



# The Story of Lacy and Andrew

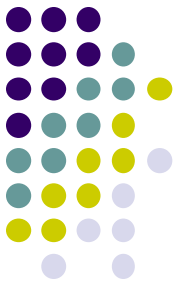
Does one size fit all?

Lacy is 4' 10" (147 cm)

Andrew is 6' 10" (208 cm)







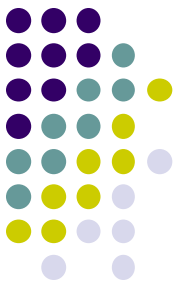






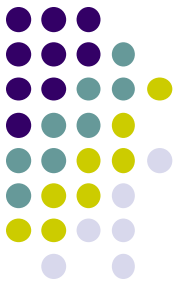








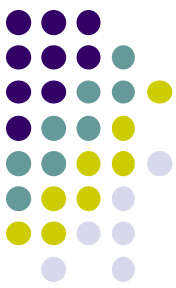
# Love conquers all – even anthropometry!





# Available Body Size Data

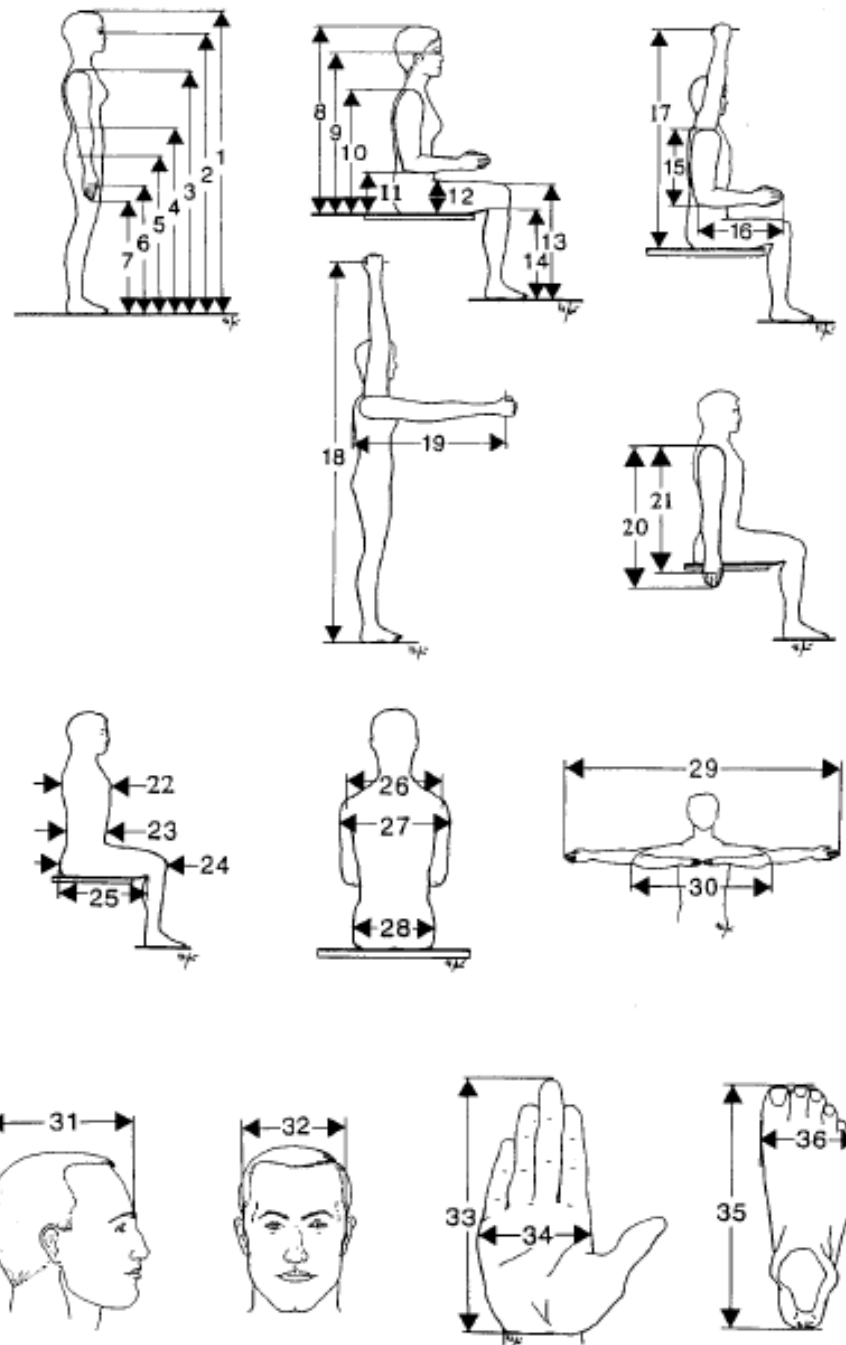
- Dimensions for 1988 US Army personnel
  - Table 1-10a (Tables 1-10 b and c for comparison)
- North American
  - Main difference is weight
    - Chest depth, Abdominal depth, Hip breadth
  - 5<sup>th</sup>, 50<sup>th</sup>, 95<sup>th</sup> percentile measures (p) and standard deviation (s)
- Most populations not thoroughly measured (small n)
  - Mean and standard deviation not true indicators of underlying population



