

# Anthropometric Data

**Segment Mass Anthropometry (50% male). Segment Weight**

Hand	0.4 kg	3.92 N
Forearm	1.2 kg	11.77 N
Upper arm	2.1 kg	20.60 N
Head, neck and trunk	43.4 kg	425.75 N
Head, neck and trunk above L5/S1 <sup>b</sup>	33.5 kg	328.64 N
Upper leg	7.4 kg	72.59 N
Lower leg	3.4 kg	33.35 N
Foot	1.0 kg	9.81 N
Total body weight	74.4 kg	729.86 N

<sup>a</sup>Corrected by Clauser et al 1969. <sup>b</sup>Pheasant 1986

**Segment Length Anthropometry (50% male).**

Stature (height)	173.0 cm
Hand (wrist to tip of middle finger)	18.7 cm
Forearm (elbow to wrist)	25.3 cm
Upper arm (shoulder to elbow)	32.2 cm
Head, neck & trunk (hip to top of head)	81.3 cm
<b>Hip to shoulder joint</b>	50.0 cm
<b>L5/S1 to hip</b>	9.9 cm
Thigh (hip to knee)	42.4 cm
Lower leg (knee to ankle)	42.6 cm
Foot (heel to toe)	26.3 cm
Foot (ankle to toe)	20.0 cm
Ankle height from floor	6.7 cm

**Segment Centre of Mass (50% male).**

Hand (wrist to hand CM)	9.2 cm
Forearm (elbow to forearm CM)	10.9 cm
Upper arm (shoulder to upper arm CM)	14.0 cm
Head, neck & trunk (hip to HNT CM)	32.5 cm
HNT above L5/S1 (segment HNT/L5)	
(L5/S1 to HNT/L5 CM)	26.6 cm
Thigh (hip to upper leg CM)	18.4 cm
Lower leg (knee to lower leg CM)	18.4 cm
Foot (heel to foot CM)	11.3 cm

**Radii of Gyration (k) / Segment Length (L) [transverse axis] (50% male).**

**Segment k/L for Centre of Mass**

Head, neck, trunk	0.503 (unitless ratio)
Upper arm	0.322
Forearm	0.303
Hand	0.297
Thigh	0.323
Lower leg	0.302
Foot (heel to toe)	0.475