | $\bigcirc$ |
| 96.06 | $20^{\text {th }}$ | 37.82 | 103.23 | $20^{\text {th }}$ | 40.64 | - |
| 96.77 | $25^{\text {th }}$ | 38.10 | 104.00 | $25^{\text {th }}$ | 40.95 | ( |
| 97.41 | $30^{\text {th }}$ | 38.35 | 104.70 | $30^{\text {th }}$ | 41.22 |  |
| 98.00 | $35^{\text {th }}$ | 38.58 | 105.35 | $35^{\text {th }}$ | 41.48 |  |
| 98.57 | $40^{\text {th }}$ | 38.87 | 105.97 | $40^{\text {th }}$ | 41.72 |  |
| 99.12 | $45^{\text {th }}$ | 39.02 | 106.57 | $45^{\text {th }}$ | 41.96 |  |
| 99.67 | $50^{\text {th }}$ | 39.24 | 107.18 | $50^{\text {th }}$ | 42.20 | - |
| 100.23 | $55^{\text {th }}$ | 39.46 | 107.78 | $55^{\text {th }}$ | 42.43 | 1 $i$ |
| 100.79 | $60^{\text {th }}$ | 39.68 | 108.40 | $60^{\text {th }}$ | 42.68 | 1 |
| 101.38 | $65^{\text {th }}$ | 39.92 | 109.05 | $65^{\text {th }}$ | 42.93 | - |
| 102.02 | $70^{\text {th }}$ | 40.16 | 109.73 | $70^{\text {th }}$ | 43.20 | 1 |
| 102.71 | $75^{\text {th }}$ | 40.44 | 110.47 | $75^{\text {th }}$ | 43.49 | . |
| 103.49 | $80^{\text {th }}$ | 40.74 | 111.31 | $80^{\text {th }}$ | 43.82 |  |
| 104.41 | $85^{\text {th }}$ | 41.11 | 112.28 | $85^{\text {th }}$ | 44.20 | , |
| 105.60 | $90^{\text {th }}$ | 41.57 | 113.50 | $90^{\text {th }}$ | 44.68 |  |
| 107.40 | $95^{\text {th }}$ | 42.28 | 115.28 | $95^{\text {th }}$ | 45.39 |  |
| 108.59 | $97^{\text {th }}$ | 42.75 | 116.41 | $97^{\text {th }}$ | 45.83 |  |
| 109.47 | $98{ }^{\text {th }}$ | 43.10 | 117.21 | $98{ }^{\text {th }}$ | 46.15 |  |
| 110.87 | $99^{\text {th }}$ | 43.65 | 118.41 | $99^{\text {th }}$ | 46.62 |  |

## Elbow-Center of Grip Length

|  | FEMALE $N=2208$ |  |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |  |
| 32.88 | Mean | 12.94 | 36.00 | Mean | 14.17 |  |
| 1.77 | Std Dev | . 70 | 1.79 | Std Dev | . 70 |  |
| 41.30 | Maximum | 16.26 | 43.60 | Maximum | 17.17 | , - |
| 23.70 | Minimum | 9.33 | 29.30 | Minimum | 11.54 | , 3, |
|  | Percentiles |  |  | Percentiles |  | - 15 |
| 29.93 | $1{ }^{\text {st }}$ | 11.39 | 32.26 | $1^{\text {st }}$ | 12.70 | - |
| 29.35 | $2^{\text {nd }}$ | 11.56 | 32.64 | $2^{\text {nd }}$ | 12.85 | (1) |
| 29.63 | $3^{\text {rd }}$ | 11.67 | 32.89 | $3^{\text {rd }}$ | 12.95 | 10 |
| 30.02 | $5^{\text {th }}$ | 11.82 | 33.23 | $5^{\text {th }}$ | 13.08 | 112 |
| 30.63 | $10^{\text {th }}$ | 12.06 | 33.78 | $10^{\text {th }}$ | 13.30 |  |
| 31.04 | $15^{\text {th }}$ | 12.22 | 34.16 | $15^{\text {th }}$ | 13.45 |  |
| 31.37 | $20^{\text {th }}$ | 12.35 | 34.47 | $20^{\text {th }}$ | 13.57 | $\rightarrow$ |
| 31.66 | $25^{\text {th }}$ | 12.47 | 34.75 | $25^{\text {th }}$ | 13.68 | - 1 |
| 31.92 | $30^{\text {th }}$ | 12.57 | 35.00 | $30^{\text {th }}$ | 13.78 |  |
| 32.17 | $35^{\text {th }}$ | 12.66 | 35.24 | $35^{\text {th }}$ | 13.87 |  |
| 32.40 | $40^{\text {th }}$ | 12.75 | 35.47 | $40^{\text {th }}$ | 13.97 |  |
| 32.62 | $45^{\text {th }}$ | 12.84 | 35.70 | $45^{\text {th }}$ | 14.05 |  |
| 32.84 | $50^{\text {th }}$ | 12.93 | 35.92 | $50^{\text {th }}$ | 14.14 |  |
| 33.06 | $55^{\text {th }}$ | 13.02 | 36.15 | $55^{\text {th }}$ | 14.23 | i |
| 33.29 | $60^{\text {th }}$ | 13.10 | 36.39 | $60^{\text {th }}$ | 14.33 | 1 |
| 33.52 | $65^{\text {th }}$ | 13.20 | 36.63 | $65^{\text {th }}$ | 14.42 |  |
| 33.77 | $70^{\text {th }}$ | 13.29 | 36.89 | $70^{\text {th }}$ | 14.52 | 1 |
| 34.04 | $75^{\text {th }}$ | 13.40 | 37.18 | $75^{\text {th }}$ | 14.64 |  |
| 34.34 | $80^{\text {th }}$ | 13.52 | 37.50 | $80^{\text {th }}$ | 14.76 |  |
| 34.69 | $85^{\text {th }}$ | 13.66 | 37.87 | $85^{\text {th }}$ | 14.91 |  |
| 35.15 | $90^{\text {th }}$ | 13.84 | 38.35 | $90^{\text {th }}$ | 15.10 |  |
| 35.84 | $95^{\text {th }}$ | 14.11 | 39.06 | $95^{\text {th }}$ | 15.38 |  |
| 36.29 | $97^{\text {th }}$ | 14.29 | 39.51 | $97^{\text {th }}$ | 15.55 |  |
| 36.64 | $98{ }^{\text {th }}$ | 14.42 | 39.83 | $98{ }^{\text {th }}$ | 15.68 |  |
| 37.20 | $99^{\text {th }}$ | 14.64 | 40.33 | $99^{\text {th }}$ | 15.88 |  |

Elbow-Wrist Length

|  | FEMALE $N=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathrm{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 26.25 | Mean | 10.33 | 29.03 | Mean | 11.43 |
| 1.54 | Std Dev | . 61 | 1.54 | Std Dev | . 61 |
| 33.40 | Maximum | 13.15 | 35.00 | Maximum | 13.78 |
| 17.00 | Minimum | 6.69 | 22.60 | Minimum | 8.90 |
|  | Percentiles |  |  | Percentiles |  |
| 22.94 | $1^{\text {st }}$ | 9.03 | 25.79 | $1^{\text {st }}$ | 10.15 |
| 23.26 | $2^{\text {nd }}$ | 9.16 | 26.09 | $2^{\text {nd }}$ | 10.27 |
| 23.47 | $3{ }^{\text {rd }}$ | 9.24 | 26.30 | $3{ }^{\text {rd }}$ | 10.35 |
| 23.78 | $5^{\text {th }}$ | 9.36 | 26.60 | $5^{\text {th }}$ | 10.47 |
| 24.28 | $10^{\text {th }}$ | 9.56 | 27.09 | $10^{\text {th }}$ | 10.66 |
| 24.64 | $15^{\text {th }}$ | 9.70 | 27.44 | $15^{\text {th }}$ | 10.80 |
| 24.93 | $20^{\text {th }}$ | 9.81 | 27.72 | $20^{\text {th }}$ | 10.91 |
| 25.18 | $25^{\text {th }}$ | 9.91 | 27.97 | $25^{\text {th }}$ | 11.01 |
| 25.41 | $30^{\text {th }}$ | 10.00 | 28.19 | $30^{\text {th }}$ | 11.10 |
| 25.62 | $35^{\text {th }}$ | 10.09 | 28.40 | $35^{\text {th }}$ | 11.18 |
| 25.83 | $40^{\text {th }}$ | 10.17 | 28.60 | $40^{\text {th }}$ | 11.26 |
| 26.03 | $45^{\text {th }}$ | 10.25 | 28.80 | $45^{\text {th }}$ | 11.34 |
| 26.22 | $50^{\text {th }}$ | 10.32 | 28.99 | $50^{\text {th }}$ | 11.41 |
| 26.42 | $55^{\text {th }}$ | 10.40 | 29.18 | $55^{\text {th }}$ | 11.49 |
| 26.62 | $60^{\text {th }}$ | 10.48 | 29.38 | $60^{\text {th }}$ | 11.57 |
| 26.83 | $65^{\text {th }}$ | 10.56 | 29.58 | $65^{\text {th }}$ | 11.65 |
| 27.05 | $70^{\text {th }}$ | 10.65 | 29.80 | $70^{\text {th }}$ | 11.73 |
| 27.29 | $75^{\text {th }}$ | 10.74 | 30.03 | $75^{\text {th }}$ | 11.82 |
| 27.56 | $80^{\text {th }}$ | 10.85 | 30.30 | $80^{\text {th }}$ | 11.93 |
| 27.86 | $85^{\text {th }}$ | 10.97 | 30.61 | $85^{\text {th }}$ | 12.05 |
| 28.26 | $90^{\text {th }}$ | 11.12 | 31.01 | $90^{\text {th }}$ | 12.21 |
| 28.83 | $95^{\text {th }}$ | 11.35 | 31.61 | $95^{\text {th }}$ | 12.45 |
| 29.21 | $97^{\text {th }}$ | 11.50 | 32.02 | $97^{\text {th }}$ | 12.61 |
| 29.49 | $98{ }^{\text {th }}$ | 11.61 | 32.33 | $98{ }^{\text {th }}$ | 12.73 |
| 29.93 | $99^{\text {th }}$ | 11.78 | 32.84 | $99^{\text {th }}$ | 12.93 |



## Eye Height Approximation, Sitting

| Centimeters | FEMALE <br> $\mathbf{N}=\mathbf{2 2 0 8}$ |  |
| :---: | :---: | :---: |
| 72.85 | Mean <br> Std Dev | Inches <br> .31 |
| 84.00 | Maximum <br> Minimum | 3.30 |
| 63.00 |  | 24.07 |
|  | Percentiles |  |
| 65.48 | $1^{\text {st }}$ | 25.78 |
| 66.27 | $2^{\text {nd }}$ | 26.09 |
| 66.78 | $3^{\text {rd }}$ | 26.29 |
| 67.48 | $5^{\text {th }}$ | 26.57 |
| 68.59 | $10^{\text {th }}$ | 27.01 |
| 69.37 | $15^{\text {th }}$ | 27.31 |
| 69.99 | $20^{\text {th }}$ | 27.55 |
| 70.54 | $25^{\text {th }}$ | 27.77 |
| 71.03 | $30^{\text {th }}$ | 27.96 |
| 71.49 | $35^{\text {th }}$ | 28.15 |
| 74.93 | $40^{\text {th }}$ | 28.32 |
| 72.36 | $45^{\text {th }}$ | 28.49 |
| 72.79 | $50^{\text {th }}$ | 28.66 |
| 73.22 | $55^{\text {th }}$ | 28.83 |
| 73.66 | $60^{\text {th }}$ | 29.00 |
| 74.11 | $65^{\text {th }}$ | 29.18 |
| 74.59 | $70^{\text {th }}$ | 29.37 |
| 75.11 | $75^{\text {th }}$ | 29.57 |
| 75.69 | $80^{\text {th }}$ | 29.80 |
| 76.36 | $85^{\text {th }}$ | 30.06 |
| 77.19 | $90^{\text {th }}$ | 30.39 |
| 78.41 | $95^{\text {th }}$ | 30.87 |
| 79.17 | $97^{\text {th }}$ | 31.17 |
| 79.71 | $98^{\text {th }}$ | 31.38 |
| 80.52 | $99^{\text {th }}$ | 31.70 |
|  |  |  |


| Centimeters | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 78.30 | Mean | 30.83 |
| 3.38 | Std Dev | 1.33 |
| 89.30 | Maximum | 35.16 |
| 67.70 | Minimum | 26.65 |
| Percentiles |  |  |
| 70.14 | $1^{\text {st }}$ | 27.61 |
| 71.17 | $2^{\text {nd }}$ | 28.02 |
| 71.81 | $3{ }^{\text {rd }}$ | 28.27 |
| 72.66 | $5^{\text {th }}$ | 28.60 |
| 73.93 | $10^{\text {th }}$ | 29.10 |
| 74.77 | $15^{\text {th }}$ | 29.44 |
| 75.43 | $20^{\text {th }}$ | 29.70 |
| 76.01 | $25^{\text {th }}$ | 29.92 |
| 76.52 | $30^{\text {th }}$ | 30.13 |
| 77.00 | $35^{\text {th }}$ | 30.31 |
| 77.45 | $40^{\text {th }}$ | 30.49 |
| 77.89 | $45^{\text {th }}$ | 30.66 |
| 78.32 | $50^{\text {th }}$ | 30.83 |
| 78.75 | $55^{\text {th }}$ | 31.01 |
| 79.19 | $60^{\text {th }}$ | 31.18 |
| 79.65 | $65^{\text {th }}$ | 31.36 |
| 80.13 | $70^{\text {th }}$ | 31.55 |
| 80.64 | $75^{\text {th }}$ | 31.75 |
| 81.22 | $80^{\text {th }}$ | 31.97 |
| 81.87 | $85^{\text {th }}$ | 32.23 |
| 82.68 | $90^{\text {th }}$ | 32.55 |
| 83.83 | $95^{\text {th }}$ | 33.01 |
| 84.53 | $97^{\text {th }}$ | 33.28 |
| 85.02 | $98{ }^{\text {th }}$ | 33.47 |
| 85.71 | $99^{\text {th }}$ | 33.74 |



## Eye Height, Sitting

FEMALE
N = 2208

| Centimeters |  | Inches |
| :---: | :---: | :---: |
| 73.87 | Mean | 29.08 |
| 3.32 | Std Dev | 1.31 |
| 86.40 | Maximum | 34.02 |
| 64.00 | Minimum | 25.20 |
|  | Percentiles |  |
| 66.40 | $1^{\text {st }}$ | 26.14 |
| 67.21 | $2^{\text {nd }}$ | 26.46 |
| 67.74 | $3{ }^{\text {rd }}$ | 26.67 |
| 68.46 | $5^{\text {th }}$ | 26.95 |
| 69.60 | $10^{\text {th }}$ | 27.40 |
| 70.38 | $15^{\text {th }}$ | 27.71 |
| 71.01 | $20^{\text {th }}$ | 27.96 |
| 71.56 | $25^{\text {th }}$ | 28.17 |
| 72.06 | $30^{\text {th }}$ | 28.37 |
| 72.52 | $35^{\text {th }}$ | 28.55 |
| 72.96 | $40^{\text {th }}$ | 28.72 |
| 73.39 | $45^{\text {th }}$ | 28.89 |
| 73.82 | $50^{\text {th }}$ | 29.06 |
| 74.25 | $55^{\text {th }}$ | 29.23 |
| 74.68 | $60^{\text {th }}$ | 29.40 |
| 75.13 | $65^{\text {th }}$ | 29.58 |
| 75.61 | $70^{\text {th }}$ | 29.77 |
| 76.13 | $75^{\text {th }}$ | 29.97 |
| 73.71 | $80^{\text {th }}$ | 30.20 |
| 77.37 | $85^{\text {th }}$ | 30.46 |
| 78.21 | $90^{\text {th }}$ | 30.79 |
| 79.43 | $95^{\text {th }}$ | 31.27 |
| 80.20 | $97^{\text {th }}$ | 31.57 |
| 81.59 | $99^{\text {th }}$ | 32.12 |
| 80.75 | $98^{\text {th }}$ | 31.79 |


| $\mathbf{N}=1774$ |  |  |
| :---: | :---: | :---: |
| Centimeters |  | Inches |
| 79.20 | Mean | 31.18 |
| 3.42 | Std Dev | 1.35 |
| 90.30 | Maximum | 35.55 |
| 67.30 | Minimum | 26.50 |
|  | Percentiles |  |
| 71.18 | $1{ }^{\text {st }}$ | 28.02 |
| 72.11 | $2^{\text {nd }}$ | 28.39 |
| 72.70 | $3{ }^{\text {rd }}$ | 28.62 |
| 73.50 | $5^{\text {th }}$ | 28.94 |
| 74.76 | $10^{\text {th }}$ | 29.43 |
| 75.61 | $15^{\text {th }}$ | 29.77 |
| 76.29 | $20^{\text {th }}$ | 30.04 |
| 76.88 | $25^{\text {th }}$ | 30.27 |
| 77.40 | $30^{\text {th }}$ | 30.47 |
| 77.88 | $35^{\text {th }}$ | 30.66 |
| 78.34 | $40^{\text {th }}$ | 30.84 |
| 78.79 | $45^{\text {th }}$ | 31.02 |
| 79.23 | $50^{\text {th }}$ | 31.19 |
| 79.66 | $55^{\text {th }}$ | 31.36 |
| 80.10 | $60^{\text {th }}$ | 31.54 |
| 80.56 | $65^{\text {th }}$ | 31.72 |
| 81.04 | $70^{\text {th }}$ | 31.90 |
| 81.55 | $75^{\text {th }}$ | 32.11 |
| 82.13 | $80^{\text {th }}$ | 32.33 |
| 82.78 | $85^{\text {th }}$ | 32.59 |
| 83.61 | $90^{\text {th }}$ | 32.92 |
| 84.80 | $95^{\text {th }}$ | 33.39 |
| 85.56 | $97^{\text {th }}$ | 33.68 |
| 86.93 | $99^{\text {th }}$ | 34.23 |
| 86.10 | $98^{\text {th }}$ | 33.90 |



