

# Exercise is Medicine Canada:

*engaging patients in physical activity dialogue — practical tools, CME workshops to assist physicians*

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*"What if there was one prescription that could prevent and treat dozens of diseases, such as diabetes, hypertension and obesity? Would you prescribe it to your patients? Certainly."*

- Robert E. Sallis, MD, FACSM, Exercise is Medicine® Task Force Chairman

## Why Exercise?

The health benefits of physical activity — and the deterioration of health and susceptibility to chronic disease associated with a sedentary lifestyle — are well known. If more people would meet the goal of 150 minutes of moderate to vigorous physical activity per week, as outlined in the Canadian Physical Activity Guidelines, Canada would have a healthier population.

Many of the chronic conditions that currently contribute to the high incidence of chronic disease can be diminished by regular physical activity. This includes cardiovascular disease, obesity, diabetes, hypertension, several cancers and Alzheimer's disease. In fact, increasing physical activity is probably the single most important lifestyle intervention a sedentary person can make to improve his or her health.

Recent research indicates that for the primary prevention of diabetes and secondary prevention of coronary heart disease, stroke, and heart failure, physical activity is as effective as, or more effective, than many drug interventions. This makes exercise a valuable and effective preventive medicine (see Figure 1, opposite).

## How Much Exercise?

The Canadian Physical Activity Guidelines published by the Canadian Society

for Exercise Physiology (<http://www.csep.ca/en/guidelines/get-the-guidelines>) identify that 150 minutes per week of moderate to vigorous physical activity (MVPA), like a brisk walk, is the amount of exercise that every adult should strive for to be healthy.

For a sedentary person, it will be easier to increase physical activity if they begin with short, 10-minute bouts of mild to moderate physical activity on a daily basis. It is not necessary to reach the 150 minutes in the first week, but they can build to that target over a period of a few months.

When someone achieves the recommended guidelines of 150 minutes per week of MVPA, there is approximately a 30% reduction in mortality risk, in addition to numerous other health benefits, including reduced risk of diabetes, cancer, depression, and stroke. The side-effects of this treatment include improved quality of life.

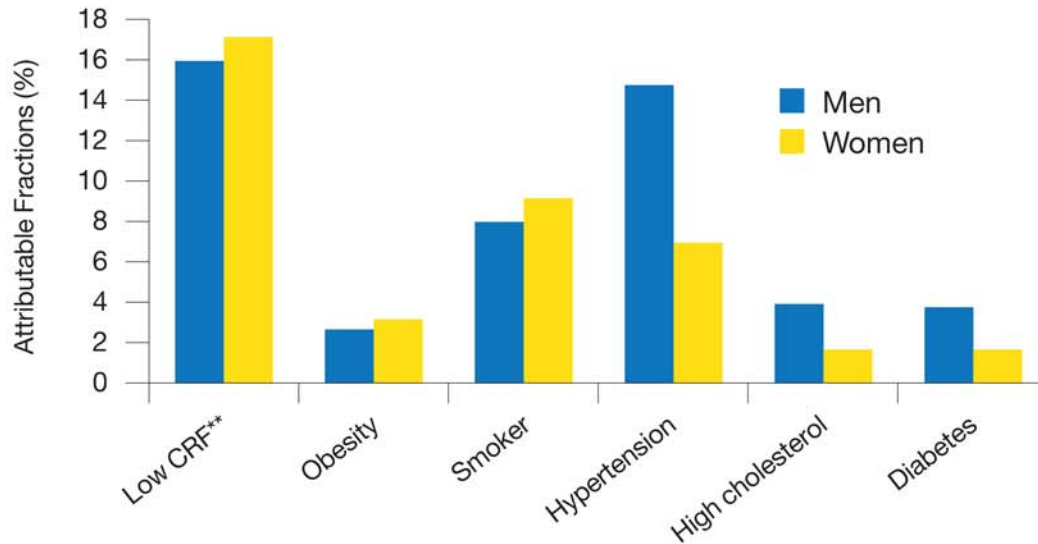
In short, evidence shows that more physical activity is better (see Figure 2, opposite), and increased vigorous activity results in greater fitness and greater overall health benefit.

