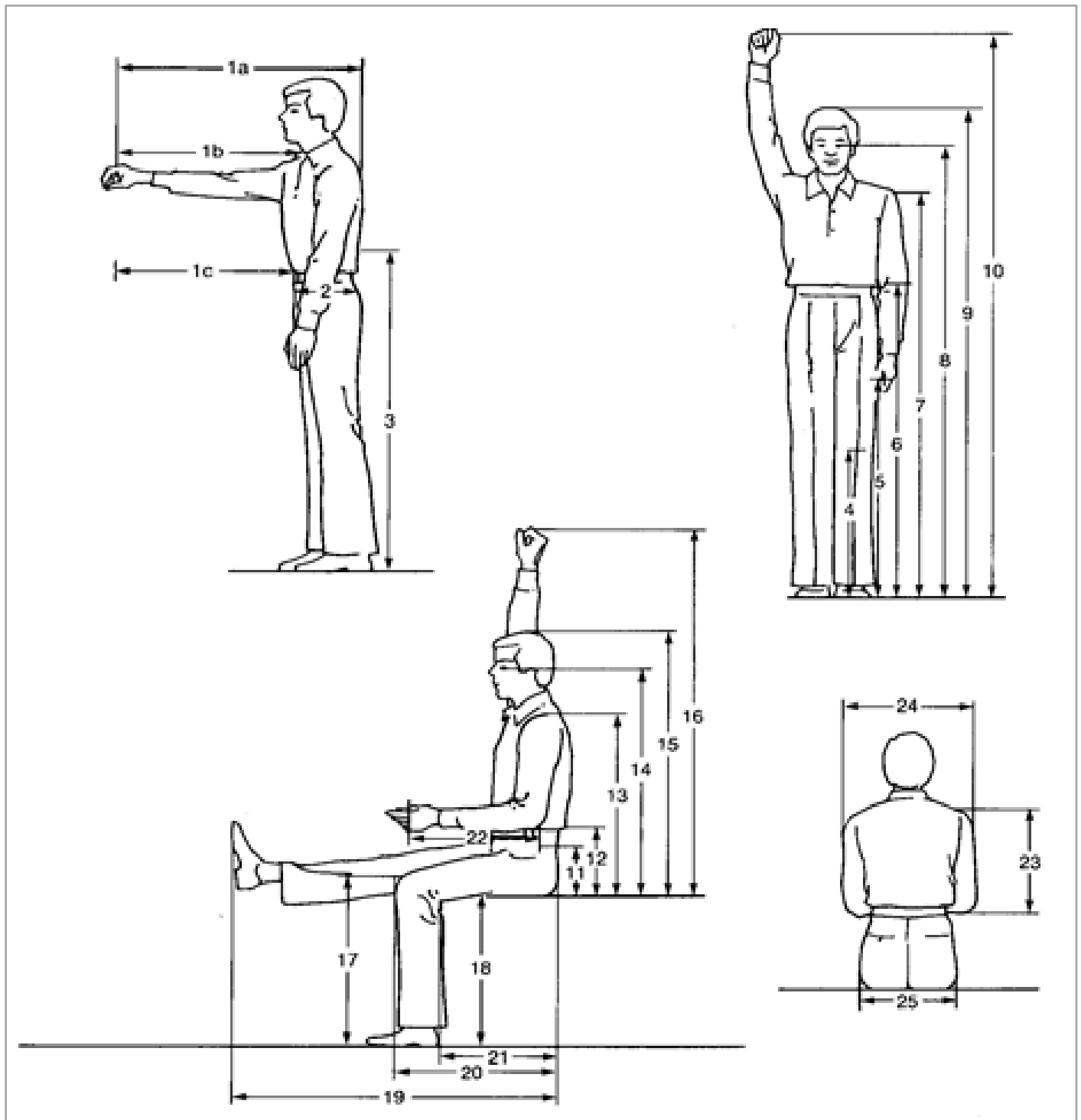
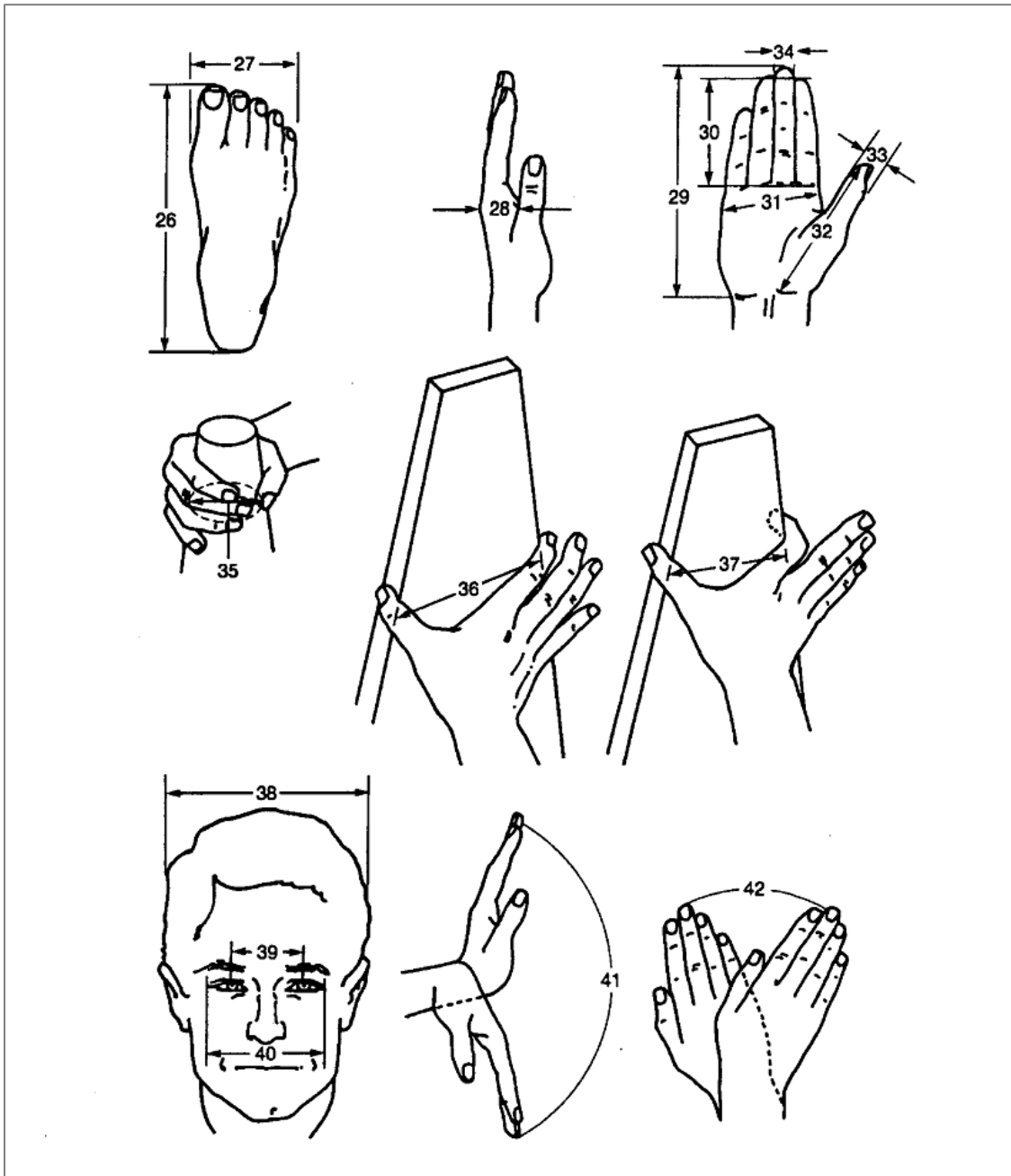


ANTHROPOMETRY

Reference Illustrations (Standing and Seated)



Reference Illustrations (Hand, Foot and Face)**Data Tables**

On the Data Tables (following page) you will see the columns have the following information.

- Column 1 shows the segment lengths and corresponding numbers from the Reference Illustrations.
- Columns 2-7 provide the 5th, 50th and 95th percentiles respectively for males and females.
- Columns 8-10 show equivalent data for 50/50 mix of males and females.

All measures are in inches. The data set is from U.S. Military personnel with a sample size of several thousand.

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.

	Males			Females			50/50 Males/Females		
	5th	50th	95th	5th	50th	95th	5th	50th	95th
STANDING									
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	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	2.6
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.