## Eye Height, Standing

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 151.61 | Mean | 59.69 | 163.39 | Mean | 64.32 |
| 6.25 | Std Dev | 2.46 | 6.57 | Std Dev | 2.59 |
| 175.30 | Maximum | 69.02 | 191.20 | Maximum | 75.28 |
| 132.50 | Minimum | 52.17 | 138.10 | Minimum | 54.37 |
|  | Percentiles |  |  | Percentiles |  |
| 137.39 | $1^{\text {st }}$ | 54.09 | 148.40 | $1^{\text {st }}$ | 58.43 |
| 139.07 | $2^{\text {nd }}$ | 54.75 | 150.22 | $2^{\text {nd }}$ | 59.14 |
| 140.11 | $3^{\text {rd }}$ | 55.16 | 151.33 | $3{ }^{\text {rd }}$ | 59.14 |
| 141.52 | $5^{\text {th }}$ | 55.72 | 152.82 | $5^{\text {th }}$ | 59.58 |
| 143.67 | $10^{\text {th }}$ | 56.56 | 155.08 | $10^{\text {th }}$ | 60.17 |
| 145.13 | $15^{\text {th }}$ | 57.14 | 156.60 | $15^{\text {th }}$ | 61.05 |
| 146.29 | $20^{\text {th }}$ | 57.59 | 157.82 | $20^{\text {th }}$ | 61.65 |
| 147.30 | $25^{\text {th }}$ | 57.99 | 158.88 | $25^{\text {th }}$ | 62.13 |
| 148.21 | $30^{\text {th }}$ | 58.35 | 159.84 | $30^{\text {th }}$ | 62.55 |
| 149.06 | $35^{\text {th }}$ | 58.68 | 160.73 | $35^{\text {th }}$ | 62.93 |
| 149.87 | $40^{\text {th }}$ | 59.00 | 161.59 | $40^{\text {th }}$ | 63.62 |
| 150.66 | $45^{\text {th }}$ | 59.32 | 162.42 | $45^{\text {th }}$ | 63.95 |
| 151.45 | $50^{\text {th }}$ | 59.63 | 163.26 | $50^{\text {th }}$ | 64.28 |
| 152.24 | $55^{\text {th }}$ | 59.94 | 164.10 | $55^{\text {th }}$ | 64.61 |
| 153.05 | $60^{\text {th }}$ | 60.26 | 164.96 | $60^{\text {th }}$ | 64.94 |
| 153.90 | $65^{\text {th }}$ | 60.59 | 165.85 | $65^{\text {th }}$ | 65.30 |
| 154.79 | $70^{\text {th }}$ | 60.94 | 166.79 | $70^{\text {th }}$ | 65.67 |
| 155.77 | $75^{\text {th }}$ | 61.33 | 167.82 | $75^{\text {th }}$ | 66.07 |
| 156.86 | $80^{\text {th }}$ | 61.76 | 168.97 | $80^{\text {th }}$ | 66.52 |
| 158.14 | $85^{\text {th }}$ | 62.26 | 170.29 | $85^{\text {th }}$ | 67.04 |
| 159.75 | $90^{\text {th }}$ | 62.90 | 171.29 | $90^{\text {th }}$ | 67.69 |
| 162.13 | $95^{\text {th }}$ | 63.83 | 174.29 | $95^{\text {th }}$ | 68.62 |
| 163.35 | $97^{\text {th }}$ | 64.43 | 175.73 | $97^{\text {th }}$ | 69.18 |
| 164.75 | $98{ }^{\text {th }}$ | 64.86 | 176.72 | $98{ }^{\text {th }}$ | 69.57 |
| 166.43 | $99^{\text {th }}$ | 65.52 | 178.15 | $99^{\text {th }}$ | 70.14 |



## Forearm-Forearm Breadth

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 46.85 | Mean | 18.44 | 54.61 | Mean | 21.50 |
| 3.47 | Std Dev | 1.36 | 4.36 | Std Dev | 1.72 |
| 60.90 | Maximum | 23.98 | 72.52 | Maximum | 28.54 |
| 37.30 | Minimum | 14.69 | 39.90 | Minimum | 15.71 |
|  | Percentiles |  |  | Percentiles |  |
| 39.42 | $1^{\text {st }}$ | 15.52 | 45.12 | $1{ }^{\text {st }}$ | 17.76 |
| 40.24 | $2^{\text {nd }}$ | 15.84 | 46.17 | $2^{\text {nd }}$ | 18.18 |
| 40.76 | $3{ }^{\text {rd }}$ | 16.05 | 46.84 | $3{ }^{\text {rd }}$ | 18.44 |
| 41.47 | $5^{\text {th }}$ | 16.33 | 47.74 | $5^{\text {th }}$ | 18.80 |
| 42.58 | $10^{\text {th }}$ | 16.76 | 49.16 | $10^{\text {th }}$ | 19.35 |
| 43.33 | $15^{\text {th }}$ | 17.06 | 50.13 | $15^{\text {th }}$ | 19.74 |
| 43.94 | $20^{\text {th }}$ | 17.30 | 50.91 | $20^{\text {th }}$ | 20.04 |
| 44.47 | $25^{\text {th }}$ | 17.51 | 51.59 | $25^{\text {th }}$ | 20.31 |
| 44.94 | $30^{\text {th }}$ | 17.69 | 52.21 | $30^{\text {th }}$ | 20.56 |
| 45.39 | $35^{\text {th }}$ | 17.87 | 52.79 | $35^{\text {th }}$ | 20.79 |
| 45.82 | $40^{\text {th }}$ | 18.04 | 53.35 | $40^{\text {th }}$ | 21.00 |
| 46.24 | $45^{\text {th }}$ | 18.20 | 53.90 | $45^{\text {th }}$ | 21.22 |
| 46.66 | $50^{\text {th }}$ | 18.37 | 54.45 | $50^{\text {th }}$ | 21.44 |
| 47.08 | $55^{\text {th }}$ | 18.54 | 55.00 | $55^{\text {th }}$ | 21.65 |
| 47.52 | $60^{\text {th }}$ | 18.71 | 55.56 | $60^{\text {th }}$ | 21.88 |
| 47.98 | $65^{\text {th }}$ | 18.89 | 56.16 | $65^{\text {th }}$ | 22.11 |
| 48.47 | $70^{\text {th }}$ | 19.08 | 56.79 | $70^{\text {th }}$ | 22.36 |
| 49.01 | $75^{\text {th }}$ | 19.30 | 57.47 | $75^{\text {th }}$ | 22.63 |
| 49.63 | $80^{\text {th }}$ | 19.54 | 58.25 | $80^{\text {th }}$ | 22.93 |
| 50.37 | $85^{\text {th }}$ | 19.83 | 59.16 | $85^{\text {th }}$ | 23.29 |
| 51.33 | $90^{\text {th }}$ | 20.21 | 60.32 | $90^{\text {th }}$ | 23.75 |
| 52.84 | $95^{\text {th }}$ | 20.80 | 62.06 | $95^{\text {th }}$ | 24.43 |
| 53.87 | $97^{\text {th }}$ | 21.21 | 63.18 | $97^{\text {th }}$ | 24.87 |
| 54.66 | $98{ }^{\text {th }}$ | 21.52 | 64.00 | $98{ }^{\text {th }}$ | 25.20 |
| 55.95 | $99^{\text {th }}$ | 22.03 | 65.27 | $99^{\text {th }}$ | 25.70 |



Forearm-Hand Length

|  | FEMALE $\mathrm{N}=2208$ |  |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |  |
| 44.29 | Mean | 17.44 | 48.40 | Mean | 19.06 |  |
| 2.34 | Std Dev | . 92 | 2.33 | Std Dev | . 92 |  |
| 54.60 | Maximum | 21.50 | 57.80 | Maximum | 22.76 | $\bigcirc$ |
| 32.40 | Minimum | 12.76 | 38.60 | Minimum | 15.20 | , ${ }_{2}$ |
|  | Percentiles |  |  | Percentiles |  | - ! |
| 39.14 | $1^{\text {st }}$ | 15.41 | 43.43 | $1^{\text {st }}$ | 17.10 | ( ${ }^{\prime \prime}$ |
| 39.74 | $2^{\text {nd }}$ | 15.65 | 43.98 | $2^{\text {nd }}$ | 17.31 | (1) |
| 40.12 | $3{ }^{\text {rd }}$ | 15.79 | 44.32 | $3{ }^{\text {rd }}$ | 17.45 | 110 |
| 40.62 | $5^{\text {th }}$ | 15.99 | 44.79 | $5^{\text {th }}$ | 17.63 | 1 1 |
| 41.38 | $10^{\text {th }}$ | 16.29 | 45.52 | $10^{\text {th }}$ | 17.92 | $\bigcirc$ |
| 41.91 | $15^{\text {th }}$ | 16.50 | 46.02 | $15^{\text {th }}$ | 18.12 | $\xi$ |
| 42.32 | $20^{\text {th }}$ | 16.66 | 46.42 | $20^{\text {th }}$ | 18.28 | - |
| 42.69 | $25^{\text {th }}$ | 16.81 | 46.78 | $25^{\text {th }}$ | 18.42 | , |
| 43.02 | $30^{\text {th }}$ | 16.94 | 47.10 | $30^{\text {th }}$ | 18.54 |  |
| 43.33 | $35^{\text {th }}$ | 17.06 | 47.41 | $35^{\text {th }}$ | 18.66 |  |
| 43.63 | $40^{\text {th }}$ | 17.18 | 47.70 | $40^{\text {th }}$ | 18.78 | - |
| 43.92 | $45^{\text {th }}$ | 17.29 | 47.99 | $45^{\text {th }}$ | 18.89 |  |
| 44.21 | $50^{\text {th }}$ | 17.41 | 48.28 | $50^{\text {th }}$ | 19.01 |  |
| 44.51 | $55^{\text {th }}$ | 17.52 | 48.58 | $55^{\text {th }}$ | 19.12 | 1 |
| 44.81 | $60^{\text {th }}$ | 17.64 | 48.88 | $60^{\text {th }}$ | 19.24 | 1 |
| 45.13 | $65^{\text {th }}$ | 17.77 | 49.20 | $65^{\text {th }}$ | 19.37 | , |
| 45.47 | $70^{\text {th }}$ | 17.90 | 49.53 | $70^{\text {th }}$ | 19.50 | 1 |
| 45.84 | $75^{\text {th }}$ | 18.05 | 49.91 | $75^{\text {th }}$ | 19.65 | . |
| 46.26 | $80^{\text {th }}$ | 18.21 | 50.33 | $80^{\text {th }}$ | 19.82 |  |
| 46.74 | $85^{\text {th }}$ | 18.40 | 50.83 | $85^{\text {th }}$ | 20.01 |  |
| 47.35 | $90^{\text {th }}$ | 18.64 | 51.46 | $90^{\text {th }}$ | 20.26 |  |
| 48.25 | $95^{\text {th }}$ | 18.99 | 52.42 | $95^{\text {th }}$ | 20.64 |  |
| 48.81 | $97^{\text {th }}$ | 19.22 | 53.04 | $97^{\text {th }}$ | 20.88 |  |
| 49.21 | $98{ }^{\text {dh }}$ | 19.38 | 53.49 | $98{ }^{\text {th }}$ | 21.06 |  |
| 49.81 | $99^{\text {th }}$ | 19.61 | 54.20 | $99^{\text {th }}$ | 21.34 |  |

Functional Grip Reach

|  | FEMALE$\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 68.61 | Mean | 27.01 | 75.07 | Mean | 29.55 |
| 3.39 | Std Dev | 1.33 | 3.68 | Std Dev | 1.45 |
| 83.20 | Maximum | 32.76 | 92.10 | Maximum | 36.26 |
| 57.50 | Minimum | 22.64 | 62.60 | Minimum | 24.65 |
|  | Percentiles |  |  | Percentiles |  |
| 61.51 | $1{ }^{\text {st }}$ | 24.22 | 67.26 | $1^{\text {st }}$ | 26.48 |
| 62.12 | $2^{\text {nd }}$ | 24.46 | 68.04 | $2^{\text {nd }}$ | 26.79 |
| 62.55 | $3^{\text {rd }}$ | 24.63 | 68.55 | $3{ }^{\text {rd }}$ | 26.99 |
| 63.19 | $5^{\text {th }}$ | 24.88 | 69.28 | $5^{\text {th }}$ | 27.28 |
| 64.26 | $10^{\text {th }}$ | 25.30 | 70.45 | $10^{\text {th }}$ | 27.74 |
| 65.03 | $15^{\text {th }}$ | 25.60 | 71.27 | $15^{\text {th }}$ | 28.06 |
| 65.66 | $20^{\text {th }}$ | 25.85 | 71.93 | $20^{\text {th }}$ | 28.32 |
| 66.22 | $25^{\text {th }}$ | 26.07 | 72.52 | $25^{\text {th }}$ | 28.55 |
| 66.72 | $30^{\text {th }}$ | 26.27 | 73.05 | $30^{\text {th }}$ | 28.76 |
| 67.19 | $35^{\text {th }}$ | 26.45 | 73.54 | $35^{\text {th }}$ | 28.95 |
| 67.64 | $40^{\text {th }}$ | 26.63 | 74.02 | $40^{\text {th }}$ | 29.14 |
| 68.08 | $45^{\text {th }}$ | 26.80 | 74.49 | $45^{\text {th }}$ | 29.33 |
| 68.51 | $50^{\text {th }}$ | 26.97 | 74.95 | $50^{\text {th }}$ | 29.51 |
| 68.95 | $55^{\text {th }}$ | 27.15 | 75.42 | $55^{\text {th }}$ | 29.69 |
| 69.40 | $60^{\text {th }}$ | 27.32 | 75.90 | $60^{\text {th }}$ | 29.88 |
| 69.86 | $65^{\text {th }}$ | 27.50 | 76.40 | $65^{\text {th }}$ | 30.08 |
| 70.34 | $70^{\text {th }}$ | 27.69 | 76.92 | $70^{\text {th }}$ | 30.29 |
| 70.87 | $75^{\text {th }}$ | 27.90 | 77.50 | $75^{\text {th }}$ | 30.51 |
| 71.46 | $80^{\text {th }}$ | 28.14 | 78.15 | $80^{\text {th }}$ | 30.77 |
| 72.15 | $85^{\text {th }}$ | 28.41 | 78.91 | $85^{\text {th }}$ | 31.07 |
| 73.03 | $90^{\text {th }}$ | 28.75 | 79.87 | $90^{\text {th }}$ | 31.45 |
| 74.36 | $95^{\text {th }}$ | 29.27 | 81.31 | $95^{\text {th }}$ | 32.01 |
| 75.24 | $97^{\text {th }}$ | 29.62 | 82.25 | $97^{\text {th }}$ | 32.38 |
| 75.90 | $98{ }^{\text {th }}$ | 29.88 | 82.94 | $98{ }^{\text {th }}$ | 32.65 |
| 76.97 | $99^{\text {th }}$ | 30.30 | 84.03 | $99^{\text {th }}$ | 33.08 |



Functional Grip Reach, Extended

| Centimeters | FEMALE $\mathrm{N}=2208$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 74.56 | Mean | 29.35 |
| 3.61 | Std Dev | 1.42 |
| 92.40 | Maximum | 36.38 |
| 62.60 | Minimum | 24.65 |
|  | Percentiles |  |
| 66.55 | $1^{\text {st }}$ | 26.20 |
| 67.40 | $2^{\text {nd }}$ | 26.54 |
| 67.96 | $3{ }^{\text {rd }}$ | 26.76 |
| 68.73 | $5^{\text {th }}$ | 27.06 |
| 69.96 | $10^{\text {th }}$ | 27.54 |
| 70.80 | $15^{\text {th }}$ | 27.87 |
| 71.48 | $20^{\text {th }}$ | 28.14 |
| 72.07 | $25^{\text {th }}$ | 28.37 |
| 72.60 | $30^{\text {th }}$ | 28.58 |
| 73.09 | $35^{\text {th }}$ | 28.78 |
| 73.56 | $40^{\text {th }}$ | 28.96 |
| 74.02 | $45^{\text {th }}$ | 29.14 |
| 74.48 | $50^{\text {th }}$ | 29.32 |
| 74.94 | $55^{\text {th }}$ | 29.50 |
| 75.40 | $60^{\text {th }}$ | 29.69 |
| 75.89 | $65^{\text {th }}$ | 29.88 |
| 76.40 | $70^{\text {th }}$ | 30.08 |
| 76.96 | $75^{\text {th }}$ | 30.30 |
| 77.59 | $80^{\text {th }}$ | 30.55 |
| 78.33 | $85^{\text {th }}$ | 30.84 |
| 79.28 | $90^{\text {th }}$ | 31.21 |
| 80.70 | $95^{\text {th }}$ | 31.77 |
| 81.65 | $97^{\text {th }}$ | 32.15 |
| 82.36 | $98{ }^{\text {th }}$ | 32.42 |
| 83.50 | $99^{\text {th }}$ | 32.87 |


| Centimeters | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ | $\underline{\text { Inches }}$ |
| :---: | :---: | :---: |
|  |  |  |
| 81.82 | Mean | 32.21 |
| 3.91 | Std Dev | 1.54 |
| 98.60 | Maximum | 38.82 |
| 68.70 | Minimum | 27.05 |
|  | Percentiles |  |
| 72.88 | $1^{\text {st }}$ | 28.69 |
| 73.88 | $2^{\text {nd }}$ | 29.09 |
| 74.53 | $3^{\text {rd }}$ | 29.34 |
| 75.43 | $5^{\text {th }}$ | 29.70 |
| 76.83 | $10^{\text {dh }}$ | 30.25 |
| 77.79 | $15^{\text {th }}$ | 30.63 |
| 78.54 | $20^{\text {th }}$ | 30.92 |
| 79.19 | $25^{\text {th }}$ | 31.18 |
| 79.77 | $30^{\text {th }}$ | 31.41 |
| 80.30 | $35^{\text {th }}$ | 31.62 |
| 80.81 | $40^{\text {th }}$ | 31.82 |
| 81.30 | $45^{\text {th }}$ | 32.01 |
| 81.78 | $50^{\text {th }}$ | 32.20 |
| 82.27 | $55^{\text {th }}$ | 32.39 |
| 82.76 | $60^{\text {th }}$ | 32.58 |
| 83.27 | $65^{\text {th }}$ | 32.78 |
| 83.80 | $70^{\text {th }}$ | 32.99 |
| 84.39 | $75^{\text {th }}$ | 33.22 |
| 85.05 | $80^{\text {th }}$ | 33.49 |
| 85.83 | $85^{\text {th }}$ | 33.79 |
| 86.84 | $90^{\text {th }}$ | 34.19 |
| 88.41 | $95^{\text {th }}$ | 34.81 |
| 89.50 | $97^{\text {th }}$ | 35.24 |
| 90.33 | $98{ }^{\text {dh }}$ | 35.56 |
| 91.73 | $99^{\text {th }}$ | 36.11 |



Functional Leg Length, Seated

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathrm{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 101.20 | Mean | 39.84 | 108.21 | Mean | 42.60 |
| 4.91 | Std Dev | 1.93 | 5.10 | Std Dev | 2.01 |
| 118.00 | Maximum | 46.46 | 129.10 | Maximum | 50.83 |
| 81.90 | Minimum | 32.24 | 88.10 | Minimum | 34.69 |
|  | Percentiles |  |  | Percentiles |  |
| 89.76 | $1{ }^{\text {st }}$ | 35.34 | 96.90 | $1{ }^{\text {st }}$ | 38.15 |
| 91.20 | $2^{\text {nd }}$ | 35.91 | 98.26 | $2^{\text {nd }}$ | 38.69 |
| 92.09 | $3^{\text {rd }}$ | 36.25 | 99.09 | $3^{\text {rd }}$ | 39.01 |
| 93.25 | $5^{\text {th }}$ | 36.71 | 100.19 | $5^{\text {th }}$ | 39.44 |
| 94.99 | $10^{\text {th }}$ | 37.40 | 101.85 | $10^{\text {th }}$ | 40.10 |
| 96.15 | $15^{\text {th }}$ | 37.86 | 102.98 | $15^{\text {th }}$ | 40.54 |
| 97.07 | $20^{\text {th }}$ | 38.21 | 103.88 | $20^{\text {th }}$ | 40.90 |
| 97.86 | $25^{\text {th }}$ | 38.53 | 104.67 | $25^{\text {th }}$ | 41.21 |
| 98.57 | $30^{\text {th }}$ | 38.81 | 105.39 | $30^{\text {th }}$ | 41.49 |
| 99.22 | $35^{\text {th }}$ | 39.06 | 106.06 | $35^{\text {th }}$ | 41.76 |
| 99.85 | $40^{\text {th }}$ | 39.31 | 106.71 | $40^{\text {th }}$ | 42.01 |
| 100.47 | $45^{\text {th }}$ | 39.55 | 107.35 | $45^{\text {th }}$ | 42.26 |
| 101.08 | $50^{\text {th }}$ | 39.79 | 107.99 | $50^{\text {th }}$ | 42.52 |
| 101.70 | $55^{\text {th }}$ | 40.04 | 108.64 | $55^{\text {th }}$ | 42.77 |
| 102.32 | $60^{\text {th }}$ | 40.28 | 109.30 | $60^{\text {th }}$ | 43.03 |
| 102.98 | $65^{\text {th }}$ | 40.54 | 110.00 | $65^{\text {th }}$ | 43.31 |
| 103.67 | $70^{\text {th }}$ | 40.82 | 110.75 | $70^{\text {th }}$ | 43.60 |
| 104.43 | $75^{\text {th }}$ | 41.12 | 111.56 | $75^{\text {th }}$ | 43.92 |
| 105.29 | $80^{\text {th }}$ | 41.45 | 112.48 | $80^{\text {th }}$ | 44.28 |
| 106.28 | $85^{\text {th }}$ | 41.84 | 113.55 | $85^{\text {th }}$ | 44.71 |
| 107.55 | $90^{\text {th }}$ | 42.34 | 114.91 | $90^{\text {th }}$ | 45.24 |
| 109.42 | $95^{\text {th }}$ | 43.08 | 116.89 | $95^{\text {th }}$ | 46.02 |
| 110.62 | $97^{\text {th }}$ | 43.55 | 118.14 | $97^{\text {th }}$ | 46.51 |
| 111.49 | $98{ }^{\text {th }}$ | 43.89 | 119.02 | $98{ }^{\text {th }}$ | 46.86 |
| 112.82 | $99^{\text {th }}$ | 44.42 | 120.33 | $99^{\text {th }}$ | 47.38 |





