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Human body weight

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The term **human body weight** is used colloquially and in the biological and medical sciences to refer to a person's [mass or weight](#). Body weight is measured in [kilograms](#), a measure of mass, throughout the world, although in some countries such as the United States it is measured in [pounds](#), or as in the United Kingdom, [stones](#) and pounds. Most hospitals, even in the United States, now use kilograms for calculations, but use kilograms and pounds together for other purposes.

Strictly speaking, body weight is the measurement of weight without items located on the person. Practically though, body weight may be measured with clothes on, but without shoes or heavy accessories such as mobile phones and wallets and using manual or digital weighing scales. Excess or reduced body weight is regarded as an indicator of determining a person's health, with body volume measurement providing an extra dimension by calculating the distribution of body weight.

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Average weight around the world [\[edit\]](#)

By region [\[edit\]](#)

Region	Adult population (millions)	Average weight	Overweight population / total population	Source
Africa	535	60.7 kg (133.8 lb)	28.9%	[1]
Asia	2,815	57.7 kg	24.2%	[1]

		(127.2 lb)		
Europe	606	70.8 kg (156.1 lb)	55.6%	[1]
Latin America and the Caribbean	386	67.9 kg (149.7 lb)	57.9%	[1]
North America	263	80.7 kg (177.9 lb)	73.9%	[1]
Oceania	24	74.1 kg (163.4 lb)	63.3%	[1]
World	4,630	62.0 kg (136.7 lb)	34.7%	[1]

By country [edit]

Country	Average male weight	Average female weight	Sample population / age range	Methodology	Year	Source
Brazil	72.7 kg (160.3 lb)	62.5 kg (137.8 lb)	20–74	Measured	2008–2009	[2]
Canada	80.3 kg (177 lb)			Measured		[citation needed]
Chile	77.3 kg (170.4 lb)	67.5 kg (148.8 lb)	15+	Measured	2009–2010	[3]
Finland	82.1 kg (181 lb)			Measured		[citation needed]
Germany	82.4 kg (181.7 lb)	67.5 kg (148.8 lb)	18+	Measured	2005	[4]
South Korea	68.6 kg (151.2 lb)	56.5 kg (124.6 lb)	18+	Measured	2007	[5]
Sweden	81.9 kg (180.6 lb)	66.7 kg (147.0 lb)	16–84	Measured	2003–2004	[6]
UK – Wales	84.0 kg (185.2 lb)	69.0 kg (152.1 lb)	16+	Measured	2009	[7]
United States	88.3 kg (194.7 lb)	74.7 kg (164.7 lb)	20+	Measured	2003–2006	[8]

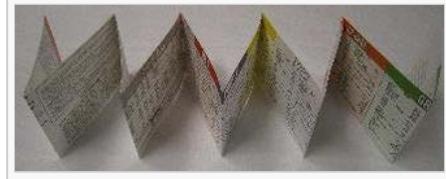
Global statistics [edit]

Researchers at the [London School of Hygiene & Tropical Medicine](#) published a study of average weights of adult humans in the journal BMC Public Health and at the United Nations conference Rio+20.^[9]

Rank [show]	Country	Kilograms	Pounds	Relative size
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Estimation in children [edit]

There are a number of methods to estimate weight in children for circumstances (such as emergencies) when actual weight cannot be measured. Most involve a parent or health care provider guessing the child's weight through weight-estimation formulas. These formulas base their findings on the child's age and tape-based systems of weight estimation. Of the many formulas that have been used for estimating body weight, some include the APLS formula, the Leffler formula, and Theron formula.^[10] There are also several types of tape-based systems for estimating children's weight, with the most well-known being the Broselow tape.^[11] The Broselow tape is based on length with weight read from the appropriate color area. Newer systems, such as the PAWPER tape, make use of a simple two-step process to estimate weight: the length-based weight estimation is modified according to the child's body habitus to increase the accuracy of the final weight prediction.^[12]



An example of a half unfolded Broselow tape.

The Leffler formula is used for children 0–10 years of age.^[10] In those less than a year old it is

$$m = \frac{1}{2}a_m + 4$$

and for those 1–10 years old it is

$$m = 2a_y + 10$$

where m is the number of kilograms the child weighs and a_m and a_y respectively are the number of months or years old the child is.^[10]

The Theron formula is

$$m = e^{0.175571a_y + 2.197099}$$

where m and a_y are as above.^[10]

Ideal body weight [edit]

Ideal body weight (IBW) was initially introduced by Devine in 1974 to allow estimation of drug clearances in obese patients;^[13] researchers have since shown that the metabolism of certain drugs relates more to IBW than total body weight.^[14] The term was based on the use of insurance data that demonstrated the relative mortality for males and females according to different height-weight combinations.

The most common estimation of IBW is by the Devine formula; other models exist and have been noted to give similar results.^[14] Other methods used in estimating the ideal body weight are [body mass index](#) and the Hamwi method.

