

Metabolic Age Charts

Metabolic age is a measure of how your basal metabolic rate (BMR) compares to the average BMR of people in your chronological age group.

Option 1: Compare against weight-body fat Metabolic Age Charts

The charts below provide estimated metabolic age for 5'10" men and 5'5" women based on their weight and body fat percentage; measure body fat and weight before using these charts. After doing so, you can use those values to pinpoint what your estimated metabolic age is on the charts below.



Option 2: Calculate BMR

If you want a more specific metabolic age, calculate the patient's BMR using one of the two equations below.

The lower the BMR, the higher the metabolic age, indicating that the body burns fewer calories at rest. In contrast, a higher BMR signifies a younger metabolic age. Metabolic age is calculated by comparing the actual BMR, which takes into account lean body mass, with the predicted BMR based on height, weight, and age.

Harris-Benedict equation

This equation estimates BMR based on weight, height, age, and gender. The formulae below are based on Pavlidou et al.'s 2023 revision of the Harris–Benedict equation.

Men	Women
BMR in pounds = $(4.38 \times \text{weight in pounds}) + (14.55 \times \text{height in inches}) - (5.08 \times \text{age in years}) + 260$	BMR in pounds = $(3.35 \times \text{weight in pounds}) + (15.42 \times \text{height in inches}) - (2.31 \times \text{age in years}) + 43$
BMR in kg = $(9.65 \times \text{weight in kg}) + (573 \times \text{height in m}) - (5.08 \times \text{age in years}) + 260$	BMR in kg = $(7.38 \times \text{weight in kg}) + (607 \times \text{height in m}) - (2.31 \times \text{age in years}) + 43$

Katch-Mcardle equation

This equation estimates BMR based on lean body mass (LBM), which is often more accurate as it factors in body composition. It requires you to calculate the LBM in kilograms.

Step 1: Calculate lean body mass (LBM)	Step 2: Calculate BMR
LBM kg = $\text{Weight in kg} \times (1 - \text{body fat percentage})$	BMR = $370 + (21.6 \times \text{LBM kg})$

Additional notes

Frothingham, S. (2019, September 30). *Metabolic age: What it is and what it means for your health* (I. Fernando, Ed.). Healthline. <https://www.healthline.com/health/exercise-fitness/metabolic-age#bottom-line>

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Mcardle, W. D., Katch, F. I., & Katch, V. L. (2006). *Essentials of exercise physiology*. Lippincott Williams & Wilkins.

Pavlidou, E., Papadopoulou, S. K., Seroglou, K., & Giaginis, C. (2023). Revised Harris–Benedict equation: New human resting metabolic rate equation. *Metabolites*, 13(2), 189. <https://doi.org/10.3390/metabo13020189>