

EXERCISE INTENSITY

There are numerous ways to rate the intensity of different physical activities.

a) **Borg Scale for Rating Perceived Exertion (RPE)**

This is a 10-point scale where you rate your level of exertion by your perceived effort.

10	Maximum effort exerted
9	
8	
7	Very strong effort exerted
6	
5	Strong (heavy) effort exerted
4	Somewhat strong effort exerted
3	Moderate effort exerted
2	Weak (light) effort exerted
1	Very weak effort exerted
0.5	Very, very weak effort exerted (just noticeable)
0	No effort exerted

b) **Heart rate**

You can also use your heart rate to calculate your exercise intensity.

Commonly, estimation is used by a percentage of your maximum heart rate (MHR). The equation used is $MHR = 220 - \text{your age}$

e.g. $MHR = 220 - 34 = 186$.

50% of 186 is 93 beats per minute (bpm)

60% of 186 is 112 bpm

70% of 186 is 130 bpm

Another formula (Karvonen) is more accurate in calculating exercise intensity.

Step 1	Calculate MHR	Females: 220-age Males: 205- half their age	An example: Male: 205-17 = 188
Step 2	Determine your resting heart rate (RHR)	Normally between 60-90 bpm This is measured by taking your pulse	90bpm
Step 3	Calculate heart rate range (HRR)	HRR=MHR-RHR	188-90=98bpm
Step 4	Calculate target heart rate range (THR)	THR = HRR x %TI + RHR TI is training intensity, usually 60-80%	THR = 98 x 60% = 58.8 58.8 + 90=149bpm(60%) or 168bpm (80%)

c) Intensity of effort required according to general population

Light intensity	Moderate intensity	Heavy/vigorous intensity
Walking slowly Stationary cycling Swimming (slow treading) Stretching, calisthenics Golf with a power cart Bowling Fishing (sitting) Boating (power) Homecare (sweeping, vacuuming) Mowing lawn (riding) Home repair (carpentry)	Walking briskly Pleasure cycling Swimming (moderate) General calisthenics Golf (carrying own clubs) Leisure racquet sports Fishing (standing, casting) Leisure canoeing Homecare (general cleaning) Pushing power mower Home repair (painting)	Walking briskly uphill Fast cycling Swimming (fast treading) Aerobic dance Competitive racquet sports Fishing in a stream Rapid canoeing Moving furniture Hand mower