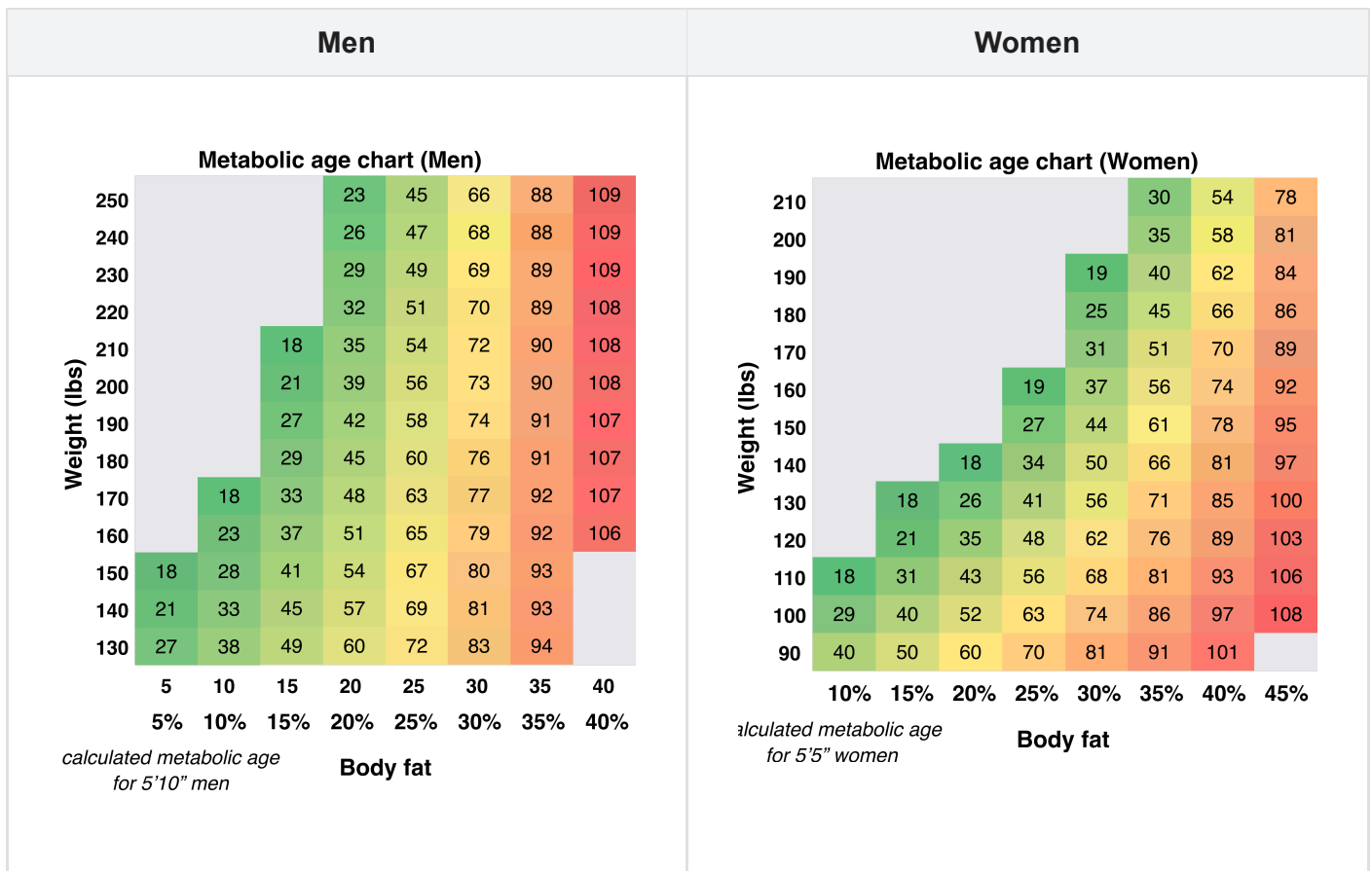# Metabolic Age Charts

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.

Men

Metabolic age chart (Men)

calculated metabolic age for 5'10" men

Weight (lbs)	5 / 5%	10 / 10%	15 / 15%	20 / 20%	25 / 25%	30 / 30%	35 / 35%	40 / 40%
250				23	45	66	88	109
240				26	47	68	88	109
230				29	49	69	89	109
220				32	51	70	89	108
210			18	35	54	72	90	108
200			21	39	56	73	90	108
190			27	42	58	74	91	107
180			29	45	60	76	91	107
170		18	33	48	63	77	92	107
160		23	37	51	65	79	92	106
150	18	28	41	54	67	80	93	
140	21	33	45	57	69	81	93	
130	27	38	49	60	72	83	94	

Body fat

Women

Metabolic age chart (Women)

calculated metabolic age for 5'5" women

Weight (lbs)	10%	15%	20%	25%	30%	35%	40%	45%
210						30	54	78
200						35	58	81
190					19	40	62	84
180					25	45	66	86
170					31	51	70	89
160				19	37	56	74	92
150				27	44	61	78	95
140			18	34	50	66	81	97
130		18	26	41	56	71	85	100
120		21	35	48	62	76	89	103
110	18	31	43	56	68	81	93	106
100	29	40	52	63	74	86	97	108
90	40	50	60	70	81	91	101	

Body fat

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 × weight in pounds) + (14.55 × height in inches) − (5.08 × age in years) + 260	BMR in pounds = (3.35 × weight in pounds) + (15.42 × height in inches) − (2.31 × age in years) + 43
BMR in kg = (9.65 × weight in kg) + (573 × height in m) − (5.08 × age in years) + 260	BMR in kg = (7.38 × weight in kg) + (607 × height in m) − (2.31 × 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 = Weight in kg × (1 − body fat percentage)	BMR = 370 + (21.6 × 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

Harris, J. A., & Benedict, F. G. (1918). A biometric study of human basal metabolism. *Proceedings of the National Academy of Sciences*, *4*(12), 370–373. https://doi.org/10.1073/pnas.4.12.370

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