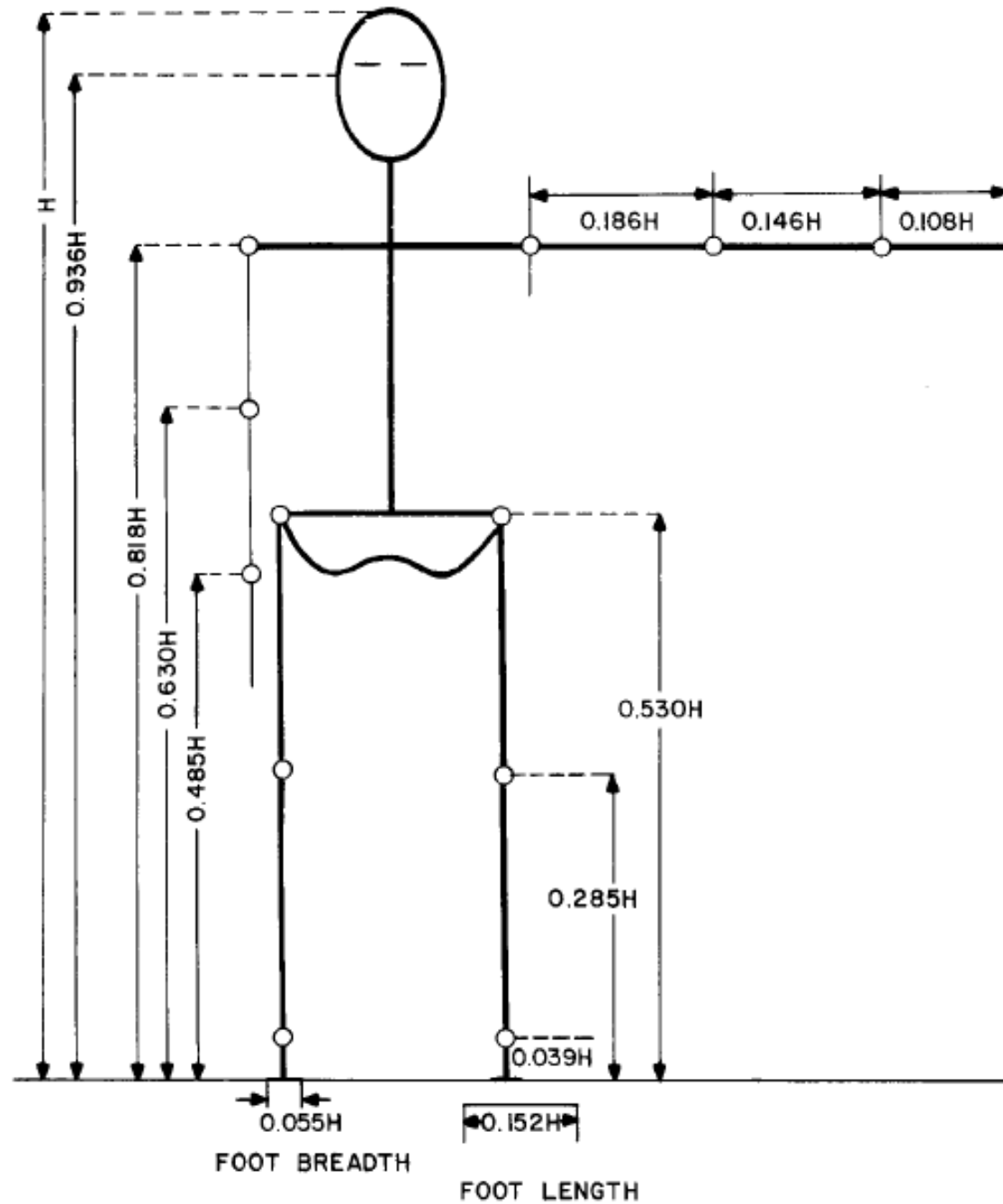
**Table 1-10a.** Anthropometric measured data in millimeters of U.S. adults, 19 to 60 years of age, according to Gordon et al. (1989). The reference numbers of the dimensions are shown in Figure 1-18.