## Hand Circumference

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 18.62 | Mean | 7.33 | 21.38 | Mean | 8.42 |
| . 85 | Std Dev | . 33 | . 97 | Std Dev | . 38 |
| 23.00 | Maximum | 9.06 | 24.70 | Maximum | 9.72 |
| 15.80 | Minimum | 6.22 | 18.20 | Minimum | 7.17 |
|  | Percentiles |  |  | Percentiles |  |
| 16.73 | $1^{\text {st }}$ | 6.59 | 19.16 | $1^{\text {st }}$ | 7.54 |
| 16.93 | $2^{\text {nd }}$ | 6.67 | 19.45 | $2^{\text {nd }}$ | 7.66 |
| 17.07 | $3^{\text {rd }}$ | 6.72 | 19.62 | $3{ }^{\text {rd }}$ | 7.72 |
| 17.25 | $5^{\text {th }}$ | 6.79 | 19.85 | $5^{\text {th }}$ | 7.81 |
| 17.55 | $10^{\text {th }}$ | 6.91 | 20.18 | $10^{\text {th }}$ | 7.94 |
| 17.75 | $15^{\text {th }}$ | 6.99 | 20.40 | $15^{\text {th }}$ | 8.03 |
| 17.91 | $20^{\text {th }}$ | 7.05 | 20.57 | $20^{\text {th }}$ | 8.10 |
| 18.04 | $25^{\text {th }}$ | 7.10 | 20.72 | $25^{\text {th }}$ | 8.16 |
| 18.17 | $30^{\text {th }}$ | 7.15 | 20.86 | $30^{\text {th }}$ | 8.21 |
| 18.28 | $35^{\text {th }}$ | 7.20 | 20.98 | $35^{\text {th }}$ | 8.26 |
| 18.39 | $40^{\text {th }}$ | 7.24 | 21.11 | $40^{\text {th }}$ | 8.31 |
| 18.50 | $45^{\text {th }}$ | 7.28 | 21.22 | $45^{\text {th }}$ | 8.36 |
| 18.60 | $50^{\text {th }}$ | 7.32 | 21.34 | $50^{\text {th }}$ | 8.40 |
| 18.70 | $55^{\text {th }}$ | 7.36 | 21.46 | $55^{\text {th }}$ | 8.45 |
| 18.81 | $60^{\text {th }}$ | 7.41 | 21.59 | $60^{\text {th }}$ | 8.50 |
| 18.92 | $65^{\text {th }}$ | 7.45 | 21.72 | $65^{\text {th }}$ | 8.55 |
| 19.04 | $70^{\text {th }}$ | 7.49 | 21.86 | $70^{\text {th }}$ | 8.61 |
| 19.16 | $75^{\text {th }}$ | 7.54 | 22.01 | $75^{\text {th }}$ | 8.67 |
| 19.30 | $80^{\text {th }}$ | 7.60 | 22.18 | $80^{\text {th }}$ | 8.73 |
| 19.47 | $85^{\text {th }}$ | 7.67 | 22.38 | $85^{\text {th }}$ | 8.81 |
| 19.69 | $90^{\text {th }}$ | 7.75 | 22.64 | $90^{\text {th }}$ | 8.92 |
| 20.03 | $95^{\text {th }}$ | 7.88 | 23.03 | $95^{\text {th }}$ | 9.07 |
| 20.25 | $97^{\text {th }}$ | 7.97 | 23.28 | $97^{\text {th }}$ | 9.17 |
| 20.43 | $98{ }^{\text {th }}$ | 8.04 | 23.46 | $98{ }^{\text {th }}$ | 9.24 |
| 20.72 | $99^{\text {th }}$ | 8.16 | 23.74 | $99^{\text {th }}$ | 9.35 |

Hand Length
$\left.\begin{array}{cccccc} & \begin{array}{c}\text { FEMALE } \\ \mathbf{N = 2 2 0 8}\end{array} & & & \begin{array}{c}\text { MALE } \\ \text { Centimeters }\end{array} & \\ \mathbf{N}=\mathbf{1 7 7 4}\end{array}\right]$


Hip Breadth
MALE
$\mathbf{N}=1774$

| Centimeters |
| :---: |
| 34.18 |
| 2.03 |
| 41.60 |
| 28.20 |
|  |
|  |
| 29.64 |
| 30.18 |
| 30.51 |
| 30.97 |
| 31.66 |
| 32.12 |
| 32.49 |
| 32.81 |
| 33.10 |
| 33.36 |
| 33.62 |
| 33.87 |
| 34.12 |
| 34.37 |
| 34.62 |
| 34.89 |
| 35.18 |
| 35.49 |
| 35.85 |
| 36.27 |
| 36.82 |
| 37.65 |
| 38.22 |
| 38.64 |
| 39.32 |




## Knee Height, Sitting

| Centimeters | FEMALE $\mathrm{N}=2208$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 51.54 | Mean | 20.29 |
| 2.63 | Std Dev | 1.04 |
| 63.30 | Maximum | 24.92 |
| 40.60 | Minimum | 15.98 |
|  | Percentiles |  |
| 45.47 | $1^{\text {st }}$ | 17.90 |
| 46.30 | $2^{\text {nd }}$ | 18.23 |
| 46.78 | $3{ }^{\text {rd }}$ | 18.42 |
| 47.40 | $5^{\text {th }}$ | 18.66 |
| 48.30 | $10^{\text {th }}$ | 19.02 |
| 48.89 | $15^{\text {th }}$ | 19.25 |
| 49.35 | $20^{\text {th }}$ | 19.42 |
| 49.76 | $25^{\text {th }}$ | 19.59 |
| 50.12 | $30^{\text {dh }}$ | 19.73 |
| 50.46 | $35^{\text {th }}$ | 19.87 |
| 50.79 | $40^{\text {th }}$ | 20.00 |
| 51.11 | $45^{\text {th }}$ | 20.12 |
| 51.43 | $50^{\text {th }}$ | 20.25 |
| 51.76 | $55^{\text {th }}$ | 20.38 |
| 52.10 | $60^{\text {dh }}$ | 20.51 |
| 52.46 | $65^{\text {th }}$ | 20.65 |
| 52.84 | $70^{\text {th }}$ | 20.80 |
| 53.26 | $75^{\text {th }}$ | 20.97 |
| 53.73 | $80^{\text {th }}$ | 21.15 |
| 54.28 | $85^{\text {th }}$ | 21.37 |
| 54.99 | $90^{\text {th }}$ | 21.65 |
| 56.02 | $95^{\text {th }}$ | 22.05 |
| 56.66 | $97^{\text {dh }}$ | 22.31 |
| 57.12 | $98{ }^{\text {th }}$ | 22.49 |
| 57.78 | $99^{\text {th }}$ | 22.75 |


| Centimeters | N = 1774 | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 55.88 | Mean | 22.00 |
| 2.79 | Std Dev | 1.10 |
| 67.50 | Maximum | 26.57 |
| 45.40 | Minimum | 17.87 |
|  | Percentiles |  |
| 49.66 | $1^{\text {st }}$ | 19.55 |
| 50.38 | $2^{\text {nd }}$ | 19.84 |
| 50.83 | $3{ }^{\text {rd }}$ | 20.01 |
| 51.44 | $5^{\text {th }}$ | 20.25 |
| 52.36 | $10^{\text {th }}$ | 20.62 |
| 53.00 | $15^{\text {th }}$ | 20.86 |
| 53.50 | $20^{\text {th }}$ | 21.06 |
| 53.95 | $25^{\text {th }}$ | 21.24 |
| 54.35 | $30^{\text {th }}$ | 21.40 |
| 54.73 | $35^{\text {th }}$ | 21.55 |
| 55.09 | $40^{\text {th }}$ | 21.69 |
| 55.44 | $45^{\text {th }}$ | 21.83 |
| 55.80 | $50^{\text {th }}$ | 21.97 |
| 56.16 | $55^{\text {th }}$ | 22.11 |
| 56.52 | $60^{\text {th }}$ | 22.25 |
| 56.90 | $65^{\text {th }}$ | 22.40 |
| 57.31 | $70^{\text {th }}$ | 22.56 |
| 57.75 | $75^{\text {th }}$ | 22.74 |
| 58.24 | $80^{\text {th }}$ | 22.93 |
| 58.82 | $85^{\text {th }}$ | 23.16 |
| 59.54 | $90^{\text {th }}$ | 23.44 |
| 61.57 | $95^{\text {th }}$ | 23.85 |
| 61.22 | $97^{\text {th }}$ | 24.10 |
| 61.67 | $98{ }^{\text {th }}$ | 24.28 |
| 62.34 | $99^{\text {th }}$ | 24.54 |



## Lower Arm

|  | FEMALE $N=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 24.34 | Mean | 9.58 | 26.99 | Mean | 10.62 |
| 1.55 | Std Dev | . 61 | 1.57 | Std Dev | . 62 |
| 31.20 | Maximum | 12.28 | 32.50 | Maximum | 12.80 |
| 15.70 | Minimum | 6.18 | 21.20 | Minimum | 8.35 |
|  | Percentiles |  |  | Percentiles |  |
| 20.97 | $1^{\text {st }}$ | 8.26 | 23.67 | $1{ }^{\text {st }}$ | 9.32 |
| 21.32 | $2^{\text {nd }}$ | 8.39 | 24.01 | $2^{\text {nd }}$ | 9.45 |
| 21.55 | $3^{\text {rd }}$ | 8.49 | 24.23 | $3{ }^{\text {rd }}$ | 9.54 |
| 21.87 | $5^{\text {th }}$ | 8.61 | 24.54 | $5^{\text {th }}$ | 9.66 |
| 22.39 | $10^{\text {th }}$ | 8.81 | 25.03 | $10^{\text {th }}$ | 9.85 |
| 22.74 | $15^{\text {th }}$ | 8.95 | 25.37 | $15^{\text {th }}$ | 9.99 |
| 23.03 | $20^{\text {th }}$ | 9.07 | 25.65 | $20^{\text {th }}$ | 10.10 |
| 23.28 | $25^{\text {th }}$ | 9.16 | 25.89 | $25^{\text {th }}$ | 10.19 |
| 23.50 | $30^{\text {th }}$ | 9.25 | 26.11 | $30^{\text {th }}$ | 10.28 |
| 23.71 | $35^{\text {th }}$ | 9.33 | 26.32 | $35^{\text {th }}$ | 10.36 |
| 23.91 | $40^{\text {th }}$ | 9.41 | 26.52 | $40^{\text {th }}$ | 10.44 |
| 24.10 | $45^{\text {th }}$ | 9.49 | 26.72 | $45^{\text {th }}$ | 10.52 |
| 24.30 | $50^{\text {th }}$ | 9.57 | 26.92 | $50^{\text {th }}$ | 10.60 |
| 24.49 | $55^{\text {th }}$ | 9.64 | 27.12 | $55^{\text {th }}$ | 10.68 |
| 24.69 | $60^{\text {th }}$ | 9.72 | 27.32 | $60^{\text {th }}$ | 10.76 |
| 24.89 | $65^{\text {th }}$ | 9.80 | 27.53 | $65^{\text {th }}$ | 10.84 |
| 25.11 | $70^{\text {th }}$ | 9.89 | 27.76 | $70^{\text {th }}$ | 10.93 |
| 25.35 | $75^{\text {th }}$ | 9.98 | 28.01 | $75^{\text {th }}$ | 11.03 |
| 25.62 | $80^{\text {th }}$ | 10.09 | 28.29 | $80^{\text {th }}$ | 11.14 |
| 25.93 | $85^{\text {th }}$ | 10.21 | 28.62 | $85^{\text {th }}$ | 11.27 |
| 26.33 | $90^{\text {th }}$ | 10.37 | 29.05 | $90^{\text {th }}$ | 11.44 |
| 26.94 | $95^{\text {th }}$ | 10.61 | 29.69 | $95^{\text {th }}$ | 11.69 |
| 27.35 | $97^{\text {th }}$ | 10.77 | 30.11 | $97^{\text {th }}$ | 11.85 |
| 27.65 | $98{ }^{\text {th }}$ | 10.89 | 30.42 | $98{ }^{\text {th }}$ | 11.98 |
| 28.14 | $99^{\text {th }}$ | 11.08 | 30.92 | $99^{\text {th }}$ | 12.17 |

Lower Leg

| Centimeters | FEMALE <br> $\mathbf{N}=\mathbf{2 2 0 8}$ |  |
| :---: | :---: | :---: |
| $\mathbf{4 5 . 8 7}$ | Mean <br> Std Dev | Inches <br> .61 |
| 58.40 | 18.06 <br> Maximum <br> Minimum | 22.99 |
| 35.80 |  | 14.09 |
|  | Percentiles |  |
| 39.94 | $1^{\text {st }}$ | 15.73 |
| 40.64 | $2^{\text {nd }}$ | 16.00 |
| 41.07 | $3^{\text {rd }}$ | 16.17 |
| 41.67 | $5^{\text {th }}$ | 16.40 |
| 42.58 | $10^{\text {th }}$ | 16.76 |
| 43.19 | $15^{\text {th }}$ | 17.00 |
| 43.68 | $20^{\text {th }}$ | 17.20 |
| 44.10 | $25^{\text {th }}$ | 17.36 |
| 44.48 | $30^{\text {th }}$ | 17.51 |
| 44.83 | $35^{\text {th }}$ | 17.65 |
| 45.16 | $40^{\text {th }}$ | 17.78 |
| 45.48 | $45^{\text {th }}$ | 17.91 |
| 45.81 | $50^{\text {th }}$ | 18.03 |
| 46.13 | $55^{\text {th }}$ | 18.16 |
| 46.46 | $60^{\text {th }}$ | 18.29 |
| 46.81 | $65^{\text {th }}$ | 18.43 |
| 47.17 | $70^{\text {th }}$ | 18.57 |
| 47.57 | $75^{\text {th }}$ | 18.73 |
| 48.02 | $80^{\text {th }}$ | 18.91 |
| 48.55 | $85^{\text {th }}$ | 19.11 |
| 49.23 | $90^{\text {th }}$ | 19.38 |
| 50.25 | $95^{\text {th }}$ | 19.78 |
| 50.94 | $97^{\text {th }}$ | 20.05 |
| 51.45 | $98^{\text {th }}$ | 20.26 |
| 52.27 | $99^{\text {th }}$ | 20.58 |
|  |  |  |

MALE
$\mathrm{N}=1774$

| Centimeters |  | Inches |
| :---: | :---: | :---: |
| 50.48 | Mean | 19.88 |
| 2.76 | Std Dev | 1.09 |
| 62.00 | Maximum | 24.41 |
| 40.60 | Minimum | 15.98 |
|  | Percentiles |  |
| 44.30 | $1{ }^{\text {st }}$ | 17.44 |
| 45.05 | $2^{\text {nd }}$ | 17.74 |
| 45.50 | $3^{\text {rd }}$ | 17.91 |
| 46.10 | $5^{\text {th }}$ | 18.15 |
| 47.01 | $10^{\text {th }}$ | 18.51 |
| 47.63 | $15^{\text {th }}$ | 18.75 |
| 48.13 | $20^{\text {th }}$ | 18.95 |
| 48.56 | $25^{\text {th }}$ | 19.12 |
| 48.96 | $30^{\text {th }}$ | 19.27 |
| 49.33 | $35^{\text {th }}$ | 19.42 |
| 49.69 | $40^{\text {th }}$ | 19.56 |
| 50.04 | $45^{\text {th }}$ | 19.70 |
| 50.39 | $50^{\text {th }}$ | 19.84 |
| 50.75 | $55^{\text {th }}$ | 19.98 |
| 51.11 | $60^{\text {th }}$ | 20.12 |
| 51.49 | $65^{\text {th }}$ | 20.27 |
| 51.90 | $70^{\text {th }}$ | 20.43 |
| 52.34 | $75^{\text {th }}$ | 20.61 |
| 52.84 | $80^{\text {th }}$ | 20.80 |
| 53.41 | $85^{\text {th }}$ | 21.03 |
| 54.13 | $90^{\text {th }}$ | 21.31 |
| 55.16 | $95^{\text {th }}$ | 21.72 |
| 55.78 | $97^{\text {th }}$ | 21.96 |
| 56.21 | $98^{\text {th }}$ | 22.13 |
| 56.81 | $99^{\text {th }}$ | 22.37 |



