



Anthropometry Data Tables

Column 1 shows the measures and corresponding numbers from the body diagrams. Columns 2-7 provide the 5th, 50th and 95th percentiles respectively for males and females. Columns 8-10 show equivalent data for a 50/50 mix of males and females. All measures in inches. Data taken primarily from U.S. military personnel with sample size of several thousand.

STANDING

1. Forward Functional Reach
 - a. Includes body depth at shoulder
 - b. Acromial Process to Functional Pitch
 - c. Abdominal Extension to Functional Pitch
2. Abdominal Extension Depth
3. Waist Height
4. Tibial Height
5. Knuckle Height
6. Elbow Height
7. Shoulder Height
8. Eye height
9. Stature
10. Functional Overhead Reach

	Males			Females			50/50 Males/Females		
	5th	50th	95th	5th	50th	95th	5th	50th	95th
1. Forward Functional Reach									
a. Includes body depth at shoulder	28.7	32.5	36.3	26.2	29.2	32.2	27.2	30.7	35
b. Acromial Process to Functional Pitch	23.5	26.9	30.3	22.0	24.6	27.2	22.6	25.6	29.3
c. Abdominal Extension to Functional Pitch	17.4	24.4	31.4	18.6	23.8	29.0	19.1	24.1	29.3
2. Abdominal Extension Depth	7.5	9.1	10.7	6.6	8.2	9.8	7.1	8.7	10.2
3. Waist Height	37.7	41.9	46.1	36.0	40.0	44.0	37.4	40.9	44.7
4. Tibial Height	15.7	17.9	20.1	14.7	16.5	18.3	15.3	17.2	19.4
5. Knuckle Height	26.5	29.7	32.9	24.8	28.0	31.2	25.9	28.8	31.9
6. Elbow Height	39.9	43.5	47.1	37.6	40.4	43.2	38.0	42.0	45.8
7. Shoulder Height	51.8	56.6	61.4	46.5	51.9	57.3	48.4	54.4	59.7
8. Eye height	59.9	64.7	69.5	55.2	59.6	64.0	56.8	62.1	67.8
9. Stature	63.5	68.7	73.9	59.0	63.8	68.6	60.8	66.2	72
10. Functional Overhead Reach	75.9	82.5	89.1	71.6	78.4	85.2	74.0	80.5	86.9

SEATED

11. Thigh Clearance Height
12. Elbow Rest Height
13. Midshoulder Height
14. Eye Height
15. Sitting Height, Normal
16. Functional Overhead Reach
17. Knee Height
18. Popliteal Height
19. Leg Length
20. Upper-Leg Length
21. Buttocks-to-Popliteal Height
22. Elbow-to-Popliteal Height
23. Upper-Arm Length
24. Shoulder Breadth
25. Hip Breadth

11. Thigh Clearance Height	4.6	5.8	7.0	3.9	4.9	5.9	4.3	5.3	6.5
12. Elbow Rest Height	6.9	9.5	12.1	6.7	9.1	11.5	7.3	9.3	11.4
13. Midshoulder Height	22.1	24.5	26.9	20.8	22.8	24.8	21.4	23.6	26.1
14. Eye Height	28.2	31.0	33.8	26.6	29.0	31.4	27.4	29.9	32.8
15. Sitting Height, Normal	31.1	34.1	37.1	29.0	32.2	35.4	32.0	34.6	37.4
16. Functional Overhead Reach	44.0	50.6	57.2	42.0	47.2	52.4	43.6	48.7	54.8
17. Knee Height	19.1	21.3	23.5	18.1	20.1	22.1	18.7	20.7	22.7
18. Popliteal Height	15.2	17.2	19.2	14.8	16.2	17.6	15.1	16.6	18.4
19. Leg Length	37.6	41.4	45.2	36.2	39.6	43.0	37.3	40.5	43.9
20. Upper-Leg Length	21.2	23.4	25.6	20.6	22.6	24.6	21.1	23.0	24.9
21. Buttocks-to-Popliteal Height	17.2	19.2	21.2	16.5	18.9	21.3	17.2	19.1	20.9
22. Elbow-to-Popliteal Height	12.4	14.2	16.0	10.5	12.7	14.9	12.6	14.5	16.2
23. Upper-Arm Length	13.1	14.5	15.9	12.6	13.4	14.2	12.9	13.8	15.5
24. Shoulder Breadth	16.3	17.9	19.5	13.8	15.4	17.0	14.3	16.7	18.8
25. Hip Breadth	12.2	14.0	15.8	13.0	15.0	17.0	12.8	14.5	16.3

Data tables excerpted from: Human Factors Section, Eastman Kodak Company, *Ergonomic Design for People at Work*, Van Nostrand Reinhold, 1983.

Anthropometry Data Tables

	Males			Females			50/50 Males/Females		
	5th	50th	95th	5th	50th	95th	5th	50th	95th
FOOT									
26. Foot Length	9.5	10.5	11.5	8.7	9.5	10.3	8.9	10.0	11.2
27. Foot Breadth	3.5	3.9	4.3	3.1	3.5	3.9	3.2	3.7	4.2
HAND									
28. Hand Thickness, Metacarpal III	1.1	1.3	1.5	0.9	1.1	1.3	1.0	1.2	1.4
29. Hand Length	6.7	7.5	8.3	6.4	7.2	8.0	6.7	7.4	8.0
30. Digit Two Length	2.4	3.0	3.6	2.1	2.7	3.3	2.3	2.8	3.3
31. Hand Breadth	3.0	3.4	3.8	2.6	3.0	3.4	2.8	3.2	3.6
32. Digit One Length	4.2	5.0	5.8	3.6	4.4	5.2	3.8	4.7	5.6
33. Breadth of Digit One Interphalangeal Joint	0.8	0.9	1.0	0.7	0.8	0.9	0.7	0.8	1.0
34. Breadth of Digit Three Interphalangeal Joint	0.6	0.7	0.8	0.5	0.6	0.7	0.6	0.7	0.8
35. Grip Breadth, Inside Diameter	1.5	1.9	2.3	1.5	1.7	1.9	1.5	1.8	2.2
36. Hand Spread, Digit One to Two, 1st Phalangeal Joint	3.1	4.9	6.7	2.5	3.9	5.3	3.0	4.3	6.1
37. Hand Spread, Digit One to Two, 2nd Phalangeal Joint	2.7	4.1	5.5	1.8	3.2	4.6	2.3	3.6	5.0
HEAD									
38. Head Breadth	5.6	6.0	6.4	5.3	5.7	6.1	5.4	5.9	6.3
39. Interpupillary Breadth	2.0	2.4	2.8	1.9	2.3	2.7	2.1	2.4	2.8
40. Biocular Breadth	3.2	3.6	4.0	3.2	3.6	4.0	3.3	3.6	3.9
OTHER MEASUREMENTS									
41. Flexion-Extension, Range of Motion of Wrist Degrees	96.0	134.0	172.0	111.0	141.0	171.0	108.0	138.0	166.0
42. Ulnar-Radial Range of Motion of Wrist Degrees	34.0	60.0	86.0	39.0	67.0	95.0	41.0	63.0	87.0
43. Weight, in pounds	117.0	183.4	249.8	84.9	146.3	207.7	105.3	164.1	226.8

Note: All values may be affected by clothing and posture.

Data tables excerpted from: Human Factors Section, Eastman Kodak Company, *Ergonomic Design for People at Work*, Van Nostrand Reinhold, 1983.