



Fitness Australia Exercise Guidelines

Cardiovascular exercise prescriptions for healthy adults

Cardiovascular exercise is an important component of any balanced exercise routine. The following recommendations help to inform cardiovascular exercise prescriptions for general health.

General Recommendations

- To achieve health benefits, healthy adults should complete a minimum of 150 minutes of moderate intensity cardiovascular exercise or 75 minutes of vigorous cardiovascular exercise per week.
- Greater activity levels are associated with further health benefits.
- Cardiovascular exercise can be accumulated in short bouts of 10 minutes to obtain health benefits.
- In order to meet the recommended weekly cardiovascular exercise volume, content can consist of a mixture of both vigorous and moderate intensity.
- One minute of vigorous-intensity exercise is approximately the equivalent of 2 minutes of moderate-intensity exercise.
- The recommended exercise levels outlined above are additional to routine low intensity activities of daily living or activities lasting less than 10 minutes in duration.

PRACTICAL EXAMPLE

Mixing sessions across a week: A person could reach the recommended weekly cardiovascular exercise through 2 x 30 minute brisk walks per week in addition to 3 x 15 minute vigorous jogs.

Mixing intensities in a single session: A 30 minute interval session consisting of 1 minute of vigorous intensity cardiovascular exercise (eg: jogging) followed by 2 minutes of moderate intensity recoveries (eg: brisk walking) would contribute 10 minutes of vigorous and 20 minutes of moderate intensity cardiovascular exercise to the weekly total.

Intensity

Monitoring cardiovascular exercise intensity helps to ensure the exercise is both safe and effective. It is a critical component of program design. Exercise Professionals can use the following methods to successfully gauge and monitor cardiovascular exercise intensity.

Rate of Perceived Exertion (RPE)

RATE OF PERCEIVED EXERTION SCALE	
6	
7	Very, Very, Light
8	
9	Very Light
10	
11	Fairly Light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very Hard
18	
19	Very, very hard
20	

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When using the rate of perceived exertion (RPE):

- Moderate intensity can be considered between 11 and 13 or 'fairly light' to 'somewhat hard.'
- Vigorous intensity can be considered between 14 and 16 or an exercise intensity that would subjectively be perceived as 'hard.'

PRACTICAL EXAMPLE

An individual that is beginning a cardiovascular exercise program may begin at an intensity of 11-13 on the RPE scale. As fitness improves they may then incorporate some vigorous intensity exercise by training at an intensity of 14-16 on the RPE scale.

Heart Rate

Calculation of a suitable exercise heart rate range can be obtained through reference to the heart rate reserve (HRR - see practical example box below).

- Moderate intensity can be considered to be between 40-60% HRR
- Vigorous intensity is between 60-85% HRR.

PRACTICAL EXAMPLE

HRR = HR max – HR resting

Eg: For a 40 year old: 180 minus 60 = 120 (HRR)
Exercise HR Range = (HRR x training range %) + HR resting
Eg: 120 x 40-60% + 60 = 108-132 bpm (Exercise HR Range)

An individual that is new to cardiovascular exercise can begin at a moderate intensity of 40-60% HRR and as fitness improves may gradually progress to some vigorous intensity exercise at 60-85% HRR.

Talk Test

- The talk test involves exercising at the highest intensity that is possible while still maintaining a comfortable conversation. This intensity is considered to be the upper level of moderate intensity.
- Once the individuals breathing patterns become elevated to the point where a conversation cannot be comfortably maintained, the intensity is considered vigorous.

PRACTICAL EXAMPLE

If while exercising, an individual cannot talk comfortably due to excessive ventilation, they are above the talk test intensity and therefore exercising at a vigorous intensity.

Using multiple markers of intensity

- Given that there are both advantages and disadvantages to the various methods of monitoring intensity, it can be advantageous to use multiple methods.

PRACTICAL EXAMPLE

Using multiple markers of intensity: A person wanting to undertake cardiovascular exercise at a moderate intensity could simultaneously aim for a HR of 40-60% HRR and an intensity at which they can comfortably maintain a conversation.

During an *interval training* session a healthy fit individual may exercise for 2 minutes at an RPE of 15 followed by 2 minutes at an RPE of 11. Alternatively an individual could exercise for 2 minutes at an intensity of 85% HRR followed by moderate intensity exercise until the HR drops back to 60% of HRR.

Mode

- The mode of activity for cardiovascular exercise needs to be large muscle mass, rhythmic activities such as walking, jogging, swimming, rowing and cycling.
- Activities of daily living that are longer than 10 minutes in duration and of sufficient intensity to raise heart rate and ventilation to moderate levels can be used towards the weekly cardiovascular exercise target (eg manual labor, lawn mowing, walking to work).

Progression

- Anything is better than nothing and in those individuals who are extremely deconditioned health benefits can be realized with small increases in cardiovascular exercise.
- If an individual has been inactive for some time, they will need to start slowly and build up to recommended cardiovascular exercise levels over time.

PRACTICAL EXAMPLE

If an individual has not been physically active for some time, they might begin with 15 minutes of moderate intensity cardiovascular exercise 3 times per week. As fitness improves they may progress over a number of weeks to performing 15 minutes of cardiovascular exercise 5 times per week. They may then progressively increase duration to 30 minutes for each session.

References:

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