Dimension	<i>Men</i>				<i>Women</i>			
	5th percentile	Mean	95th percentile	SD	5th percentile	Mean	95th percentile	SD
1. Stature [99]	1647	1756	1867	67	1528	1629	1737	64
2. Eye height, standing [D19]	1528	1634	1743	66	1415	1516	1621	63
3. Shoulder height (acromion), standing [2]	1342	1443	1546	62	1241	1334	1432	58
4. Elbow height, standing [D16]	995	1073	1153	48	926	998	1074	45
5. Hip height (trochanter) [107]	853	928	1009	48	789	862	938	45
6. Knuckle height, standing	na	na	na	na	na	na	na	na
7. Fingertip height, standing [D13]	591	653	716	40	551	610	670	36
8. Sitting height [93]	855	914	972	36	795	852	910	35
9. Sitting eye height [49]	735	792	848	34	685	739	794	33
10. Sitting shoulder height (acromion) [3]	549	598	646	30	509	556	604	29
11. Sitting elbow height [48]	184	231	274	27	176	221	264	27
12. Sitting thigh height (clearance) [104]	149	168	190	13	140	160	180	12
13. Sitting knee height [73]	514	559	606	28	474	515	560	26
14. Sitting popliteal height [86]	395	434	476	25	351	389	429	24
15. Shoulder-elbow length [91]	340	369	399	18	308	336	365	17





**Figure 1-18.** Illustration of measured body dimensions.



**Figure 3.9** Some body segment lengths expressed as proportion of body stature by Drillis and Contini (Roebuck, Kroemer, and Thomson, 1975).

**Table 1-12.** Average anthropometric data in millimeters estimated for 20 regions of the earth. Adapted from Juergens, Aune, and Pieper (1990).

	<i>Stature</i>		<i>Sitting height</i>		<i>Knee height, sitting</i>	
	Females	Males	Females	Males	Females	Males
North America	1650	1790	880	930	500	550
Latin America						
Indian Population	1480	1620	800	850	445	495
European and Negroid population	1620	1750	860	930	480	540
Europe						
North	1690	1810	900	950	500	550
Central	1660	1770	880	940	500	550
East	1630	1750	870	910	510	550
Southeast	1620	1730	860	900	460	535
France	1630	1770	860	930	490	540
Iberia	1600	1710	850	890	480	520
Africa						
North	1610	1690	840	870	500	535
West	1530	1670	790	820	480	530
Southeast	1570	1680	820	860	495	540
Near East	1610	1710	850	890	490	520
India						
North	1540	1670	820	870	490	530
South	1500	1620	800	820	470	510
Asia						
North	1590	1690	850	900	475	515
Southeast	1530	1630	800	840	460	495
South China	1520	1660	790	840	460	505
Japan	1590	1720	860	920	395	515
Australia						
European extraction	1670	1770	880	930	525	570