Devine Formula [edit]

The Devine Formula for calculating ideal body weight in adults is as follows:^[14]

- Male Ideal Body Weight = $50\text{ kg} + 2.3\text{ kg} * (\text{Height(in)} - 60)$
- Female Ideal Body Weight = $45.5\text{ kg} + 2.3\text{ kg} * (\text{Height(in)} - 60)$

Hamwi method [edit]

The Hamwi method is used to calculate the ideal body weight of the general adult. For men, the Hamwi method ideal body weight is 106 pounds (48 kg) plus 6 pounds (2.7 kg) for every inch (2.54 cm) over 5 feet (1.5 m). For women, it is 100 pounds (45 kg) plus 5 pounds (2.3 kg) for every inch over 5 feet.^[15]

Usage [edit]

Sports [edit]

Participants in sports such as [boxing](#), [mixed martial arts](#), [wrestling](#), [rowing](#), [judo](#), [Olympic weightlifting](#), and [powerlifting](#) are classified according to their body weight, measured in units of mass such as pounds or kilograms. See, e.g., [wrestling weight classes](#), [boxing weight classes](#), [judo at the 2004 Summer Olympics](#), [boxing at the 2004 Summer Olympics](#).

Medicine [edit]

Ideal Body Weight, specifically the Devine Formula, is used clinically for multiple reasons, most commonly in estimating renal function in drug dosing, and predicting pharmacokinetics in morbidly obese patients.[\[16\]](#)[\[17\]](#)

See also [edit]

- [Anthropometry](#)
- [Bergmann's Rule](#)
- [Birth weight](#)
- [Body Mass Index \(BMI\)](#)
- [Body volume index](#)
- [Hesse's Rule](#)
- [Human height](#)
- [List of the heaviest people](#)
- [Obesity](#)
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- [Weight phobia](#)

References [edit]

1. ^ [a b c d e f g](#) Walpole, Sarah C; Prieto-Merino, David; Edwards, Phil; Cleland, John; Stevens, Gretchen; Roberts, Ian et al. (18 June 2012). "[The weight of nations: an estimation of adult human biomass](#)" . *BMC Public Health* (BMC Public Health 2012, 12:439) **12** (1): 439. doi:[10.1186/1471-2458-12-439](#) . PMC [3408371](#) . PMID [22709383](#) . Retrieved 12 July 2012.
2. ^ Do G1, em São Paulo (2010-08-27). "[G1 - Metade dos adultos brasileiros está acima do peso, segundo IBGE - notícias em Brasil](#)" . G1.globo.com. Retrieved 2012-07-13.
3. ^ [Encuesta Nacional de Salud 2009–2010](#) (p. 81)
4. ^ © wissenmedia in der inmediaONE] GmbH, Gütersloh/München. "[Bauer sucht Frau aus dem Lexikon](#)" (in German). wissen.de. Retrieved 2012-07-13.
5. ^ "[The Chosun Ilbo \(English Edition\): Daily News from Korea - Average Korean Now Overweight](#)" . English.chosun.com. 2009-07-27. Retrieved 2012-07-13.
6. ^ "["6 kilo mer man och 4 kilo mer kvinna"](#)" (in Swedish). Retrieved 2014-02-27.
7. ^ "[The Welsh Health Survey 2009, p. 58](#)" (PDF). Wales.gov.uk. 2010-09-15. Retrieved 2011-01-22.
8. ^ "[Anthropometric Reference Data for Children and Adults: United States, 2003–2006](#)" (PDF). Retrieved 2012-10-25.
9. ^ Data extracted from "[The world's fattest countries: how do you compare?](#)" . *The Daily Telegraph*. 21 June 2012. Retrieved 13 June 2013.
10. ^ [a b c d](#) So TY, Farrington E, Absher RK (June 2009). "Evaluation of the accuracy of different methods used to estimate weights in the pediatric population". *Pediatrics* **123** (6): e1045–51. doi:[10.1542/peds.2008-1968](#) . PMID [19482737](#) .
11. ^ Lubitz, Deborah; Seidel, JS; Chameides, L; Luten, RC; Zaritsky, AL; Campbell, FW (1988). "A rapid method for estimating weight and resuscitation drug dosages from length in the pediatric



- age group". *Ann Emerg Med* **17** (6): 576–81. doi:10.1016/S0196-0644(88)80396-2. PMID 3377285.
12. ^ Wells, Mike (2011). "Clinical: The PAWPER Tape". *Sanguine* **1** (2). Retrieved 13 June 2013.
13. ^ Devine, Ben J (1974). "Gentamicin therapy". *Drug Intell Clin Pharm* **8** (11): 650–5. doi:10.1177/106002807400801104.
14. ^ a b c Pai, Manjunath P; Paloucek, Frank P (September 2000). "The Origin of the "Ideal" Body Weight Equations". *The Annals of Pharmacotherapy* **34** (9): 1066–1069. doi:10.1345/aph.19381. PMID 10981254.
15. ^ *Geriatric Nutrition Handbook*. p. 15. ISBN 978-0412136412.
16. ^ Jones, Graham RD (2011). "Estimating Renal Function for Drug Dosing Decisions". *The Clinical Biochemist Reviews* **32** (2): 81–88. PMC 3100285. PMID 21611081.
17. ^ van Kralingen, S; van de Garde, EMW; Knibbe, CAJ; Diepstraten, J; Wiezer, MJ; van Ramshorst, B; Dongen, EPA (2011). "Comparative evaluation of atracurium dosed on ideal body weight vs. total body weight in morbidly obese patients". *British Journal of Clinical Pharmacology* **71** (1): 34–40. doi:10.1111/j.1365-2125.2010.03803.x. PMC 3018024. PMID 21143499.

External links [edit]

- <http://www.scymed.com/en/smnxpn/pndfc237.htm> - Online calculator for Hamwi method

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Categories: Human weight | Auxology | Anthropometry | Mathematics in medicine

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