Overhead Fingertip Reach, Sitting

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathrm{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 132.65 | Mean | 52.22 | 143.38 | Mean | 56.45 |
| 5.59 | Std Dev | 2.20 | 5.90 | Std Dev | 2.32 |
| 151.40 | Maximum | 59.61 | 169.30 | Maximum | 66.65 |
| 112.90 | Minimum | 44.45 | 116.40 | Minimum | 45.83 |
|  | Percentiles |  |  | Percentiles |  |
| 119.72 | $1{ }^{\text {st }}$ | 47.13 | 129.31 | $1{ }^{\text {st }}$ | 50.91 |
| 121.12 | $2^{\text {nd }}$ | 47.69 | 131.19 | $2^{\text {nd }}$ | 51.65 |
| 122.05 | $3{ }^{\text {rd }}$ | 48.05 | 132.32 | $3{ }^{\text {rd }}$ | 52.09 |
| 123.33 | $5^{\text {th }}$ | 48.55 | 133.78 | $5^{\text {th }}$ | 52.67 |
| 125.35 | $10^{\text {th }}$ | 49.35 | 135.93 | $10^{\text {th }}$ | 53.52 |
| 126.75 | $15^{\text {th }}$ | 49.90 | 137.35 | $15^{\text {th }}$ | 54.07 |
| 127.85 | $20^{\text {th }}$ | 50.34 | 138.46 | $20^{\text {th }}$ | 54.51 |
| 128.81 | $25^{\text {th }}$ | 50.71 | 139.42 | $25^{\text {th }}$ | 54.89 |
| 129.68 | $30^{\text {th }}$ | 51.05 | 140.28 | $30^{\text {th }}$ | 55.23 |
| 130.47 | $35^{\text {th }}$ | 51.37 | 141.07 | $35^{\text {th }}$ | 55.54 |
| 131.22 | $40^{\text {th }}$ | 51.66 | 141.84 | $40^{\text {th }}$ | 55.84 |
| 131.95 | $45^{\text {th }}$ | 51.95 | 142.58 | $45^{\text {th }}$ | 56.13 |
| 132.67 | $50^{\text {th }}$ | 52.23 | 143.32 | $50^{\text {th }}$ | 56.42 |
| 133.39 | $55^{\text {th }}$ | 52.51 | 144.06 | $55^{\text {th }}$ | 56.72 |
| 134.11 | $60^{\text {th }}$ | 52.80 | 144.82 | $60^{\text {th }}$ | 57.02 |
| 134.85 | $65^{\text {th }}$ | 53.09 | 145.61 | $65^{\text {th }}$ | 57.33 |
| 135.63 | $70^{\text {th }}$ | 53.40 | 146.45 | $70^{\text {th }}$ | 57.66 |
| 136.47 | $75^{\text {th }}$ | 53.73 | 147.36 | $75^{\text {th }}$ | 58.01 |
| 137.40 | $80^{\text {th }}$ | 54.09 | 148.38 | $80^{\text {th }}$ | 58.42 |
| 138.47 | $85^{\text {th }}$ | 54.52 | 149.56 | $85^{\text {th }}$ | 58.88 |
| 139.81 | $90^{\text {th }}$ | 55.04 | 151.04 | $90^{\text {th }}$ | 59.46 |
| 141.77 | $95^{\text {th }}$ | 55.81 | 153.17 | $95^{\text {th }}$ | 60.30 |
| 143.03 | $97^{\text {th }}$ | 56.31 | 154.48 | $97^{\text {th }}$ | 60.82 |
| 143.94 | $98{ }^{\text {th }}$ | 56.67 | 155.39 | $98{ }^{\text {th }}$ | 61.18 |
| 145.38 | $99^{\text {th }}$ | 57.24 | 156.72 | $99^{\text {th }}$ | 61.70 |



Popliteal Height

| FEMALE$\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Inches | Centimeters |  | Inches |
| Mean | 15.33 | 43.41 | Mean | 17.09 |
| Std Dev | . 93 | 2.49 | Std Dev | . 98 |
| Maximum | 19.69 | 54.70 | Maximum | 21.54 |
| Minimum | 11.77 | 33.80 | Minimum | 13.31 |
| Percentiles |  |  | Percentiles |  |
| $1{ }^{\text {st }}$ | 13.25 | 37.83 | $1{ }^{\text {st }}$ | 14.89 |
| $2^{\text {nd }}$ | 13.48 | 38.49 | $2^{\text {nd }}$ | 15.15 |
| $3^{\text {rd }}$ | 13.63 | 38.90 | $3{ }^{\text {rd }}$ | 15.32 |
| $5^{\text {th }}$ | 13.83 | 39.46 | $5^{\text {th }}$ | 15.53 |
| $10^{\text {th }}$ | 14.14 | 40.30 | $10^{\text {th }}$ | 15.86 |
| $15^{\text {th }}$ | 14.36 | 40.86 | $15^{\text {th }}$ | 16.09 |
| $20^{\text {th }}$ | 14.53 | 41.31 | $20^{\text {th }}$ | 16.26 |
| $25^{\text {th }}$ | 14.39 | 41.70 | $25^{\text {th }}$ | 16.42 |
| $30^{\text {th }}$ | 14.82 | 42.06 | $30^{\text {th }}$ | 16.56 |
| $35^{\text {th }}$ | 14.95 | 42.39 | $35^{\text {th }}$ | 16.69 |
| $40^{\text {th }}$ | 15.07 | 42.70 | $40^{\text {th }}$ | 16.81 |
| $45^{\text {th }}$ | 15.19 | 43.01 | $45^{\text {th }}$ | 16.93 |
| $50^{\text {th }}$ | 15.31 | 43.32 | $50^{\text {th }}$ | 17.06 |
| $55^{\text {th }}$ | 15.43 | 43.63 | $55^{\text {th }}$ | 17.18 |
| $60^{\text {th }}$ | 15.55 | 43.95 | $60^{\text {th }}$ | 17.30 |
| $65^{\text {th }}$ | 15.68 | 44.28 | $65^{\text {th }}$ | 17.43 |
| $70^{\text {th }}$ | 15.81 | 44.64 | $70^{\text {th }}$ | 17.57 |
| $75^{\text {th }}$ | 15.96 | 45.03 | $75^{\text {th }}$ | 17.73 |
| $80^{\text {th }}$ | 16.12 | 45.47 | $80^{\text {th }}$ | 17.90 |
| $85^{\text {th }}$ | 16.31 | 45.98 | $85^{\text {th }}$ | 18.10 |
| $90^{\text {th }}$ | 16.55 | 46.64 | $90^{\text {th }}$ | 18.36 |
| $95^{\text {th }}$ | 16.91 | 47.63 | $95^{\text {th }}$ | 18.75 |
| $97^{\text {th }}$ | 17.14 | 48.28 | $97^{\text {th }}$ | 19.01 |
| $98^{\text {th }}$ | 17.31 | 48.75 | $98{ }^{\text {th }}$ | 19.19 |
| $99^{\text {th }}$ | 17.57 | 49.49 | $99^{\text {th }}$ | 19.48 |



|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{aligned} & \text { MALE } \\ & \mathbf{N}=\mathbf{1 7 7 4} \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 133.36 | Mean | 52.50 | 144.25 | Mean | 56.79 |
| 5.79 | Std Dev | 2.28 | 6.20 | Std Dev | 2.44 |
| 156.5 | Maximum | 61.61 | 170.4 | Maximum | 67.09 |
| 113.9 | Minimum | 44.84 | 118.2 | Minimum | 46.54 |
|  | Percentiles |  |  | Percentiles |  |
| 119.82 | $1^{\text {st }}$ | 47.17 | 129.86 | $1{ }^{\text {st }}$ | 51.13 |
| 121.63 | $2^{\text {nd }}$ | 47.89 | 131.62 | $2^{\text {nd }}$ | 51.82 |
| 122.70 | $3^{\text {rd }}$ | 48.31 | 132.71 | $3{ }^{\text {rd }}$ | 52.25 |
| 124.09 | $5^{\text {th }}$ | 48.85 | 134.16 | $5^{\text {th }}$ | 52.82 |
| 126.12 | $10^{\text {th }}$ | 49.65 | 136.35 | $10^{\text {th }}$ | 53.68 |
| 127.45 | $15^{\text {th }}$ | 50.18 | 137.83 | $15^{\text {th }}$ | 54.26 |
| 128.49 | $20^{\text {th }}$ | 50.59 | 139.00 | $20^{\text {th }}$ | 54.72 |
| 129.40 | $25^{\text {th }}$ | 50.95 | 140.02 | $25^{\text {th }}$ | 55.13 |
| 130.22 | $30^{\text {th }}$ | 51.27 | 140.93 | $30^{\text {th }}$ | 55.49 |
| 130.99 | $35^{\text {th }}$ | 51.57 | 141.78 | $35^{\text {th }}$ | 55.82 |
| 131.72 | $40^{\text {th }}$ | 51.86 | 142.60 | $40^{\text {th }}$ | 56.14 |
| 132.44 | $45^{\text {th }}$ | 52.14 | 143.39 | $45^{\text {th }}$ | 56.45 |
| 133.16 | $50^{\text {th }}$ | 52.43 | 144.18 | $50^{\text {th }}$ | 56.76 |
| 133.90 | $55^{\text {th }}$ | 52.72 | 144.97 | $55^{\text {th }}$ | 57.07 |
| 134.65 | $60^{\text {th }}$ | 53.01 | 145.77 | $60^{\text {th }}$ | 57.39 |
| 135.43 | $65^{\text {th }}$ | 53.32 | 146.61 | $65^{\text {th }}$ | 57.72 |
| 136.27 | $70^{\text {th }}$ | 53.65 | 147.50 | $70^{\text {th }}$ | 58.07 |
| 137.19 | $75^{\text {th }}$ | 54.01 | 148.46 | $75^{\text {th }}$ | 58.45 |
| 138.23 | $80^{\text {th }}$ | 54.42 | 149.53 | $80^{\text {th }}$ | 58.87 |
| 139.44 | $85^{\text {th }}$ | 54.90 | 150.77 | $85^{\text {th }}$ | 59.36 |
| 140.97 | $90^{\text {th }}$ | 55.50 | 152.32 | $90^{\text {th }}$ | 59397 |
| 143.20 | $95^{\text {th }}$ | 56.38 | 154.56 | $95^{\text {th }}$ | 60.85 |
| 144.59 | $97^{\text {th }}$ | 56.93 | 155.95 | $97^{\text {th }}$ | 61.40 |
| 145.57 | $98{ }^{\text {th }}$ | 57.31 | 156.93 | $98{ }^{\text {th }}$ | 61.79 |
| 146.99 | $99^{\text {th }}$ | 57.87 | 158.38 | $99^{\text {th }}$ | 62.35 |



Shoulder Height, Sitting

| Centimeters | FEMALE$\mathrm{N}=2208$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 55.55 | Mean | 21.87 |
| 2.86 | Std Dev | 1.13 |
| 66.40 | Maximum | 26.14 |
| 46.40 | Minimum | 18.27 |
|  | Percentiles |  |
| 49.24 | $1{ }^{\text {st }}$ | 19.38 |
| 49.88 | $2^{\text {nd }}$ | 19.64 |
| 50.31 | $3{ }^{\text {rd }}$ | 19.81 |
| 50.91 | $5^{\text {th }}$ | 20.04 |
| 51.87 | $10^{\text {th }}$ | 20.42 |
| 52.54 | $15^{\text {th }}$ | 20.69 |
| 53.09 | $20^{\text {th }}$ | 20.90 |
| 53.56 | $25^{\text {th }}$ | 21.09 |
| 53.99 | $30^{\text {th }}$ | 21.26 |
| 54.39 | $35^{\text {d }}$ | 21.41 |
| 54.77 | $40^{\text {th }}$ | 21.56 |
| 55.14 | $45^{\text {th }}$ | 21.71 |
| 55.51 | $50^{\text {th }}$ | 21.85 |
| 55.88 | $55^{\text {th }}$ | 22.00 |
| 56.25 | $60^{\text {th }}$ | 22.15 |
| 56.64 | $65^{\text {d }}$ | 22.30 |
| 57.05 | $70^{\text {th }}$ | 22.46 |
| 57.50 | $75^{\text {th }}$ | 22.64 |
| 57.99 | $80^{\text {th }}$ | 22.83 |
| 58.57 | $85^{\text {th }}$ | 23.06 |
| 59.29 | $90^{\text {th }}$ | 23.34 |
| 60.36 | $95^{\text {d }}$ | 23.76 |
| 61.05 | $97^{\text {th }}$ | 24.03 |
| 61.55 | $98^{\text {th }}$ | 24.23 |
| 62.33 | $99^{\text {dh }}$ | 24.54 |


|  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |
| :---: | :---: | :---: |
| Centimeters |  | Inches |
| 59.78 | Mean | 23.53 |
| 2.96 | Std Dev | 1.16 |
| 69.50 | Maximum | 27.36 |
| 50.10 | Minimum | 19.72 |
|  | Percentiles |  |
| 52.52 | $1{ }^{\text {st }}$ | 20.68 |
| 53.49 | $2^{\text {nd }}$ | 21.06 |
| 54.08 | $3^{\text {rd }}$ | 21.29 |
| 54.85 | $5^{\text {th }}$ | 21.59 |
| 55.98 | $10^{\text {th }}$ | 22.04 |
| 56.73 | $15^{\text {th }}$ | 22.33 |
| 57.31 | $20^{\text {th }}$ | 22.56 |
| 57.81 | $25^{\text {th }}$ | 22.76 |
| 58.25 | $30^{\text {th }}$ | 22.93 |
| 58.66 | $35^{\text {th }}$ | 23.10 |
| 59.05 | $40^{\text {th }}$ | 23.25 |
| 59.43 | $45^{\text {th }}$ | 23.40 |
| 59.80 | $50^{\text {th }}$ | 23.54 |
| 60.17 | $55^{\text {th }}$ | 23.69 |
| 60.55 | $60^{\text {th }}$ | 23.84 |
| 60.94 | $65^{\text {th }}$ | 23.99 |
| 61.35 | $70^{\text {th }}$ | 24.15 |
| 61.79 | $75^{\text {th }}$ | 24.33 |
| 62.29 | $80^{\text {th }}$ | 24.52 |
| 62.86 | $85^{\text {th }}$ | 24.75 |
| 63.58 | $90^{\text {th }}$ | 25.03 |
| 64.63 | $95^{\text {th }}$ | 25.44 |
| 65.28 | $97^{\text {th }}$ | 25.70 |
| 65.75 | $98{ }^{\text {dh }}$ | 25.89 |
| 66.45 | $99^{\text {th }}$ | 26.16 |



Shoulder-Elbow Length


Shoulder-Waist Length (Omphalion)

| Centimeters | FEMALE <br> $\mathbf{N}=\mathbf{2 2 0 8}$ |  |
| :---: | :---: | :---: |
| $\mathbf{3 5 . 1 5}$ | Mean <br> Std Dev | Inches <br> 2.28 |
| 44.20 | Maximum <br> Minimum | .90 |
| 27.80 |  | 17.40 |
|  | Percentiles |  |
| 30.94 | $1^{\text {st }}$ | 11.87 |
| 30.69 | $2^{\text {nd }}$ | 12.08 |
| 31.04 | $3^{\text {rd }}$ | 12.22 |
| 31.53 | $5^{\text {th }}$ | 12.41 |
| 32.28 | $10^{\text {th }}$ | 12.71 |
| 32.80 | $15^{\text {th }}$ | 12.97 |
| 33.21 | $20^{\text {th }}$ | 13.07 |
| 33.57 | $25^{\text {th }}$ | 13.22 |
| 33.90 | $30^{\text {th }}$ | 13.35 |
| 34.21 | $35^{\text {th }}$ | 13.47 |
| 34.50 | $40^{\text {th }}$ | 13.58 |
| 34.79 | $45^{\text {th }}$ | 13.70 |
| 35.07 | $50^{\text {th }}$ | 13.81 |
| 35.36 | $55^{\text {th }}$ | 13.92 |
| 35.65 | $60^{\text {th }}$ | 14.04 |
| 35.96 | $65^{\text {th }}$ | 14.16 |
| 36.29 | $70^{\text {th }}$ | 14.29 |
| 36.65 | $75^{\text {th }}$ | 14.43 |
| 37.05 | $80^{\text {th }}$ | 14.59 |
| 37.52 | $85^{\text {th }}$ | 14.77 |
| 38.13 | $90^{\text {th }}$ | 15.01 |
| 39.06 | $95^{\text {th }}$ | 15.38 |
| 39.67 | $97^{\text {th }}$ | 15.62 |
| 40.12 | $98^{\text {th }}$ | 15.80 |
| 40.85 | $99^{\text {th }}$ | 16.08 |
|  |  |  |


| Centimeters | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 38.37 | Mean | 15.11 |
| 2.56 | Std Dev | 1.01 |
| 48.30 | Maximum | 19.02 |
| 30.50 | Minimum | 12.01 |
|  | Percentiles |  |
| 32.65 | $1{ }^{\text {st }}$ | 12.85 |
| 33.29 | $2^{\text {nd }}$ | 13.11 |
| 33.70 | $3{ }^{\text {rd }}$ | 13.27 |
| 34.27 | $5^{\text {th }}$ | 13.49 |
| 35.15 | $10^{\text {th }}$ | 13.84 |
| 35.74 | $15^{\text {th }}$ | 14.07 |
| 36.22 | $20^{\text {th }}$ | 14.26 |
| 36.63 | $25^{\text {th }}$ | 14.42 |
| 37.00 | $30^{\text {th }}$ | 14.57 |
| 37.34 | $35^{\text {th }}$ | 14.70 |
| 37.64 | $40^{\text {th }}$ | 14.83 |
| 37.99 | $45^{\text {th }}$ | 14.95 |
| 38.30 | $50^{\text {th }}$ | 15.08 |
| 38.62 | $55^{\text {th }}$ | 15.20 |
| 38.94 | $60^{\text {th }}$ | 15.33 |
| 39.28 | $65^{\text {th }}$ | 15.46 |
| 39.63 | $70^{\text {th }}$ | 15.60 |
| 40.02 | $75^{\text {th }}$ | 15.76 |
| 40.47 | $80^{\text {th }}$ | 15.93 |
| 40.99 | $85^{\text {th }}$ | 16.14 |
| 41.67 | $90^{\text {th }}$ | 16.40 |
| 42.72 | $95^{\text {th }}$ | 16.82 |
| 43.43 | $97^{\text {th }}$ | 17.10 |
| 43.98 | $98^{\text {th }}$ | 17.31 |
| 44.88 | $99^{\text {th }}$ | 17.67 |



Sitting Height

| Centimeters | FEMALE $N=2208$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 85.20 | Mean | 33.54 |
| 3.49 | Std Dev | 1.37 |
| 97.10 | Maximum | 38.23 |
| 74.80 | Minimum | 29.45 |
|  | Percentiles |  |
| 77.48 | $1{ }^{\text {st }}$ | 30.50 |
| 78.27 | $2^{\text {nd }}$ | 30.81 |
| 78.79 | $3^{\text {rd }}$ | 31.02 |
| 79.53 | $5^{\text {th }}$ | 31.31 |
| 80.70 | $10^{\text {th }}$ | 31.77 |
| 81.52 | $15^{\text {th }}$ | 32.09 |
| 82.18 | $20^{\text {th }}$ | 32.35 |
| 82.76 | $25^{\text {th }}$ | 32.58 |
| 83.28 | $30^{\text {th }}$ | 32.79 |
| 83.77 | $35^{\text {th }}$ | 32.98 |
| 84.23 | $40^{\text {th }}$ | 33.16 |
| 84.69 | $45^{\text {th }}$ | 33.34 |
| 85.14 | $50^{\text {th }}$ | 33.52 |
| 85.59 | $55^{\text {th }}$ | 33.70 |
| 86.05 | $60^{\text {th }}$ | 33.88 |
| 86.52 | $65^{\text {th }}$ | 34.06 |
| 87.02 | $70^{\text {th }}$ | 34.26 |
| 87.57 | $75^{\text {th }}$ | 34.48 |
| 88.17 | $80^{\text {th }}$ | 34.71 |
| 88.87 | $85^{\text {th }}$ | 34.99 |
| 89.75 | $90^{\text {th }}$ | 35.33 |
| 91.02 | $95^{\text {th }}$ | 35.84 |
| 91.83 | $97^{\text {th }}$ | 36.15 |
| 92.42 | $98{ }^{\text {th }}$ | 36.38 |
| 93.31 | $99^{\text {th }}$ | 36.74 |

