



# Guide to maintaining cardiorespiratory fitness in order to keep illnesses at bay

By Nathan Deans\*

There are 1,440 minutes in every day – schedule 30 of them for physical activity.

Adults need recess too and, with a little creativity and planning, even the person with the busiest schedule can make room for physical activity.

For many folks, before or after work or meals is often an available time to cycle, walk or play.

Think about your weekly or daily schedule and look for, or make, opportunities to be more active. Every little bit helps.

In this regard, an important concept to understand is cardiorespiratory fitness, which refers to the ability to carry out large muscle, dynamic, moderate-to-high intensity exercise for prolonged periods.

Performance of such exercise depends on the functional capacity of the respiratory, cardiovascular and musculo-skeletal systems.

Research has strongly linked increased cardiorespiratory fitness to reduced risk of coronary heart disease, diabetes, obesity, as well as a multitude of other health risk factors.

Moreover, reduced cardiorespiratory fitness has been linked to increased risk of premature death with a special emphasis on coronary heart disease, increased incidence of obesity and increased risk of diabetes.



Gymnasiums are great places to exercise (picture courtesy of bangor10.cityspur.com).

Improving your cardiorespiratory fitness generally involves modifying any or all of the core exercise components of intensity, duration or frequency.

Intensity is best modified by monitoring your heart rate during exercise.

Use the guide (bottom right) when monitoring heart rate during exercise (HRMax = 220 – age)

Duration of an exercise, when combined with its intensity, indicates the overall energy expenditure for the exercise session.

As such, one would expect to spend more energy by exercising for 60 minutes at moderate intensity than at the same period at a low intensity.

So, when starting a walking program for example, a 45 minute walk of an evening may be enough to get you into a fatigued state.

After a couple of weeks of this walking program your body will adapt and a 60 minute walk may be required in order to reach the same fatigued state.

EXERCISE INTENSITY

AND/OR

EXERCISE DURATION

AND/OR

EXERCISE FREQUENCY

<i>Light Intensity</i>	< 55% HRMax
<i>Moderate Intensity</i>	55-70% HRMax
<i>High Intensity</i>	70-90% HRMax

DOS	DON'TS
Be realistic. Start slowly and only adjust one core exercise component at a time.	Charge in like a 'Bull at a Gate'. Too much too quickly will lead to injuries and big setbacks.
Listen to your body. It will tell you when you've done too much or too little exercise for the day.	Expect immediate results. Adaptation takes time and is a gradual process. One day you'll just notice.
Vary your routine to keep things interesting.	Quit. Keep at it.
Remember to warm-up and cool down.	Go above 90% HRMax for extended periods of exercise (this is for elite athletes only).

Frequency of exercise sessions is somewhat limited by increased risk of sustaining lower leg musculo-skeletal injury.

Ideally then, unfit people should aim for three exercise sessions per week with a view to increasing this to five a week.

Those who are exercising at 70-90% HRMax (high intensity) should expect that three sessions per week is sufficient to maintain or improve current fitness levels.

Consider the following simple suggestions:

- Walk, cycle, jog or skate to work, school, the store or place of worship;
- Park the car farther away from your destination;
- Take the stairs instead of the elevator or escalator;
- Take fitness breaks and walk or do desk exercises instead of taking cigarette or coffee breaks;
- Perform gardening or home repair activities;
- Use leg power – take small trips on foot to get your body moving;
- Keep a pair of comfortable walking or running shoes in your car and office (you'll be ready for activity wherever you go);
- Walk while doing errands;
- Get a dog to ensure at least two walking sessions daily, and;
- Maintaining physical activity is always

more likely (and more fun) when you can do it with someone else.

Additionally, there are a number of tips for people who have been inactive for a while.

Firstly, use a sensible approach by starting out slowly.

Also, begin this by choosing moderate-intensity activities you enjoy the most. By choosing activities you enjoy, you'll be more likely to stick with them.

While doing this, gradually build up the time spent doing the activity by adding a few minutes every few days or until you can comfortably perform a minimum recommended amount of activity (30 minutes per day).

Furthermore, as the minimum amount becomes easier, gradually increase either the length of time performing an activity or increase the intensity of the activity, or both.

People are also advised to vary their activities, both for interest and to broaden the range of benefits. They should also explore new physical activities.

Finally, efforts should be rewarded and acknowledged.



Avoiding dehydration during physical activity is also important.

There are a number of dos and don'ts, as shown in the chart above.

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It has been suggested that people cycle to their destinations more often.

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