Evidence also shows that, unfortunately, the great majority of Canadians are not currently active enough to meet the Canadian Physical Activity Guidelines and therefore do not achieve these numerous health benefits.

There are many barriers that impede people from being physically active (e.g., lack of time, motivation, confidence, facilities, etc.). In addition, despite the proven positive physical and mental health benefits of exercise, long-term adherence to exercise programs can be challenging. Only about half of all persons who initiate an exercise program continue the habit for more than six months.

The issue of non-adherence is particularly important because exercise

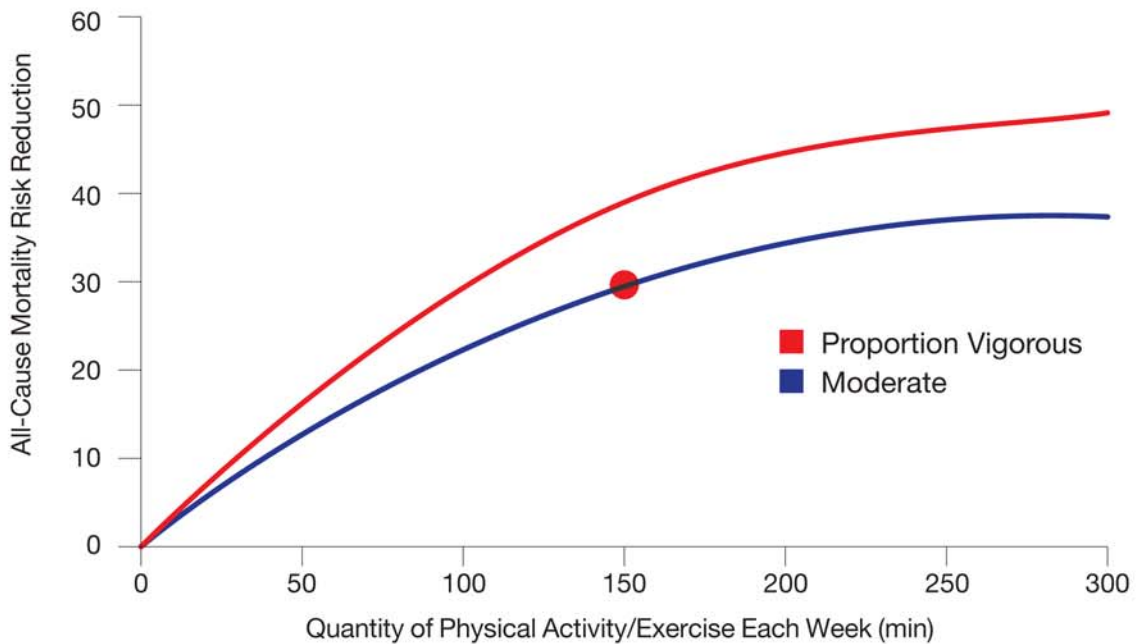
**Figure 1**  
**Relationship Between Cardiorespiratory Fitness and Health Risk For Men and Women, Expressed as Attributable Fraction<sup>1</sup> (Proportion of Deaths Attributed to Listed Causes)\***



\* Reproduced with permission of BMJ Group. (Note: Figure 1 is adapted from Reference 1, which appears on page 33.)

\*\* Low CRF refers to low cardiorespiratory fitness.

**Figure 2**  
**Health Benefits of Exercise<sup>2,3</sup>**



By increasing moderate to vigorous physical activity, all-cause mortality (blue line) is reduced for even small increases, up to 150 minutes of physical activity per week (red dot). Beyond this duration, there are further benefits, but the slope of the relationship decreases. A similar line could be drawn to represent risk for various chronic diseases (diabetes, heart disease, and some cancers). When physical activity includes vigorous intensity (red line), additional risk reduction is obtained. Vigorous physical activity is most beneficial for increasing cardiorespiratory fitness.

(Note: Figure 2 is based on data presented from References 2 and 3, which appear on page 33.)



is most beneficial to achieve optimal health benefits when maintained over time. Strategies to encourage more people to meet the Canadian Physical Activity Guidelines, and to maintain their exercise programs, are required.