MALE
$\mathbf{N}=\mathbf{1 7 7 4}$

| Centimeters |  | Inches |
| :---: | :---: | :---: |
| 91.39 | Mean | 35.98 |
| 3.56 | Std Dev | 1.40 |
| 103.20 | Maximum | 40.63 |
| 80.80 | Minimum | 31.81 |
|  | Percentiles |  |
| 82.79 | $1{ }^{\text {st }}$ | 32.59 |
| 83.88 | $2^{\text {nd }}$ | 33.02 |
| 84.55 | $3{ }^{\text {rd }}$ | 33.29 |
| 85.45 | $5^{\text {th }}$ | 33.67 |
| 86.79 | $10^{\text {th }}$ | 34.17 |
| 87.68 | $15^{\text {th }}$ | 34.52 |
| 88.38 | $20^{\text {th }}$ | 34.80 |
| 88.99 | $25^{\text {th }}$ | 35.03 |
| 89.53 | $30^{\text {th }}$ | 35.25 |
| 90.03 | $35^{\text {th }}$ | 35.44 |
| 90.51 | $40^{\text {th }}$ | 35.63 |
| 90.97 | $45^{\text {th }}$ | 35.81 |
| 91.42 | $50^{\text {th }}$ | 35.99 |
| 91.88 | $55^{\text {th }}$ | 36.17 |
| 92.34 | $60^{\text {th }}$ | 36.35 |
| 92.82 | $65^{\text {th }}$ | 36.54 |
| 93.32 | $70^{\text {dh }}$ | 36.47 |
| 93.86 | $75^{\text {th }}$ | 36.95 |
| 94.46 | $80^{\text {th }}$ | 37.19 |
| 95.14 | $85^{\text {th }}$ | 37.46 |
| 95.99 | $90^{\text {th }}$ | 37.79 |
| 97.19 | $95^{\text {th }}$ | 38.26 |
| 97.91 | $97^{\text {dh }}$ | 38.55 |
| 98.42 | $98{ }^{\text {th }}$ | 38.75 |
| 99.14 | $99^{\text {th }}$ | 39.03 |



Sleeve Inseam

| Centimeters | FEMALE <br> $\mathbf{N}=\mathbf{2 2 0 8}$ |  |
| :---: | :---: | :---: |
| 44.33 | Mean <br> Std Dev | Inches <br> .95 |
| 55.30 | 17.45 <br> Maximum <br> Minimum | 27.16 |
| 32.60 |  | 12.83 |
|  | Percentiles |  |
| 37.79 | $1^{\text {st }}$ | 14.88 |
| 38.47 | $2^{\text {nd }}$ | 15.15 |
| 38.92 | $3^{\text {rd }}$ | 15.32 |
| 39.54 | $5^{\text {th }}$ | 15.57 |
| 40.54 | $10^{\text {th }}$ | 15.96 |
| 41.24 | $15^{\text {th }}$ | 16.24 |
| 41.80 | $20^{\text {th }}$ | 16.46 |
| 42.29 | $25^{\text {th }}$ | 16.65 |
| 42.73 | $30^{\text {th }}$ | 16.82 |
| 43.14 | $35^{\text {th }}$ | 16.98 |
| 43.53 | $40^{\text {th }}$ | 17.14 |
| 43.91 | $45^{\text {th }}$ | 17.29 |
| 44.28 | $50^{\text {th }}$ | 17.43 |
| 44.66 | $55^{\text {th }}$ | 17.58 |
| 45.04 | $60^{\text {th }}$ | 17.73 |
| 45.44 | $65^{\text {th }}$ | 17.89 |
| 45.86 | $70^{\text {th }}$ | 18.05 |
| 46.31 | $75^{\text {th }}$ | 18.23 |
| 46.82 | $80^{\text {th }}$ | 18.43 |
| 47.41 | $85^{\text {th }}$ | 18.66 |
| 48.15 | $90^{\text {th }}$ | 18.96 |
| 49.25 | $95^{\text {th }}$ | 19.39 |
| 49.97 | $97^{\text {th }}$ | 19.67 |
| 50.50 | $98^{\text {th }}$ | 19.88 |
| 51.34 | $99^{\text {th }}$ | 20.21 |


| Centimeters | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 47.43 | Mean | 18.67 |
| 2.97 | Std Dev | 1.17 |
| 59.00 | Maximum | 23.23 |
| 36.90 | Minimum | 14.53 |
|  | Percentiles |  |
| 40.94 | $1^{\text {st }}$ | 16.12 |
| 41.58 | $2^{\text {nd }}$ | 16.37 |
| 42.02 | $3^{\text {rd }}$ | 16.54 |
| 42.64 | $5^{\text {th }}$ | 16.79 |
| 43.63 | $10^{\text {th }}$ | 17.18 |
| 44.32 | $15^{\text {th }}$ | 17.45 |
| 44.88 | $20^{\text {th }}$ | 17.67 |
| 45.38 | $25^{\text {th }}$ | 17.86 |
| 45.82 | $30^{\text {th }}$ | 18.04 |
| 46.23 | $35^{\text {th }}$ | 18.20 |
| 46.62 | $40^{\text {th }}$ | 18.36 |
| 47.00 | $45^{\text {th }}$ | 18.51 |
| 47.38 | $50^{\text {th }}$ | 18.65 |
| 47.76 | $55^{\text {th }}$ | 18.80 |
| 48.15 | $60^{\text {th }}$ | 18.96 |
| 48.55 | $65^{\text {th }}$ | 19.11 |
| 48.97 | $70^{\text {th }}$ | 19.28 |
| 49.42 | $75^{\text {th }}$ | 19.46 |
| 49.94 | $80^{\text {th }}$ | 19.66 |
| 50.53 | $85^{\text {th }}$ | 19.89 |
| 51.28 | $90^{\text {th }}$ | 20.19 |
| 52.40 | $95^{\text {th }}$ | 20.63 |
| 53.13 | $97^{\text {th }}$ | 20.92 |
| 53.67 | $98{ }^{\text {th }}$ | 21.13 |
| 54.33 | $99^{\text {th }}$ | 21.47 |



|  | FEMALE $N=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 167.19 | Mean | 65.82 | 182.31 | Mean | 71.77 |
| 8.13 | Std Dev | 3.20 | 8.19 | Std Dev | 3.23 |
| 196.80 | Maximum | 77.48 | 215.90 | Maximum | 85.00 |
| 135.60 | Minimum | 53.39 | 147.40 | Minimum | 58.03 |
|  | Percentiles |  |  | Percentiles |  |
| 148.81 | $1^{\text {st }}$ | 58.89 | 164.79 | $1{ }^{\text {st }}$ | 64.88 |
| 151.02 | $2^{\text {nd }}$ | 59.46 | 166.53 | $2^{\text {nd }}$ | 65.56 |
| 152.38 | $3^{\text {rd }}$ | 59.99 | 167.68 | $3^{\text {rd }}$ | 66.02 |
| 154.21 | $5^{\text {th }}$ | 60.71 | 169.31 | $5^{\text {th }}$ | 66.66 |
| 157.00 | $10^{\text {th }}$ | 61.81 | 171.94 | $10^{\text {th }}$ | 67.69 |
| 158.88 | $15^{\text {th }}$ | 62.55 | 173.78 | $15^{\text {th }}$ | 68.42 |
| 160.37 | $20^{\text {th }}$ | 63.14 | 175.28 | $20^{\text {th }}$ | 69.01 |
| 161.67 | $25^{\text {th }}$ | 63.65 | 176.60 | $25^{\text {th }}$ | 69.53 |
| 162.85 | $30^{\text {th }}$ | 64.11 | 177.80 | $30^{\text {th }}$ | 70.00 |
| 163.94 | $35^{\text {th }}$ | 64.54 | 178.92 | $35^{\text {th }}$ | 70.44 |
| 164.98 | $40^{\text {th }}$ | 64.95 | 179.99 | $40^{\text {th }}$ | 70.86 |
| 166.00 | $45^{\text {th }}$ | 65.36 | 181.04 | $45^{\text {th }}$ | 71.28 |
| 167.02 | $50^{\text {th }}$ | 65.76 | 182.09 | $50^{\text {th }}$ | 71.69 |
| 168.04 | $55^{\text {th }}$ | 66.16 | 183.14 | $55^{\text {th }}$ | 72.10 |
| 169.09 | $60^{\text {th }}$ | 66.57 | 184.21 | $60^{\text {th }}$ | 72.52 |
| 170.18 | $65^{\text {th }}$ | 67.00 | 185.32 | $65^{\text {th }}$ | 72.96 |
| 171.33 | $70^{\text {th }}$ | 67.45 | 186.50 | $70^{\text {th }}$ | 73.42 |
| 172.60 | $75^{\text {th }}$ | 67.95 | 187.77 | $75^{\text {th }}$ | 73.93 |
| 174.02 | $80^{\text {th }}$ | 68.51 | 189.21 | $80^{\text {th }}$ | 74.49 |
| 175.67 | $85^{\text {th }}$ | 69.16 | 190.86 | $85^{\text {th }}$ | 75.14 |
| 177.76 | $90^{\text {th }}$ | 69.99 | 192.96 | $90^{\text {th }}$ | 75.97 |
| 180.86 | $95^{\text {th }}$ | 71.20 | 196.03 | $95^{\text {th }}$ | 77.18 |
| 182.84 | $97^{\text {th }}$ | 71.98 | 197.99 | $97^{\text {th }}$ | 77.95 |
| 184.27 | $98{ }^{\text {th }}$ | 72.55 | 199.42 | $98{ }^{\text {th }}$ | 78.51 |
| 186.45 | $99^{\text {th }}$ | 73.41 | 201.62 | $99^{\text {th }}$ | 79.38 |




Stature

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 162.94 | Mean | 64.15 | 175.58 | Mean | 69.13 |
| 6.36 | Std Dev | 2.50 | 6.68 | Std Dev | 2.63 |
| 187.00 | Maximum | 73.62 | 204.20 | Maximum | 80.39 |
| 142.80 | Minimum | 56.22 | 149.70 | Minimum | 58.94 |
|  | Percentiles |  |  | Percentiles |  |
| 148.32 | $1^{\text {st }}$ | 58.39 | 160.27 | $1{ }^{\text {st }}$ | 63.10 |
| 150.18 | $2^{\text {nd }}$ | 59.13 | 162.05 | $2^{\text {nd }}$ | 63.80 |
| 151.31 | $3^{\text {rd }}$ | 59.57 | 163.17 | $3{ }^{\text {rd }}$ | 64.24 |
| 152.78 | $5^{\text {th }}$ | 60.15 | 164.69 | $5^{\text {th }}$ | 64.84 |
| 154.97 | $10^{\text {th }}$ | 61.01 | 167.03 | $10^{\text {th }}$ | 65.76 |
| 156.43 | $15^{\text {th }}$ | 61.59 | 168.62 | $15^{\text {th }}$ | 66.39 |
| 157.58 | $20^{\text {th }}$ | 62.04 | 169.86 | $20^{\text {th }}$ | 66.88 |
| 158.58 | $25^{\text {th }}$ | 62.43 | 173.99 | $25^{\text {th }}$ | 67.32 |
| 159.48 | $30^{\text {th }}$ | 62.79 | 171.98 | $30^{\text {th }}$ | 67.71 |
| 160.32 | $35^{\text {th }}$ | 63.12 | 172.90 | $35^{\text {th }}$ | 68.70 |
| 161.14 | $40^{\text {th }}$ | 63.44 | 173.78 | $40^{\text {th }}$ | 68.42 |
| 161.93 | $45^{\text {th }}$ | 63.75 | 174.64 | $45^{\text {th }}$ | 68.76 |
| 162.72 | $50^{\text {th }}$ | 64.06 | 175.49 | $50^{\text {th }}$ | 69.09 |
| 163.53 | $55^{\text {th }}$ | 64.38 | 176.34 | $55^{\text {th }}$ | 69.43 |
| 164.35 | $60^{\text {th }}$ | 64.70 | 177.21 | $60^{\text {th }}$ | 69.77 |
| 165.21 | $65^{\text {th }}$ | 65.04 | 178.11 | $65^{\text {th }}$ | 70.12 |
| 166.13 | $70^{\text {th }}$ | 65.40 | 179.06 | $70^{\text {th }}$ | 70.50 |
| 167.13 | $75^{\text {th }}$ | 65.80 | 180.09 | $75^{\text {th }}$ | 70.90 |
| 168.27 | $80^{\text {th }}$ | 66.25 | 181.24 | $80^{\text {th }}$ | 71.35 |
| 169.59 | $85^{\text {th }}$ | 66.77 | 182.57 | $85^{\text {th }}$ | 71.88 |
| 171.27 | $90^{\text {th }}$ | 67.43 | 184.23 | $90^{\text {th }}$ | 72.53 |
| 173.73 | $95^{\text {th }}$ | 68.40 | 186.65 | $95^{\text {th }}$ | 73.48 |
| 175.28 | $97^{\text {th }}$ | 69.01 | 188.16 | $97^{\text {th }}$ | 74.08 |
| 176.39 | $98{ }^{\text {th }}$ | 69.44 | 189.24 | $98{ }^{\text {th }}$ | 74.50 |
| 178.04 | $99^{\text {th }}$ | 70.09 | 190.87 | $99^{\text {th }}$ | 75.14 |



|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 20.7 | Mean | . 81 | 2.41 | Mean | 0.95 |
| . 13 | Std Dev | . 05 | 0.14 | Std Dev | 0.05 |
| 2.50 | Maximum | . 98 | 2.90 | Maximum | 1.14 |
| 1.70 | Minimum | . 67 | 1.90 | Minimum | 0.75 |
|  | Percentiles |  |  | Percentiles |  |
| 1.78 | $1^{\text {st }}$ | . 70 | 2.09 | $1^{\text {st }}$ | . 82 |
| 1.81 | $2^{\text {nd }}$ | . 71 | 2.13 | $2^{\text {nd }}$ | . 84 |
| 1.84 | $3^{\text {rd }}$ | . 71 | 2.16 | $3^{\text {rd }}$ | . 85 |
| 1.86 | $5^{\text {th }}$ | . 73 | 2.19 | $5^{\text {th }}$ | . 86 |
| 1.91 | $10^{\text {th }}$ | . 75 | 2.24 | $10^{\text {th }}$ | . 88 |
| 1.93 | $15^{\text {th }}$ | . 76 | 2.27 | $15^{\text {th }}$ | . 90 |
| 1.96 | $20^{\text {th }}$ | . 77 | 2.30 | $20^{\text {th }}$ | . 91 |
| 1.97 | $25^{\text {th }}$ | . 78 | 2.32 | $25^{\text {th }}$ | . 91 |
| 1.99 | $30^{\text {th }}$ | . 78 | 2.34 | $30^{\text {th }}$ | . 92 |
| 2.01 | $35^{\text {th }}$ | . 79 | 2.36 | $35^{\text {th }}$ | . 93 |
| 2.03 | $40^{\text {th }}$ | . 80 | 2.38 | $40^{\text {th }}$ | . 94 |
| 2.04 | $45^{\text {th }}$ | . 80 | 2.39 | $45^{\text {th }}$ | . 94 |
| 2.06 | $50^{\text {th }}$ | . 81 | 2.41 | $50^{\text {th }}$ | . 95 |
| 2.08 | $55^{\text {th }}$ | . 82 | 2.43 | $55^{\text {th }}$ | . 96 |
| 2.09 | $60^{\text {th }}$ | . 82 | 2.45 | $60^{\text {th }}$ | . 96 |
| 2.11 | $65^{\text {th }}$ | . 83 | 2.46 | $65^{\text {th }}$ | . 97 |
| 2.13 | $70^{\text {th }}$ | . 84 | 2.48 | $70^{\text {th }}$ | . 98 |
| 2.15 | $75^{\text {th }}$ | . 85 | 2.51 | $75^{\text {th }}$ | . 99 |
| 2.18 | $80^{\text {th }}$ | . 86 | 2.53 | $80^{\text {th }}$ | 1.00 |
| 2.20 | $85^{\text {th }}$ | . 87 | 2.56 | $85^{\text {th }}$ | 1.01 |
| 2.24 | $90^{\text {th }}$ | . 88 | 2.60 | $90^{\text {th }}$ | 1.02 |
| 2.29 | $95^{\text {th }}$ | . 90 | 2.65 | $95^{\text {th }}$ | 1.04 |
| 2.31 | $97^{\text {th }}$ | . 91 | 2.68 | $97^{\text {th }}$ | 1.06 |
| 2.33 | $98{ }^{\text {th }}$ | . 92 | 2.71 | $98{ }^{\text {th }}$ | 1.07 |
| 2.35 | $99^{\text {th }}$ | . 93 | 2.74 | $99^{\text {th }}$ | 1.08 |




Thumbtip Reach, Extended

|  | FEMALE $\mathrm{N}=2208$ |  | MALE$\mathbf{N}=1774$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 76.69 | Mean | 31.38 | 87.28 | Mean | 34.36 |
| 3.85 | Std Dev | 1.52 | 4.16 | Std Dev | 1.64 |
| 97.70 | Maximum | 38.46 | 104.60 | Maximum | 41.18 |
| 66.70 | Minimum | 26.26 | 73.40 | Minimum | 28.90 |
|  | Percentiles |  |  | Percentiles |  |
| 71.15 | $1^{\text {st }}$ | 28.01 | 77.92 | $1^{\text {st }}$ | 30.68 |
| 72.05 | $2^{\text {nd }}$ | 28.36 | 78.89 | $2^{\text {nd }}$ | 31.06 |
| 72.63 | $3{ }^{\text {rd }}$ | 28.60 | 79.55 | $3{ }^{\text {rd }}$ | 31.32 |
| 73.45 | $5^{\text {th }}$ | 28.92 | 80.48 | $5^{\text {th }}$ | 31.68 |
| 74.76 | $10^{\text {dh }}$ | 29.43 | 81.96 | $10^{\text {th }}$ | 32.27 |
| 75.66 | $15^{\text {th }}$ | 29.79 | 82.97 | $15^{\text {th }}$ | 32.67 |
| 76.38 | $20^{\text {th }}$ | 30.07 | 83.78 | $20^{\text {th }}$ | 32.98 |
| 77.02 | $25^{\text {th }}$ | 30.32 | 84.48 | $25^{\text {th }}$ | 33.26 |
| 77.59 | $30^{\text {dh }}$ | 30.55 | 85.10 | $30^{\text {th }}$ | 33.50 |
| 78.12 | $35^{\text {th }}$ | 30.76 | 85.67 | $35^{\text {th }}$ | 33.73 |
| 78.63 | $40^{\text {th }}$ | 30.96 | 86.22 | $40^{\text {th }}$ | 33.94 |
| 79.12 | $45^{\text {th }}$ | 31.15 | 86.74 | $45^{\text {th }}$ | 34.15 |
| 79.61 | $50^{\text {th }}$ | 31.34 | 87.25 | $50^{\text {th }}$ | 34.35 |
| 80.10 | $55^{\text {th }}$ | 31.54 | 87.76 | $55^{\text {th }}$ | 34.55 |
| 80.60 | $60^{\text {th }}$ | 31.73 | 88.28 | $60^{\text {dh }}$ | 34.76 |
| 81.12 | $65^{\text {th }}$ | 31.94 | 88.81 | $65^{\text {th }}$ | 34.97 |
| 81.66 | $70^{\text {th }}$ | 32.15 | 89.38 | $70^{\text {th }}$ | 35.19 |
| 82.26 | $75^{\text {th }}$ | 32.39 | 89.99 | $75^{\text {th }}$ | 35.43 |
| 82.93 | $80^{\text {th }}$ | 32.65 | 90.68 | $80^{\text {th }}$ | 35.70 |
| 83.70 | $85^{\text {th }}$ | 32.95 | 91.49 | $85^{\text {th }}$ | 36.02 |
| 84.69 | $90^{\text {th }}$ | 33.34 | 92.54 | $90^{\text {dh }}$ | 36.43 |
| 86.17 | $95^{\text {th }}$ | 33.92 | 94.18 | $95^{\text {th }}$ | 37.08 |
| 87.14 | $97^{\text {th }}$ | 34.31 | 95.33 | $97^{\text {th }}$ | 37.53 |
| 87.86 | $98{ }^{\text {th }}$ | 34.59 | 96.22 | $98{ }^{\text {th }}$ | 37.88 |
| 89.00 | $99^{\text {th }}$ | 35.04 | 97.74 | $99^{\text {th }}$ | 38.48 |



