COMPOSITION ID

CARDIO FITNESS REFERENCE

VO2 max by age for women and men

Lab-measured VO2 max percentiles (ml/kg/min) for healthy U.S. adults. Find your age row: the 50th percentile is the median, and the 75th or above is excellent for your age.

Women

Age	10th	25th	50th (median)	75th	90th
20-29	23.9	30.5	37.6	44.7	51.3
30-39	20.9	25.3	30.2	36.1	41.4
40-49	18.8	22.1	26.7	32.4	38.4
50-59	17.3	19.9	23.4	27.6	32.0
60-69	14.6	17.2	20.0	23.8	27.0
70-79	13.6	15.6	18.3	20.8	23.1

Men

Age	10th	25th	50th (median)	75th	90th
20-29	32.1	40.1	48.0	55.2	61.8
30-39	30.2	35.9	42.4	49.2	56.5
40-49	26.8	31.9	37.8	45.0	52.1
50-59	22.8	27.1	32.6	39.7	45.6
60-69	19.8	23.7	28.2	34.5	40.3
70-79	17.1	20.4	24.4	30.4	36.6

Source: Kaminsky LA, Arena R, Myers J. Reference standards for cardiorespiratory fitness measured with cardiopulmonary exercise testing (FRIEND registry). Mayo Clinic Proceedings, 2015;90(11):1515-1523, Table 3. Treadmill tests with gas analysis.

Example. A 42-year-old woman with a VO2 max of 33 sits just above the 75th percentile for her age (32.4). The same 33 for a 42-year-old man falls between the 25th and 50th. Field-test estimates and cycle tests usually read differently, so treat a percentile from an estimate as directional. Estimate yours free with the VO2 max calculator at compositionid.com.

Get your real VO2 max and training zones.

A lab VO2 max test measures your oxygen use breath by breath and gives you exact heart-rate zones. Available in Washington, DC · Tysons, VA · Scottsdale, AZ · Orlando, FL at compositionid.com/locations.

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