### Motivate Patients To Become Physically Active

Despite the strength of the evidence supporting the need for increased physical activity, many physicians are not routinely assessing and advising their patients on the health benefits of physical activity or prescribing exercise “as medicine.” Family physicians have substantial time constraints, and often lack physical activity counseling skills, training or knowledge. Yet, with appropriate training, it is possible to engage physicians in the assessment of physical activity and prescription of exercise with only a small investment of their time.

A first step that can be immediately incorporated into practice — alongside routine monitoring of patients' weight and blood pressure — is one of the key aspects of assessment by consistent evaluation of the Exercise Vital Sign (see Sidebar 1, below). This means

asking every patient, every time, how much physical activity they are getting. It is also important to counsel patients about the risks of a sedentary lifestyle.

### Exercise is Medicine Canada

Exercise is Medicine Canada (EIMC) is a program that provides physicians with training and support in prescribing exercise to their patients. EIMC believes that enabling health care professionals to make routine physical activity assessment and exercise prescription a standard part of the disease prevention and treatment for all patients can be an important part of an effective strategy to improve the health of Canadians.

EIMC hosts regular workshops across the country to educate physicians and other health care professionals on how to assess current physical activity and talk to their patients about increasing physical activity. The workshops, which are accredited by the College of Family Physicians of Canada and the Royal College of Physicians and Surgeons of Canada, can help more physicians engage their patients in the discussion about a healthy lifestyle.

To view a schedule of workshops, or to find out how to bring a workshop

to your team, visit the EIMC website at [exerciseismedicine.ca](http://exerciseismedicine.ca).

The EIMC Advisory Council, whose members represent several Canadian health and exercise science organizations (see Sidebar 2, below), is helping members of the health professions engage in exercise assessment and prescription.

The EIMC website provides useful information and tools for engaging patients in the physical activity dialogue. In addition to providing an exercise prescription pad and a suggested flow-chart of questions and answers (see Figure 3, opposite), the website also contains links to important professional resources for health care teams, including physicians, other regulated health professionals (e.g., physiotherapists and registered kinesiologists), and highly qualified exercise professionals, which can facilitate these strategies with co-operation from community programs that provide opportunities for active living.

Effective motivational strategies are required to achieve and sustain active behaviours in Canadians. EIMC is asking physicians to promote, support and facilitate change. EIMC advocates a multidisciplinary support system to safely accept referrals for intensive counseling and barrier reduction in community settings to help patients reach their health goals through increased physical activity. Success of this initiative will also require political endorsement of health policies that support community programs and the involvement of qualified exercise professionals to assist in the process.

EIMC has a recognition program to help physicians select appropriately qualified exercise professionals. Health professionals are encouraged to look for EIMC Recognized Exercise Professionals in their community for referral and support for patients who require assistance to safely exercise, but who no longer require clinical care, thereby greatly increasing the patient's ability to control and improve their health throughout their life.

Many patients, especially those who have no cardiorespiratory risk factors, can safely exercise, analogous to taking

#### Sidebar 1 The Exercise Vital Sign

- Ask your patients: "On average, how many minutes per week are you engaged in moderate to vigorous physical activity, like a brisk walk?"
- Remind your patients that you recommend 150 minutes of moderate to vigorous physical activity per week (this is consistent with the Canadian Physical Activity Guidelines published by the Canadian Society for Exercise Physiology).

#### Sidebar 2 Exercise is Medicine Canada: Advisory Council Member Organizations

- Canadian Society for Exercise Physiology, Chair
- College of Family Physicians of Canada
- Canadian Academy for Sport and Exercise Medicine
- Canadian Nurses Association
- Canadian Physiotherapy Association
- Dietitians of Canada
- Canadian Kinesiology Alliance
- Canadian Society for Psychomotor Learning in Sport and Exercise Psychology
- Royal College of Chiropractic Sport Sciences (Canada)
- Clinical Exercise Professional Representative



an over-the-counter medication. Some patients who have been sedentary for a long time or with chronic medical conditions may require the assistance and monitoring of an appropriately qualified exercise professional to help them with their physical activity routine and an exercise “prescription.”