Upper Arm Length

| Centimeters | FEMALE $\mathrm{N}=2208$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 31.19 | Mean | 12.28 |
| 1.67 | Std Dev | . 66 |
| 37.00 | Maximum | 14.57 |
| 26.20 | Minimum | 10.31 |
|  | Percentiles |  |
| 27.37 | $1{ }^{\text {st }}$ | 10.77 |
| 27.83 | $2^{\text {nd }}$ | 10.95 |
| 28.11 | $3^{\text {rd }}$ | 11.07 |
| 28.49 | $5^{\text {th }}$ | 11.22 |
| 29.07 | $10^{\text {th }}$ | 11.44 |
| 29.46 | $15^{\text {th }}$ | 11.60 |
| 29.77 | $20^{\text {th }}$ | 11.72 |
| 30.04 | $25^{\text {th }}$ | 11.83 |
| 30.28 | $30^{\text {th }}$ | 11.92 |
| 30.50 | $35^{\text {th }}$ | 12.01 |
| 30.72 | $40^{\text {th }}$ | 12.09 |
| 30.93 | $45^{\text {th }}$ | 12.18 |
| 31.14 | $50^{\text {th }}$ | 12.26 |
| 31.35 | $55^{\text {th }}$ | 12.34 |
| 31.57 | $60^{\text {th }}$ | 12.43 |
| 31.79 | $65^{\text {th }}$ | 12.52 |
| 32.03 | $70^{\text {th }}$ | 12.61 |
| 32.29 | $75^{\text {th }}$ | 12.71 |
| 32.59 | $80^{\text {th }}$ | 12.83 |
| 32.93 | $85^{\text {th }}$ | 12.96 |
| 33.37 | $90^{\text {th }}$ | 13.14 |
| 34.02 | $95^{\text {th }}$ | 13.39 |
| 34.44 | $97^{\text {th }}$ | 13.56 |
| 34.74 | $98{ }^{\text {th }}$ | 13.68 |
| 35.21 | $99^{\text {th }}$ | 13.86 |

MALE
$\mathrm{N}=1774$

| Centimeters |  | Inches |
| :---: | :---: | :---: |
| 34.08 | Mean | 13.42 |
| 1.72 | Std Dev | . 68 |
| 41.50 | Maximum | 16.34 |
| 27.10 | Minimum | 10.67 |
|  | Percentiles |  |
| 30.23 | $1{ }^{\text {st }}$ | 11.90 |
| 30.66 | $2^{\text {nd }}$ | 12.07 |
| 30.94 | $3{ }^{\text {rd }}$ | 12.18 |
| 31.32 | $5^{\text {th }}$ | 12.33 |
| 31.91 | $10^{\text {th }}$ | 12.56 |
| 32.31 | $15^{\text {th }}$ | 12.72 |
| 32.63 | $20^{\text {th }}$ | 12.85 |
| 32.91 | $25^{\text {th }}$ | 12.96 |
| 33.16 | $30^{\text {th }}$ | 13.06 |
| 33.40 | $35^{\text {th }}$ | 13.15 |
| 33.62 | $40^{\text {th }}$ | 13.24 |
| 33.83 | $45^{\text {th }}$ | 13.32 |
| 34.05 | $50^{\text {th }}$ | 13.41 |
| 34.27 | $55^{\text {th }}$ | 13.49 |
| 34.49 | $60^{\text {th }}$ | 13.58 |
| 34.72 | $65^{\text {th }}$ | 13.67 |
| 34.96 | $70^{\text {th }}$ | 13.76 |
| 35.22 | $75^{\text {th }}$ | 13.87 |
| 35.52 | $80^{\text {th }}$ | 13.98 |
| 35.86 | $85^{\text {th }}$ | 14.12 |
| 36.30 | $90^{\text {th }}$ | 14.29 |
| 36.95 | $95^{\text {th }}$ | 14.55 |
| 37.38 | $97^{\text {th }}$ | 14.72 |
| 37.69 | $98{ }^{\text {th }}$ | 14.84 |
| 38.18 | $99^{\text {th }}$ | 15.03 |



## FEMALE

| Centimeters | FEMALE $\mathrm{N}=2208$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 194.73 | Mean | 76.67 |
| 8.71 | Std Dev | 3.43 |
| 226.00 | Maximum | 88.98 |
| 162.20 | Minimum | 63.86 |
|  | Percentiles |  |
| 174.63 | $1^{\text {st }}$ | 68.75 |
| 177.23 | $2^{\text {nd }}$ | 69.78 |
| 178.79 | $3^{\text {rd }}$ | 70.39 |
| 180.83 | $5^{\text {th }}$ | 71.19 |
| 183.85 | $10^{\text {th }}$ | 72.38 |
| 185.85 | $15^{\text {th }}$ | 73.17 |
| 187.43 | $20^{\text {th }}$ | 73.79 |
| 188.81 | $25^{\text {th }}$ | 74.33 |
| 190.05 | $30^{\text {th }}$ | 74.82 |
| 191.21 | $35^{\text {th }}$ | 75.28 |
| 192.32 | $40^{\text {th }}$ | 75.72 |
| 193.41 | $45^{\text {th }}$ | 76.15 |
| 194.50 | $50^{\text {th }}$ | 76.57 |
| 195.60 | $55^{\text {th }}$ | 77.01 |
| 196.73 | $60^{\text {th }}$ | 77.45 |
| 197.90 | $65^{\text {th }}$ | 77.91 |
| 199.16 | $70^{\text {th }}$ | 78.41 |
| 200.53 | $75^{\text {th }}$ | 78.95 |
| 202.07 | $80^{\text {th }}$ | 79.56 |
| 203.87 | $85^{\text {th }}$ | 80.26 |
| 206.14 | $90^{\text {th }}$ | 81.16 |
| 209.44 | $95^{\text {th }}$ | 82.46 |
| 211.51 | $97^{\text {th }}$ | 83.27 |
| 212.96 | $98{ }^{\text {th }}$ | 83.84 |
| 215.10 | $99^{\text {th }}$ | 84.64 |

Vertical Grip Reach

| Centimeters | MALE $\mathbf{N}=1774$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 210.74 | Mean | 82.97 |
| 9.24 | Std Dev | 3.64 |
| 253.40 | Maximum | 99.76 |
| 169.90 | Minimum | 66.89 |
|  | Percentiles |  |
| 189.28 | $1^{\text {st }}$ | 74.52 |
| 192.01 | $2^{\text {nd }}$ | 75.60 |
| 193.66 | $3^{\text {rd }}$ | 76.25 |
| 195.84 | $5^{\text {th }}$ | 77.10 |
| 199.08 | $10^{\text {th }}$ | 78.38 |
| 201.25 | $15^{\text {th }}$ | 79.23 |
| 202.96 | $20^{\text {th }}$ | 79.91 |
| 204.46 | $25^{\text {th }}$ | 80.49 |
| 205.80 | $30^{\text {th }}$ | 81.02 |
| 207.05 | $35^{\text {th }}$ | 81.52 |
| 208.25 | $40^{\text {th }}$ | 81.99 |
| 209.59 | $45^{\text {th }}$ | 82.45 |
| 210.59 | $50^{\text {th }}$ | 82.91 |
| 211.77 | $55^{\text {th }}$ | 83.38 |
| 212.97 | $60^{\text {th }}$ | 83.85 |
| 214.23 | $65^{\text {th }}$ | 84.34 |
| 215.55 | $70^{\text {th }}$ | 84.86 |
| 216.99 | $75^{\text {th }}$ | 85.43 |
| 218.60 | $80^{\text {th }}$ | 86.06 |
| 220.45 | $85^{\text {th }}$ | 86.79 |
| 222.76 | $90^{\text {th }}$ | 87.70 |
| 226.04 | $95^{\text {th }}$ | 88.99 |
| 228.03 | $97^{\text {th }}$ | 89.77 |
| 229.39 | $98{ }^{\text {th }}$ | 90.31 |
| 231.31 | $99^{\text {th }}$ | 91.07 |



## Vertical Grip Reach Down

| Centimeters | FEMALE $\mathrm{N}=2208$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 60.95 | Mean | 24.00 |
| 3.27 | Std Dev | 1.29 |
| 73.50 | Maximum | 28.94 |
| 49.20 | Minimum | 19.37 |
|  | Percentiles |  |
| 35.55 | $1^{\text {st }}$ | 21.08 |
| 54.42 | $2^{\text {nd }}$ | 21.43 |
| 54.97 | $3{ }^{\text {rd }}$ | 21.64 |
| 55.71 | $5^{\text {th }}$ | 21.93 |
| 56.84 | $10^{\text {th }}$ | 22.38 |
| 57.61 | $15^{\text {th }}$ | 22.68 |
| 58.21 | $20^{\text {th }}$ | 22.92 |
| 58.74 | $25^{\text {th }}$ | 23.13 |
| 59.21 | $30^{\text {th }}$ | 23.31 |
| 59.65 | $35^{\text {th }}$ | 23.48 |
| 60.07 | $40^{\text {th }}$ | 23.65 |
| 60.48 | $45^{\text {th }}$ | 23.81 |
| 60.88 | $50^{\text {dh }}$ | 23.97 |
| 61.29 | $55^{\text {th }}$ | 24.13 |
| 61.70 | $60^{\text {th }}$ | 24.29 |
| 62.14 | $65^{\text {th }}$ | 24.46 |
| 62.60 | $70^{\text {th }}$ | 24.64 |
| 63.10 | $75^{\text {th }}$ | 24.84 |
| 63.66 | $80^{\text {th }}$ | 25.06 |
| 64.32 | $85^{\text {th }}$ | 25.32 |
| 65.16 | $90^{\text {th }}$ | 25.65 |
| 66.42 | $95^{\text {th }}$ | 26.15 |
| 67.25 | $97^{\text {th }}$ | 26.48 |
| 67.86 | $98^{\text {th }}$ | 26.72 |
| 68.82 | $99^{\text {th }}$ | 27.09 |


| Centimeters | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 66.57 | Mean | 26.21 |
| 3.33 | Std Dev | 1.31 |
| 81.40 | Maximum | 32.05 |
| 54.10 | Minimum | 21.30 |
|  | Percentiles |  |
| 59.08 | $1{ }^{\text {st }}$ | 23.26 |
| 59.95 | $2^{\text {nd }}$ | 23.60 |
| 60.50 | $3^{\text {rd }}$ | 23.82 |
| 62.23 | $5^{\text {th }}$ | 24.11 |
| 62.36 | $10^{\text {th }}$ | 24.55 |
| 63.13 | $15^{\text {th }}$ | 24.85 |
| 63.74 | $20^{\text {th }}$ | 25.09 |
| 64.28 | $25^{\text {th }}$ | 25.31 |
| 64.76 | $30^{\text {th }}$ | 25.50 |
| 65.21 | $35^{\text {th }}$ | 25.67 |
| 65.65 | $40^{\text {th }}$ | 25.84 |
| 66.07 | $45^{\text {th }}$ | 26.01 |
| 66.49 | $50^{\text {dh }}$ | 26.18 |
| 66.92 | $55^{\text {d }}$ | 26.35 |
| 67.35 | $60^{\text {th }}$ | 26.52 |
| 67.81 | $65^{\text {th }}$ | 26.70 |
| 68.29 | $70^{\text {th }}$ | 26.89 |
| 68.81 | $75^{\text {th }}$ | 27.09 |
| 69.40 | $80^{\text {th }}$ | 27.32 |
| 70.09 | $85^{\text {th }}$ | 27.59 |
| 70.96 | $90^{\text {th }}$ | 27.94 |
| 72.23 | $95^{\text {th }}$ | 28.44 |
| 73.04 | $97^{\text {dh }}$ | 28.75 |
| 73.61 | $98{ }^{\text {dh }}$ | 28.98 |
| 74.49 | $99^{\text {th }}$ | 29.33 |



## Vertical Grip Reach, Sitting

| Centimeters | FEMALE <br> $\mathbf{N}=\mathbf{2 2 0 8}$ |  |
| :---: | :---: | :---: |
| 121.23 | Mean <br> Std Dev | Inches <br> .13 |
| 138.60 | Maximum <br> Minimum | 54.02 |
| 103.00 |  | 40.57 |
|  | Percentiles |  |
| 109.24 | $1^{\text {st }}$ |  |
| 110.60 | $2^{\text {nd }}$ | 43.01 |
| 111.48 | $3^{\text {rd }}$ | 43.54 |
| 112.69 | $5^{\text {th }}$ | 43.89 |
| 114.57 | $10^{\text {th }}$ | 44.36 |
| 115.86 | $15^{\text {th }}$ | 45.11 |
| 116.87 | $20^{\text {th }}$ | 46.01 |
| 117.76 | $25^{\text {th }}$ | 46.36 |
| 118.54 | $30^{\text {th }}$ | 46.67 |
| 119.27 | $35^{\text {th }}$ | 46.96 |
| 119.96 | $40^{\text {th }}$ | 47.23 |
| 120.62 | $45^{\text {th }}$ | 47.49 |
| 121.28 | $50^{\text {th }}$ | 47.75 |
| 121.93 | $55^{\text {th }}$ | 48.01 |
| 122.59 | $60^{\text {th }}$ | 48.27 |
| 123.27 | $65^{\text {th }}$ | 48.53 |
| 123.99 | $70^{\text {th }}$ | 48.81 |
| 124.75 | $75^{\text {th }}$ | 49.12 |
| 125.61 | $80^{\text {th }}$ | 49.45 |
| 126.59 | $85^{\text {th }}$ | 49.84 |
| 127.82 | $90^{\text {th }}$ | 50.32 |
| 129.61 | $95^{\text {th }}$ | 51.03 |
| 130.76 | $97^{\text {th }}$ | 51.48 |
| 131.60 | $98^{\text {th }}$ | 51.81 |
| 132.90 | $99^{\text {th }}$ | 52.32 |
|  |  |  |


| Centimeters | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 130.98 | Mean | 51.57 |
| 5.45 | Std Dev | 2.15 |
| 155.10 | Maximum | 61.06 |
| 106.40 | Minimum | 41.89 |
|  | Percentiles |  |
| 117.75 | $1^{\text {st }}$ | 46.36 |
| 119.64 | $2^{\text {nd }}$ | 47.10 |
| 120.74 | $3^{\text {rd }}$ | 47.53 |
| 122.14 | $5^{\text {th }}$ | 48.09 |
| 124.15 | $10^{\text {th }}$ | 48.88 |
| 125.45 | $15^{\text {th }}$ | 49.39 |
| 126.46 | $20^{\text {th }}$ | 49.79 |
| 127.34 | $25^{\text {th }}$ | 50.13 |
| 128.12 | $30^{\text {th }}$ | 50.44 |
| 128.84 | $35^{\text {th }}$ | 50.73 |
| 129.54 | $40^{\text {th }}$ | 51.00 |
| 130.22 | $45^{\text {th }}$ | 51.27 |
| 130.90 | $50^{\text {th }}$ | 51.54 |
| 131.59 | $55^{\text {th }}$ | 51.81 |
| 132.29 | $60^{\text {th }}$ | 52.08 |
| 133.02 | $65^{\text {th }}$ | 52.37 |
| 133.80 | $70^{\text {th }}$ | 52.68 |
| 134.64 | $75^{\text {th }}$ | 53.01 |
| 135.60 | $80^{\text {th }}$ | 53.38 |
| 136.70 | $85^{\text {th }}$ | 53.82 |
| 138.08 | $90^{\text {th }}$ | 54.36 |
| 140.05 | $95^{\text {th }}$ | 55.14 |
| 141.25 | $97^{\text {th }}$ | 55.61 |
| 142.06 | $98{ }^{\text {th }}$ | 55.93 |
| 143.20 | $99^{\text {th }}$ | 56.38 |



Vertical Index Fingertip Reach Down

|  | FEMALE $\mathrm{N}=2208$ |  |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |  |
| 71.24 | Mean | 28.05 | 77.68 | Mean | 30.58 |  |
| 3.76 | Std Dev | 1.48 | 3.80 | Std Dev | 1.49 | - |
| 95.80 | Maximum | 33.78 | 94.10 | Maximum | 37.05 | (2) |
| 57.60 | Minimum | 22.68 | 63.10 | Minimum | 24.84 | (3) |
|  |  |  |  |  |  | i> |
|  | Percentiles |  |  | Percentiles |  | - |
| 62.72 | $1{ }^{\text {st }}$ | 24.69 | 69.25 | $1^{\text {st }}$ | 27.26 | , ${ }^{2}$ |
| 63.70 | $2^{\text {nd }}$ | 25.08 | 70.25 | $2^{\text {nd }}$ | 27.66 | (1) |
| 64.32 | $3{ }^{\text {rd }}$ | 25.32 | 70.86 | $3{ }^{\text {rd }}$ | 27.90 | 1,2 |
| 65.16 | $5^{\text {th }}$ | 25.65 | 71.68 | $5^{\text {th }}$ | 28.22 | $11 \pm$ |
| 66.47 | $10^{\text {th }}$ | 26.17 | 72.92 | $10^{\text {th }}$ | 28.71 | 1 |
| 67.36 | $15^{\text {th }}$ | 26.52 | 73.77 | $15^{\text {th }}$ | 29.04 | 11 |
| 68.26 | $20^{\text {th }}$ | 26.80 | 74.45 | $20^{\text {th }}$ | 29.31 | 0 |
| 68.68 | $25^{\text {th }}$ | 27.04 | 75.04 | $25^{\text {th }}$ | 29.55 | ( |
| 69.23 | $30^{\text {th }}$ | 27.26 | 75.59 | $30^{\text {th }}$ | 29.76 |  |
| 69.75 | $35^{\text {th }}$ | 27.46 | 76.10 | $35^{\text {th }}$ | 29.96 | - |
| 70.24 | $40^{\text {th }}$ | 27.65 | 76.59 | $40^{\text {th }}$ | 30.15 | - |
| 70.71 | $45^{\text {th }}$ | 27.84 | 77.07 | $45^{\text {th }}$ | 30.34 |  |
| 71.18 | $50^{\text {th }}$ | 28.03 | 77.56 | $50^{\text {th }}$ | 30.53 |  |
| 71.66 | $55^{\text {th }}$ | 28.21 | 78.05 | $55^{\text {th }}$ | 30.73 | ) |
| 72.14 | $60^{\text {th }}$ | 28.40 | 78.55 | $60^{\text {th }}$ | 30.92 | 1 |
| 72.65 | $65^{\text {th }}$ | 28.60 | 79.09 | $65^{\text {th }}$ | 31.13 |  |
| 73.18 | $70^{\text {th }}$ | 28.81 | 79.63 | $70^{\text {th }}$ | 31.35 | 1 |
| 73.76 | $75^{\text {th }}$ | 29.04 | 80.24 | $75^{\text {th }}$ | 31.59 | - |
| 74.41 | $80^{\text {th }}$ | 29.30 | 80.93 | $80^{\text {th }}$ | 31.86 |  |
| 75.17 | $85^{\text {th }}$ | 29.59 | 81.72 | $85^{\text {th }}$ | 32.17 |  |
| 76.13 | $90^{\text {th }}$ | 59.97 | 82.72 | $90^{\text {th }}$ | 32.57 |  |
| 77.57 | $95^{\text {th }}$ | 30.54 | 84.15 | $95^{\text {th }}$ | 33.13 |  |
| 78.51 | $97^{\text {th }}$ | 30.91 | 85.03 | $97^{\text {th }}$ | 33.48 |  |
| 79.20 | $98{ }^{\text {th }}$ | 31.18 | 85.65 | $98{ }^{\text {th }}$ | 33.72 |  |
| 80.28 | $99^{\text {th }}$ | 31.61 | 86.53 | $99^{\text {th }}$ | 34.07 |  |

