

Properties of Bone

Type of Stress	Ultimate Strength ($\times 10^8$ N/m ²)
Compression	1.5
Tension	1.2-1.5
Bending	2.1-2.2
Young's Modulus	171-185

Data from J.V. Noble,
www.phys.virginia.edu/classes/304/lects.htm

Body Segment Data

Segment	Weight (% of Body)	Center of Gravity (% of distance from upper end)
Head and Neck	7.9	
Trunk with Head and Neck	56.5	60.4
Upper Arm	2.7	43.6
Forearm	1.5	43
Hand	0.6	50.6
Thigh	9.7	43.3
Lower Leg	4.5	43.3
Foot	1.4	42.8
Entire Arm (hand included)	4.8	46
Entire Leg (foot included)	15.6	40

Data from
Mechanics, Heat, and the Human Body, H. Goldick. Prentice Hall, 2001.