**Join Exercise Is Medicine Canada**

EIMC is building a professional referral network linking health and exercise professionals to assist the communication and referral process. Health care professionals are encouraged to join this professional network to keep informed of the activities of EIMC and to help support this important initiative.

To join EIMC, learn more about the program, access the tools, or find out about local workshops, please visit

exerciseismedicine.ca (materials are available in English and French). You can also follow EIMC on Facebook (<http://ow.ly/YWwOt>) and Twitter ([twitter.com/EIM\\_Canada](https://twitter.com/EIM_Canada)).

We encourage physicians to participate in EIMC’s vision that “Physical activity is an integral part of prevention and treatment of chronic disease in the Canadian health care system.” ■

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**References**

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**Figure 3**  
**Prescription And Referral Tool Created By Exercise Is Medicine Canada**

(The tool can be downloaded from [exerciseismedicine.ca](http://exerciseismedicine.ca); hard copies can be ordered from the EIMC office at [eimc@csep.ca](mailto:eimc@csep.ca))

**Exercise prescription & referral**

Name \_\_\_\_\_

Date \_\_\_\_\_ Age \_\_\_\_\_

Relevant diagnoses \_\_\_\_\_

**REDUCE SEDENTARY BEHAVIOUR**

Move more / Sit less / Use stairs / Limit screen time

**PHYSICAL ACTIVITY RECOMMENDATIONS**

**AEROBIC / CARDIOVASCULAR ACTIVITY**

Frequency	2	3	4	5	6	7	days / week
Intensity	Light		Moderate		Vigorous		
Time	10	15	20	30	40	more	minutes / session
Type							

**STRENGTH / RESISTANCE ACTIVITY**

2 3 4 5 6 7 days / week

Example \_\_\_\_\_

**CANADIAN PHYSICAL ACTIVITY GUIDELINES FOR ADULTS 18 YEARS AND OLDER**

To achieve health benefits, adults aged 18 years and older should accumulate at least 150 minutes of moderate- to vigorous-intensity aerobic physical activity per week, in bouts of 10 minutes or more. It is also beneficial to add muscle and bone strengthening activities using major muscle groups, at least 2 days per week. More physical activity provides greater health benefits.

**REFERRAL FOR ADDITIONAL EXERCISE ASSESSMENT AND COUNSELING**

Name / Contact \_\_\_\_\_

Follow-up / Other \_\_\_\_\_

**YOUR HEALTH PROFESSIONAL**

Name \_\_\_\_\_ Signature \_\_\_\_\_ Licence # \_\_\_\_\_

**WHAT DO WE KNOW ABOUT EXERCISE?**

- **Exercise will make you feel good and can be fun!**
- **Exercise is effective.** If exercise was a drug, it would be one of the most effective and safe ways to prevent and treat many chronic diseases such as heart disease, hypertension, diabetes, osteoporosis, anxiety disorders and depression!
- **Exercise is safe for your joints.** Regular low impact exercise and gradual muscle strengthening can stabilise and protect your joints from osteoarthritis and reduce the risk of falls and injuries that is associated with poor physical fitness.
- **Improving fitness is more important than losing weight.** Low cardiovascular fitness is associated with a much higher risk of disease and death than being overweight.
- **Walking is free anywhere and any day of the year!**

**WHAT ABOUT AEROBIC INTENSITY AND MUSCLE STRENGTHENING?**

How can I assess intensity?

- **Light exercise will usually not cause adults to sweat and breathe harder.** It is easy to have a conversation at this intensity. Walking is the typical example of light exercise.
- **Moderate-intensity exercise will cause adults to sweat a little and breathe harder.** It is possible to have a conversation in short sentences. Examples are brisk walking (as if you are late for the bus!) and bike riding.
- **Vigorous-intensity exercise will cause adults to sweat and be “out of breath”.** It is difficult to have a conversation. Examples are jogging, swimming laps, cross-country skiing and hiking on hills.

**What is strength and resistance exercise?**

- Strength and resistance exercises make your muscles work harder by adding weight or resistance to the movement.

**For more information**

You can consult your health professional, an exercise professional or visit the Resources page on [exerciseismedicine.ca](http://exerciseismedicine.ca).