Vertical Index Fingertip Reach, Sitting

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=\mathbf{1 7 7 4} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 131.53 | Mean | 51.78 | 142.09 | Mean | 55.94 |
| 5.55 | Std Dev | 2.19 | 5.87 | Std Dev | 2.31 |
| 149.90 | Maximum | 59.02 | 168.10 | Maximum | 66.18 |
| 11.70 | Minimum | 43.98 | 115.40 | Minimum | 45.43 |
|  | Percentiles |  |  | Percentiles |  |
| 118.78 | $1^{\text {st }}$ | 46.76 | 128.17 | $1^{\text {st }}$ | 50.46 |
| 120.11 | $2^{\text {nd }}$ | 47.29 | 129.98 | $2^{\text {nd }}$ | 51.17 |
| 121.01 | $3^{\text {rd }}$ | 47.64 | 131.08 | $3^{\text {rd }}$ | 51.61 |
| 122.27 | $5^{\text {th }}$ | 48.14 | 132.51 | $5^{\text {th }}$ | 52.17 |
| 124.28 | $10^{\text {th }}$ | 49.93 | 134.65 | $10^{\text {th }}$ | 53.01 |
| 125.67 | $15^{\text {th }}$ | 49.48 | 136.06 | $15^{\text {th }}$ | 53.57 |
| 126.78 | $20^{\text {th }}$ | 49.91 | 137.17 | $20^{\text {th }}$ | 54.00 |
| 127.74 | $25^{\text {th }}$ | 50.29 | 138.13 | $25^{\text {th }}$ | 54.38 |
| 128.61 | $30^{\text {th }}$ | 50.63 | 138.99 | $30^{\text {th }}$ | 54.72 |
| 129.40 | $35^{\text {th }}$ | 50.94 | 139.78 | $35^{\text {th }}$ | 55.03 |
| 130.15 | $40^{\text {th }}$ | 51.24 | 140.55 | $40^{\text {th }}$ | 55.33 |
| 130.87 | $45^{\text {th }}$ | 51.52 | 141.29 | $45^{\text {th }}$ | 55.63 |
| 131.59 | $50^{\text {th }}$ | 51.81 | 142.03 | $50^{\text {th }}$ | 55.92 |
| 132.30 | $55^{\text {th }}$ | 52.08 | 142.77 | $55^{\text {th }}$ | 56.21 |
| 133.01 | $60^{\text {th }}$ | 52.37 | 143.52 | $60^{\text {th }}$ | 56.51 |
| 133.74 | $65^{\text {th }}$ | 52.65 | 144.31 | $65^{\text {th }}$ | 56.81 |
| 134.51 | $70^{\text {th }}$ | 52.96 | 145.14 | $70^{\text {th }}$ | 57.14 |
| 135.33 | $75^{\text {th }}$ | 53.28 | 146.04 | $75^{\text {th }}$ | 57.50 |
| 136.25 | $80^{\text {th }}$ | 53.64 | 147.06 | $80^{\text {th }}$ | 57.90 |
| 137.31 | $85^{\text {th }}$ | 54.06 | 148.23 | $85^{\text {th }}$ | 58.36 |
| 138.63 | $90^{\text {th }}$ | 54.58 | 149.69 | $90^{\text {th }}$ | 58.93 |
| 140.59 | $95^{\text {th }}$ | 55.35 | 151.81 | $95^{\text {th }}$ | 59.77 |
| 141.86 | $97^{\text {th }}$ | 55.85 | 153.13 | $97^{\text {th }}$ | 60.29 |
| 142.81 | $98{ }^{\text {th }}$ | 56.22 | 154.05 | $98{ }^{\text {th }}$ | 60.65 |
| 144.32 | $99^{\text {th }}$ | 56.82 | 155.40 | $99^{\text {th }}$ | 61.18 |



## Vertical Thumbtip Reach, Sitting

| Centimeters | FEMALE <br> $\mathbf{N}=\mathbf{2 2 0 8}$ |  |
| :---: | :---: | :---: |
| 126.37 | Mean <br> 5.36 | Inches <br> Std Dev |
| 144.30 | Maximum <br> Minimum | 5.75 |
| 107.40 |  | 42.81 |
|  | Percentiles |  |
| 113.96 | $1^{\text {st }}$ | 44.87 |
| 115.30 | $2^{\text {nd }}$ | 45.39 |
| 116.18 | $3^{\text {rd }}$ | 45.74 |
| 117.41 | $5^{\text {th }}$ | 46.22 |
| 119.36 | $10^{\text {th }}$ | 46.99 |
| 120.71 | $15^{\text {th }}$ | 47.52 |
| 121.77 | $20^{\text {th }}$ | 47.94 |
| 122.70 | $25^{\text {th }}$ | 48.31 |
| 123.53 | $30^{\text {th }}$ | 48.43 |
| 124.30 | $35^{\text {th }}$ | 48.94 |
| 125.02 | $40^{\text {th }}$ | 49.22 |
| 125.72 | $45^{\text {th }}$ | 49.50 |
| 126.42 | $50^{\text {th }}$ | 49.77 |
| 127.10 | $55^{\text {th }}$ | 50.04 |
| 127.80 | $60^{\text {th }}$ | 50.31 |
| 128.51 | $65^{\text {th }}$ | 50.59 |
| 129.25 | $70^{\text {th }}$ | 50.89 |
| 130.06 | $75^{\text {th }}$ | 51.20 |
| 130.95 | $80^{\text {th }}$ | 51.56 |
| 131.98 | $85^{\text {th }}$ | 51.96 |
| 133.26 | $90^{\text {th }}$ | 52.47 |
| 135.15 | $95^{\text {th }}$ | 53.21 |
| 136.36 | $97^{\text {th }}$ | 53.69 |
| 137.26 | $98^{\text {th }}$ | 54.04 |
| 138.66 | $99^{\text {th }}$ | 54.59 |
|  |  |  |


| Centimeters | MALE <br> $\mathbf{N}=\mathbf{1 7 7 4}^{2}$ |  |
| :---: | :---: | :---: |
| 136.44 | Mean <br> Std Dev | Inches |
| 5.68 | 2.72 |  |
| 161.30 | Maximum <br> Minimum | 63.50 |
| 110.70 |  | 43.58 |
|  | Percentiles |  |
| 122.95 | $1^{\text {st }}$ | 48.41 |
| 124.76 | $2^{\text {nd }}$ | 49.12 |
| 125.84 | $3^{\text {rd }}$ | 49.54 |
| 127.24 | $5^{\text {th }}$ | 50.09 |
| 129.29 | $10^{\text {th }}$ | 50.90 |
| 130.64 | $15^{\text {th }}$ | 51.43 |
| 131.70 | $20^{\text {th }}$ | 51.85 |
| 132.62 | $25^{\text {th }}$ | 52.21 |
| 133.44 | $30^{\text {th }}$ | 52.54 |
| 134.21 | $35^{\text {th }}$ | 52.84 |
| 134.94 | $40^{\text {th }}$ | 53.13 |
| 135.66 | $45^{\text {th }}$ | 53.41 |
| 136.38 | $50^{\text {th }}$ | 53.69 |
| 137.10 | $55^{\text {th }}$ | 53.98 |
| 137.83 | $60^{\text {th }}$ | 54.27 |
| 138.60 | $65^{\text {th }}$ | 54.57 |
| 139.42 | $70^{\text {th }}$ | 54.89 |
| 140.30 | $75^{\text {th }}$ | 55.24 |
| 141.30 | $80^{\text {th }}$ | 55.63 |
| 142.45 | $85^{\text {th }}$ | 56.08 |
| 143.88 | $90^{\text {th }}$ | 56.65 |
| 145.93 | $95^{\text {th }}$ | 57.45 |
| 147.18 | $97^{\text {th }}$ | 57.95 |
| 148.04 | $98^{\text {th }}$ | 58.28 |
| 149.26 | $99^{\text {th }}$ | 58.76 |
|  |  |  |



## FEMALE

N = 2208

| Centimeters |  | Inches |
| :---: | :---: | :---: |
| 188.10 | Mean | 74.06 |
| 8.55 | Std Dev | 3.37 |
| 218.10 | Maximum | 85.87 |
| 156.00 | Minimum | 61.42 |
|  | Percentiles |  |
| 168.38 | $1{ }^{\text {st }}$ | 66.29 |
| 170.93 | $2^{\text {nd }}$ | 67.29 |
| 172.46 | $3^{\text {rd }}$ | 67.90 |
| 174.46 | $5^{\text {th }}$ | 68.68 |
| 177.42 | $10^{\text {th }}$ | 69.85 |
| 179.39 | $15^{\text {th }}$ | 70.62 |
| 180.94 | $20^{\text {th }}$ | 71.24 |
| 182.29 | $25^{\text {th }}$ | 71.77 |
| 183.51 | $30^{\text {th }}$ | 72.25 |
| 184.64 | $35^{\text {th }}$ | 72.69 |
| 185.74 | $40^{\text {th }}$ | 73.12 |
| 186.80 | $45^{\text {th }}$ | 73.54 |
| 187.87 | $50^{\text {th }}$ | 73.96 |
| 188.95 | $55^{\text {th }}$ | 74.39 |
| 190.06 | $60^{\text {th }}$ | 74.82 |
| 191.21 | $65^{\text {th }}$ | 75.28 |
| 192.44 | $70^{\text {th }}$ | 75.76 |
| 193.79 | $75^{\text {th }}$ | 76.29 |
| 195.30 | $80^{\text {th }}$ | 76.89 |
| 197.07 | $85^{\text {th }}$ | 77.58 |
| 199.30 | $90^{\text {th }}$ | 78.46 |
| 202.55 | $95^{\text {th }}$ | 79.75 |
| 204.59 | $97^{\text {th }}$ | 80.55 |
| 206.03 | $98{ }^{\text {th }}$ | 81.12 |
| 208.16 | $99^{\text {th }}$ | 81.95 |

Vertical Wrist Height
MALE
$\mathrm{N}=1774$

| Centimeters |  | Inches |
| :---: | :---: | :---: |
| 203.76 | Mean | 80.22 |
| 9.07 | Std Dev | 3.57 |
| 244.80 | Maximum | 96.38 |
| 163.80 | Minimum | 64.49 |
|  | Percentiles |  |
| 182.72 | $1{ }^{\text {st }}$ | 71.94 |
| 185.42 | $2^{\text {nd }}$ | 73.00 |
| 187.04 | $3{ }^{\text {rd }}$ | 73.64 |
| 189.17 | $5^{\text {th }}$ | 74.47 |
| 192.33 | $10^{\text {th }}$ | 75.72 |
| 194.44 | $15^{\text {th }}$ | 76.55 |
| 196.11 | $20^{\text {th }}$ | 77.21 |
| 197.57 | $25^{\text {th }}$ | 77.78 |
| 198.89 | $30^{\text {th }}$ | 78.30 |
| 200.12 | $35^{\text {th }}$ | 78.79 |
| 201.30 | $40^{\text {th }}$ | 79.25 |
| 202.45 | $45^{\text {th }}$ | 79.71 |
| 203.61 | $50^{\text {th }}$ | 80.16 |
| 204.77 | $55^{\text {th }}$ | 80.62 |
| 205.96 | $60^{\text {th }}$ | 81.09 |
| 507.19 | $65^{\text {th }}$ | 81.57 |
| 208.51 | $70^{\text {th }}$ | 82.09 |
| 209.93 | $75^{\text {th }}$ | 82.65 |
| 211.52 | $80^{\text {th }}$ | 83.28 |
| 213.35 | $85^{\text {th }}$ | 84.00 |
| 215.62 | $90^{\text {th }}$ | 84.89 |
| 218.81 | $95^{\text {th }}$ | 86.15 |
| 220.72 | $97^{\text {th }}$ | 86.90 |
| 222.00 | $98{ }^{\text {th }}$ | 87.40 |
| 223.76 | $99^{\text {th }}$ | 88.09 |



Vertical Wrist Height, Sitting

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 114.61 | Mean | 45.12 | 124.00 | Mean | 48.82 |
| 4.98 | Std Dev | 1.96 | 5.30 | Std Dev | 2.08 |
| 131.70 | Maximum | 51.85 | 156.50 | Maximum | 57.68 |
| 96.80 | Minimum | 38.11 | 100.30 | Minimum | 39.49 |
|  | Percentiles |  |  | Percentiles |  |
| 103.03 | $1^{\text {st }}$ | 40.56 | 111.34 | $1^{\text {st }}$ | 43.84 |
| 104.34 | $2^{\text {nd }}$ | 41.08 | 113.06 | $2^{\text {nd }}$ | 44.51 |
| 105.19 | $3{ }^{\text {rd }}$ | 41.41 | 114.08 | $3^{\text {rd }}$ | 44.91 |
| 106.34 | $5^{\text {th }}$ | 41.87 | 115.41 | $5^{\text {th }}$ | 45.44 |
| 108.15 | $10^{\text {dh }}$ | 42.58 | 117.35 | $10^{\text {th }}$ | 46.20 |
| 109.38 | $15^{\text {d }}$ | 43.06 | 118.62 | $15^{\text {th }}$ | 46.70 |
| 110.35 | $20^{\text {th }}$ | 43.45 | 119.62 | $20^{\text {th }}$ | 47.09 |
| 111.20 | $25^{\text {th }}$ | 43.78 | 120.47 | $25^{\text {th }}$ | 47.43 |
| 111.96 | $30^{\text {th }}$ | 44.05 | 121.23 | $30^{\text {th }}$ | 47.73 |
| 112.67 | $35^{\text {th }}$ | 44.36 | 121.95 | $35^{\text {th }}$ | 48.01 |
| 113.33 | $40^{\text {th }}$ | 44.62 | 122.63 | $40^{\text {th }}$ | 48.28 |
| 113.87 | $45^{\text {th }}$ | 44.87 | 123.29 | $45^{\text {th }}$ | 48.54 |
| 114.62 | $50^{\text {th }}$ | 45.13 | 123.95 | $50^{\text {th }}$ | 48.80 |
| 115.26 | $55^{\text {th }}$ | 45.38 | 124.62 | $55^{\text {th }}$ | 49.06 |
| 115.90 | $60^{\text {dh }}$ | 45.63 | 125.30 | $60^{\text {dh }}$ | 49.33 |
| 116.57 | $65^{\text {th }}$ | 45.89 | 126.01 | $65^{\text {th }}$ | 49.61 |
| 117.27 | $70^{\text {th }}$ | 46.17 | 126.76 | $70^{\text {th }}$ | 49.90 |
| 118.02 | $75^{\text {th }}$ | 46.46 | 127.57 | $75^{\text {th }}$ | 50.22 |
| 118.86 | $80^{\text {th }}$ | 46.79 | 128.49 | $80^{\text {th }}$ | 50.58 |
| 119.82 | $85^{\text {th }}$ | 47.17 | 129.54 | $85^{\text {th }}$ | 51.00 |
| 121.03 | $90^{\text {th }}$ | 47.65 | 130.87 | $90^{\text {dh }}$ | 51.52 |
| 122.77 | $95^{\text {th }}$ | 48.34 | 132.77 | $95^{\text {th }}$ | 52.27 |
| 123.88 | $97^{\text {th }}$ | 48.77 | 133.95 | $97^{\text {th }}$ | 52.73 |
| 124.68 | $988^{\text {dh }}$ | 49.09 | 134.76 | $988^{\text {th }}$ | 53.06 |
| 125.90 | $99^{\text {th }}$ | 49.57 | 135.94 | $99^{\text {th }}$ | 53.52 |



Waist Height (Natural Indentation)

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 105.65 | Mean | 41.60 | 112.71 | Mean | 44.37 |
| 5.17 | Std Dev | 2.04 | 5.20 | Std Dev | 2.05 |
| 123.40 | Maximum | 48.58 | 134.80 | Maximum | 53.07 |
| 86.30 | Minimum | 33.98 | 91.70 | Minimum | 36.10 |
|  | Percentiles |  |  | Percentiles |  |
| 94.14 | $1^{\text {st }}$ | 37.06 | 100.91 | $1{ }^{\text {st }}$ | 39.73 |
| 95.39 | $2^{\text {nd }}$ | 37.56 | 102.28 | $2^{\text {nd }}$ | 40.27 |
| 96.20 | $3^{\text {rd }}$ | 37.88 | 103.15 | $3{ }^{\text {rd }}$ | 40.61 |
| 97.32 | $5^{\text {th }}$ | 38.32 | 104.31 | $5^{\text {th }}$ | 41.07 |
| 99.09 | $10^{\text {th }}$ | 39.01 | 106.11 | $10^{\text {th }}$ | 41.78 |
| 100.30 | $15^{\text {th }}$ | 39.49 | 107.33 | $15^{\text {th }}$ | 42.26 |
| 101.26 | $20^{\text {th }}$ | 39.87 | 108.30 | $20^{\text {th }}$ | 42.64 |
| 102.10 | $25^{\text {th }}$ | 40.20 | 109.15 | $25^{\text {th }}$ | 42.97 |
| 102.86 | $30^{\text {th }}$ | 40.50 | 109.91 | $30^{\text {th }}$ | 43.27 |
| 103.56 | $35^{\text {th }}$ | 40.77 | 110.62 | $35^{\text {th }}$ | 43.55 |
| 104.23 | $40^{\text {th }}$ | 41.04 | 111.29 | $40^{\text {th }}$ | 43.82 |
| 104.88 | $45^{\text {th }}$ | 41.29 | 111.95 | $45^{\text {th }}$ | 44.07 |
| 105.53 | $50^{\text {th }}$ | 41.55 | 112.60 | $50^{\text {th }}$ | 44.33 |
| 106.18 | $55^{\text {th }}$ | 41.80 | 113.26 | $55^{\text {th }}$ | 44.59 |
| 106.84 | $60^{\text {th }}$ | 42.06 | 113.92 | $60^{\text {th }}$ | 44.85 |
| 107.52 | $65^{\text {th }}$ | 42.33 | 114.62 | $65^{\text {th }}$ | 45.13 |
| 108.25 | $70^{\text {th }}$ | 42.62 | 115.35 | $70^{\text {th }}$ | 45.41 |
| 109.04 | $75^{\text {th }}$ | 42.93 | 116.15 | $75^{\text {th }}$ | 45.73 |
| 109.93 | $80^{\text {th }}$ | 43.28 | 117.05 | $80^{\text {th }}$ | 46.08 |
| 110.97 | $85^{\text {th }}$ | 43.69 | 118.08 | $85^{\text {th }}$ | 46.49 |
| 112.31 | $90^{\text {th }}$ | 44.22 | 119.40 | $90^{\text {th }}$ | 47.01 |
| 1143.33 | $95^{\text {th }}$ | 45.01 | 121.34 | $95^{\text {th }}$ | 47.77 |
| 115.67 | $97^{\text {th }}$ | 45.54 | 122.58 | $97^{\text {th }}$ | 48.26 |
| 116.68 | $98{ }^{\text {th }}$ | 45.94 | 123.48 | $98^{\text {th }}$ | 48.61 |
| 118.30 | $99^{\text {th }}$ | 46.58 | 124.86 | $99^{\text {th }}$ | 49.16 |



Waist Height, Sitting (Natural Indentation)

|  | FEMALE $\mathrm{N}=2208$ |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |
| 27.95 | Mean | 11.01 | 28.73 | Mean | 11.31 |
| 2.14 | Std Dev | . 84 | 1.66 | Std Dev | . 65 |
| 36.00 | Maximum | 14.17 | 34.70 | Maximum | 13.66 |
| 20.08 | Minimum | 8.19 | 23.10 | Minimum | 9.09 |
|  | Percentiles |  |  | Percentiles |  |
| 22.81 | $1^{\text {st }}$ | 8.98 | 24.79 | $1{ }^{\text {st }}$ | 9.76 |
| 23.48 | $2^{\text {nd }}$ | 9.24 | 35.31 | $2^{\text {nd }}$ | 9.96 |
| 23.88 | $3{ }^{\text {rd }}$ | 9.40 | 25.63 | $3{ }^{\text {rd }}$ | 10.09 |
| 24.42 | $5^{\text {th }}$ | 9.61 | 26.04 | $5^{\text {th }}$ | 10.25 |
| 25.22 | $10^{\text {th }}$ | 9.93 | 26.66 | $10^{\text {th }}$ | 10.50 |
| 25.75 | $15^{\text {th }}$ | 10.14 | 27.06 | $15^{\text {th }}$ | 10.65 |
| 26.16 | $20^{\text {th }}$ | 10.30 | 27.37 | $20^{\text {th }}$ | 10.78 |
| 26.52 | $25^{\text {th }}$ | 10.44 | 27.64 | $25^{\text {th }}$ | 10.88 |
| 26.84 | $30^{\text {th }}$ | 10.57 | 27.88 | $30^{\text {th }}$ | 10.98 |
| 27.14 | $35^{\text {th }}$ | 10.69 | 28.10 | $35^{\text {th }}$ | 11.06 |
| 27.42 | $40^{\text {th }}$ | 10.80 | 28.30 | $40^{\text {th }}$ | 11.14 |
| 27.70 | $45^{\text {th }}$ | 10.90 | 28.51 | $45^{\text {th }}$ | 11.22 |
| 27.97 | $50^{\text {th }}$ | 11.01 | 28.70 | $50^{\text {th }}$ | 11.30 |
| 28.24 | $55^{\text {th }}$ | 11.12 | 28.90 | $55^{\text {th }}$ | 11.38 |
| 28.51 | $60^{\text {th }}$ | 11.23 | 29.11 | $60^{\text {th }}$ | 11.46 |
| 28.80 | $65^{\text {th }}$ | 11.34 | 29.32 | $65^{\text {th }}$ | 11.54 |
| 29.10 | $70^{\text {th }}$ | 11.46 | 29.55 | $70^{\text {th }}$ | 11.63 |
| 29.42 | $75^{\text {th }}$ | 11.58 | 29.79 | $75^{\text {th }}$ | 11.73 |
| 29.78 | $80^{\text {th }}$ | 11.73 | 30.07 | $80^{\text {th }}$ | 11.84 |
| 30.20 | $85^{\text {th }}$ | 11.89 | 30.41 | $85^{\text {th }}$ | 11.97 |
| 30.72 | $90^{\text {th }}$ | 12.09 | 30.84 | $90^{\text {th }}$ | 12.14 |
| 31.46 | $95^{\text {th }}$ | 12.39 | 31.58 | $95^{\text {th }}$ | 12.40 |
| 31.92 | $97^{\text {th }}$ | 12.57 | 31.95 | $97^{\text {th }}$ | 12.58 |
| 32.25 | $98{ }^{\text {th }}$ | 12.70 | 32.29 | $98{ }^{\text {th }}$ | 12.71 |
| 32.73 | $99^{\text {th }}$ | 12.89 | 32.85 | $99^{\text {th }}$ | 12.93 |




## FEMALE <br> N = 2208

| Centimeters | , | Inches |
| :---: | :---: | :---: |
| 47.13 | Mean | 18.55 |
| 3.44 | Std Dev | 1.36 |
| 57.20 | Maximum | 22.52 |
| 35.50 | Minimum | 13.98 |
|  | Percentiles |  |
| 39.46 | $1^{\text {st }}$ | 15.53 |
| 40.09 | $2^{\text {nd }}$ | 15.78 |
| 40.57 | $3^{\text {rd }}$ | 15.97 |
| 41.29 | $5^{\text {th }}$ | 16.25 |
| 42.52 | $10^{\text {th }}$ | 16.74 |
| 43.40 | $15^{\text {th }}$ | 17.09 |
| 44.12 | $20^{\text {th }}$ | 17.37 |
| 44.75 | $25^{\text {th }}$ | 17.62 |
| 45.31 | $30^{\text {th }}$ | 17.84 |
| 45.83 | $35^{\text {th }}$ | 18.04 |
| 46.32 | $40^{\text {th }}$ | 18.24 |
| 46.79 | $45^{\text {th }}$ | 18.42 |
| 47.25 | $50^{\text {th }}$ | 18.60 |
| 47.71 | $55^{\text {th }}$ | 18.78 |
| 48.16 | $60^{\text {th }}$ | 18.96 |
| 48.62 | $65^{\text {th }}$ | 19.14 |
| 49.10 | $70^{\text {th }}$ | 19.33 |
| 49.61 | $75^{\text {th }}$ | 19.53 |
| 50.16 | $80^{\text {th }}$ | 19.75 |
| 50.79 | $85^{\text {th }}$ | 19.99 |
| 51.56 | $90^{\text {th }}$ | 20.30 |
| 52.66 | $95^{\text {th }}$ | 20.73 |
| 53.37 | $97^{\text {th }}$ | 21.01 |
| 53.89 | $98{ }^{\text {th }}$ | 21.22 |
| 54.72 | $99^{\text {th }}$ | 21.54 |

Wrist Height, Sitting
MALE
$\mathrm{N}=1774$

| Centimeters |  | Inches |
| :---: | :---: | :---: |
| 45.98 | Mean | 18.10 |
| . 52 | Std Dev | 1.39 |
| 55.90 | Maximum | 22.01 |
| 34.30 | Minimum | 13.50 |
|  | Percentiles |  |
| 37.13 | $1^{\text {st }}$ | 14.62 |
| 38.19 | $2^{\text {nd }}$ | 15.04 |
| 38.88 | $3{ }^{\text {rd }}$ | 15.31 |
| 39.84 | $5^{\text {th }}$ | 15.68 |
| 41.32 | $10^{\text {th }}$ | 16.27 |
| 42.30 | $15^{\text {th }}$ | 16.66 |
| 43.07 | $20^{\text {th }}$ | 16.96 |
| 43.72 | $25^{\text {th }}$ | 17.21 |
| 44.29 | $30^{\text {th }}$ | 17.44 |
| 44.81 | $35^{\text {th }}$ | 17.64 |
| 45.29 | $40^{\text {th }}$ | 17.83 |
| 45.74 | $45^{\text {th }}$ | 18.01 |
| 46.19 | $50^{\text {th }}$ | 18.18 |
| 46.62 | $55^{\text {th }}$ | 18.35 |
| 47.05 | $60^{\text {th }}$ | 18.52 |
| 47.49 | $65^{\text {th }}$ | 18.70 |
| 47.94 | $70^{\text {th }}$ | 18.88 |
| 48.43 | $75^{\text {th }}$ | 19.07 |
| 48.96 | $80^{\text {th }}$ | 19.28 |
| 49.57 | $85^{\text {th }}$ | 19.52 |
| 50.34 | $90^{\text {th }}$ | 19.82 |
| 51.50 | $95^{\text {th }}$ | 20.27 |
| 52.27 | $97^{\text {th }}$ | 20.58 |
| 52.87 | $98{ }^{\text {th }}$ | 20.82 |
| 53.88 | $99^{\text {th }}$ | 21.21 |



Wrist-Center Of Grip Length

|  | FEMALE $\mathrm{N}=2208$ |  |  | $\begin{gathered} \text { MALE } \\ \mathbf{N}=1774 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Centimeters |  | Inches | Centimeters |  | Inches |  |
| 6.63 | Mean | 2.61 | 6.97 | Mean | 2.75 |  |
| . 49 | Std Dev | . 19 | . 49 | Std Dev | . 19 |  |
| 8.30 | Maximum | 3.27 | 8.70 | Maximum | 3.43 |  |
| 5.20 | Minimum | 2.05 | 5.70 | Minimum | 2.24 | - |
|  | Percentiles |  |  | Percentiles |  | 1 |
| 5.57 | $1^{\text {st }}$ | 2.19 | 5.99 | $1^{\text {st }}$ | 2.36 | - |
| 5.69 | $2^{\text {nd }}$ | 2.24 | 6.08 | $2^{\text {nd }}$ | 2.40 | - |
| 5.77 | $3{ }^{\text {rd }}$ | 2.27 | 6.15 | $3{ }^{\text {rd }}$ | 2.42 | 人1 |
| 5.87 | $5^{\text {th }}$ | 2.31 | 6.23 | $5^{\text {th }}$ | 2.45 | $\bigcirc<$ |
| 6.02 | $10^{\text {th }}$ | 2.37 | 6.37 | $10^{\text {th }}$ | 2.51 | - |
| 6.12 | $15^{\text {th }}$ | 2.41 | 6.47 | $15^{\text {th }}$ | 2.55 | - |
| 6.21 | $20^{\text {th }}$ | 2.44 | 6.55 | $20^{\text {th }}$ | 2.58 | (1) |
| 6.28 | $25^{\text {th }}$ | 2.47 | 6.62 | $25^{\text {th }}$ | 2.61 | , |
| 6.35 | $30^{\text {th }}$ | 2.50 | 6.69 | $30^{\text {th }}$ | 2.63 |  |
| 6.41 | $35^{\text {th }}$ | 2.52 | 6.75 | $35^{\text {th }}$ | 2.66 | - |
| 6.47 | $40^{\text {th }}$ | 2.55 | 6.82 | $40^{\text {th }}$ | 2.68 |  |
| 6.54 | $45^{\text {th }}$ | 2.57 | 6.88 | $45^{\text {th }}$ | 2.71 |  |
| 6.60 | $50^{\text {th }}$ | 2.60 | 6.94 | $50^{\text {th }}$ | 2.73 |  |
| 6.66 | $55^{\text {th }}$ | 2.62 | 7.01 | $55^{\text {th }}$ | 2.76 |  |
| 6.73 | $60^{\text {th }}$ | 2.65 | 7.07 | $60^{\text {th }}$ | 2.78 |  |
| 6.80 | $65^{\text {th }}$ | 2.68 | 7.14 | $65^{\text {th }}$ | 2.81 |  |
| 6.87 | $70^{\text {th }}$ | 2.70 | 7.22 | $70^{\text {th }}$ | 2.84 |  |
| 6.95 | $75^{\text {th }}$ | 2.74 | 7.30 | $75^{\text {th }}$ | 2.87 |  |
| 7.04 | $80^{\text {th }}$ | 2.77 | 7.39 | $80^{\text {th }}$ | 2.91 |  |
| 7.15 | $85^{\text {th }}$ | 2.81 | 7.50 | $85^{\text {th }}$ | 2.95 |  |
| 7.29 | $90^{\text {th }}$ | 2.87 | 7.63 | $90^{\text {th }}$ | 3.00 |  |
| 7.49 | $95^{\text {th }}$ | 2.95 | 7.83 | $95^{\text {th }}$ | 3.08 |  |
| 7.62 | $97^{\text {th }}$ | 3.00 | 7.95 | $97^{\text {th }}$ | 3.13 |  |
| 7.71 | $98{ }^{\text {th }}$ | 3.04 | 8.04 | $98{ }^{\text {th }}$ | 3.16 |  |
| 7.85 | $99^{\text {th }}$ | 3.09 | 8.16 | $99^{\text {th }}$ | 3.21 |  |



## Wrist-Wall Length

| Centimeters | FEMALE <br> $\mathbf{N}=\mathbf{2 2 0 8}$ |  |
| :---: | :---: | :---: |
| 61.98 | Mean <br> Std Dev | Inches <br> 3.21 |
| 76.30 | Maximum <br> Minimum | 3.26 |
| 50.80 |  | 20.04 |
|  | Percentiles |  |
| 55.30 | $1^{\text {st }}$ | 21.77 |
| 55.89 | $2^{\text {nd }}$ | 22.00 |
| 56.30 | $3^{\text {rd }}$ | 22.16 |
| 56.89 | $5^{\text {th }}$ | 22.40 |
| 57.89 | $10^{\text {th }}$ | 22.79 |
| 58.60 | $15^{\text {th }}$ | 23.07 |
| 59.19 | $20^{\text {th }}$ | 23.30 |
| 59.71 | $25^{\text {th }}$ | 23.51 |
| 60.18 | $30^{\text {th }}$ | 23.69 |
| 60.62 | $35^{\text {th }}$ | 23.87 |
| 61.05 | $40^{\text {th }}$ | 24.04 |
| 61.47 | $45^{\text {th }}$ | 24.20 |
| 61.89 | $50^{\text {th }}$ | 24.36 |
| 62.31 | $55^{\text {th }}$ | 24.53 |
| 62.73 | $60^{\text {th }}$ | 24.70 |
| 63.18 | $65^{\text {th }}$ | 24.87 |
| 63.65 | $70^{\text {th }}$ | 25.06 |
| 64.16 | $75^{\text {th }}$ | 25.26 |
| 64.74 | $80^{\text {th }}$ | 25.49 |
| 65.41 | $85^{\text {th }}$ | 25.75 |
| 66.26 | $90^{\text {th }}$ | 26.09 |
| 67.52 | $95^{\text {th }}$ | 26.58 |
| 68.34 | $97^{\text {th }}$ | 26.91 |
| 68.95 | $98^{\text {th }}$ | 27.15 |
| 69.91 | $99^{\text {th }}$ | 27.52 |

MALE
$\mathbf{N}=1774$

| Centimeters |  | Inches |
| :---: | :---: | :---: |
| 68.09 | Mean | 26.81 |
| 3.48 | Std Dev | 1.37 |
| 83.50 | Maximum | 32.87 |
| 56.50 | Minimum | 22.24 |
|  | Percentiles |  |
| 60.69 | $1^{\text {st }}$ | 23.90 |
| 61.36 | $2^{\text {nd }}$ | 24.16 |
| 61.83 | $3{ }^{\text {rd }}$ | 24.34 |
| 62.51 | $5^{\text {th }}$ | 24.61 |
| 63.65 | $10^{\text {th }}$ | 25.06 |
| 64.46 | $15^{\text {th }}$ | 25.38 |
| 65.12 | $20^{\text {th }}$ | 25.64 |
| 65.70 | $25^{\text {th }}$ | 25.86 |
| 66.22 | $30^{\text {th }}$ | 26.07 |
| 66.70 | $35^{\text {th }}$ | 26.26 |
| 67.16 | $40^{\text {th }}$ | 26.44 |
| 67.61 | $45^{\text {th }}$ | 26.62 |
| 68.05 | $50^{\text {th }}$ | 26.79 |
| 68.49 | $55^{\text {th }}$ | 26.96 |
| 68.94 | $60^{\text {th }}$ | 27.14 |
| 69.40 | $65^{\text {th }}$ | 27.32 |
| 69.89 | $70^{\text {th }}$ | 27.52 |
| 70.42 | $75^{\text {th }}$ | 27.73 |
| 71.02 | $80^{\text {th }}$ | 27.96 |
| 71.71 | $85^{\text {th }}$ | 28.23 |
| 72.60 | $90^{\text {th }}$ | 28.58 |
| 73.96 | $95^{\text {th }}$ | 29.12 |
| 74.88 | $97^{\text {th }}$ | 29.48 |
| 75.58 | $98{ }^{\text {th }}$ | 29.75 |
| 76.73 | $99^{\text {th }}$ | 30.21 |




Wrist-Wall Length, Extended

| Centimeters | FEMALE $\mathrm{N}=2208$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 67.93 | Mean | 26.74 |
| 3.43 | Std Dev | 1.35 |
| 84.50 | Maximum | 33.27 |
| 56.00 | Minimum | 22.05 |
|  | Percentiles |  |
| 60.56 | $1^{\text {st }}$ | 23.84 |
| 61.29 | $2^{\text {nd }}$ | 24.13 |
| 61.78 | $3{ }^{\text {rd }}$ | 24.32 |
| 62.47 | $5^{\text {th }}$ | 24.60 |
| 63.59 | $10^{\text {th }}$ | 25.04 |
| 64.37 | $15^{\text {th }}$ | 25.34 |
| 65.01 | $20^{\text {th }}$ | 25.59 |
| 65.56 | $25^{\text {th }}$ | 25.81 |
| 66.07 | $30^{\text {th }}$ | 26.01 |
| 66.54 | $35^{\text {th }}$ | 26.20 |
| 66.99 | $40^{\text {th }}$ | 26.37 |
| 67.43 | $45^{\text {th }}$ | 26.55 |
| 67.87 | $50^{\text {dh }}$ | 26.72 |
| 68.37 | $55^{\text {th }}$ | 26.89 |
| 68.76 | $60^{\text {th }}$ | 27.07 |
| 69.32 | $65^{\text {th }}$ | 27.25 |
| 69.72 | $70^{\text {th }}$ | 27.45 |
| 70.25 | $75^{\text {th }}$ | 27.66 |
| 70.85 | $80^{\text {th }}$ | 27.90 |
| 71.55 | $85^{\text {th }}$ | 28.17 |
| 72.43 | $90^{\text {th }}$ | 28.52 |
| 73.74 | $95^{\text {th }}$ | 29.03 |
| 74.59 | $97^{\text {th }}$ | 29.37 |
| 75.21 | $98^{\text {th }}$ | 29.61 |
| 76.19 | $99^{\text {th }}$ | 29.99 |


| Centimeters | MALE $\mathbf{N}=1774$ | Inches |
| :---: | :---: | :---: |
|  |  |  |
| 74.84 | Mean | 29.47 |
| 3.73 | Std Dev | 1.47 |
| 90.30 | Maximum | 35.55 |
| 63.00 | Minimum | 24.80 |
|  | Percentiles |  |
| 66.43 | $1{ }^{\text {st }}$ | 26.15 |
| 67.34 | $2^{\text {nd }}$ | 26.51 |
| 67.94 | $3{ }^{\text {rd }}$ | 26.75 |
| 68.78 | $5^{\text {th }}$ | 27.08 |
| 70.09 | $10^{\text {th }}$ | 27.59 |
| 70.98 | $15^{\text {th }}$ | 27.95 |
| 71.69 | $20^{\text {th }}$ | 28.23 |
| 72.31 | $25^{\text {th }}$ | 28.47 |
| 72.86 | $30^{\text {th }}$ | 28.69 |
| 73.37 | $35^{\text {th }}$ | 28.89 |
| 73.85 | $40^{\text {th }}$ | 29.08 |
| 74.32 | $45^{\text {th }}$ | 29.26 |
| 74.79 | $50^{\text {th }}$ | 29.44 |
| 75.25 | $55^{\text {th }}$ | 29.63 |
| 75.72 | $60^{\text {th }}$ | 29.81 |
| 76.21 | $65^{\text {th }}$ | 30.00 |
| 76.72 | $70^{\text {dh }}$ | 30.20 |
| 77.28 | $75^{\text {th }}$ | 30.43 |
| 77.91 | $80^{\text {th }}$ | 30.67 |
| 78.65 | $85^{\text {th }}$ | 30.97 |
| 79.61 | $90^{\text {th }}$ | 31.34 |
| 81.07 | $95^{\text {th }}$ | 31.92 |
| 82.06 | $97^{\text {th }}$ | 32.31 |
| 82.82 | $98^{\text {th }}$ | 32.61 |
| 84.08 | $99^{\text {th }}$ | 33.10 |


(2)

