

Prevention C+olumn

DIABETES – FEBRUARY 2021

Exercise for diabetes: Just what the doctor ordered!

It's common knowledge that an active lifestyle improves physical and mental health. For people with **type 2 diabetes**, exercise is all the more important as it can be a **key to treatment!**

DID YOU KNOW?

- **1 in 10 Canadians** is diabetic. This number hikes up to **over 1 in 4 Canadians** if those with pre-diabetes (higher-than-normal blood glucose levels in people without diabetes) are included.
- Type 2 diabetes accounts for 90% of diagnosed cases.
- Without healthy life changes, a person with pre-diabetes will develop diabetes **within 5 years**.

In collaboration with
Stéphanie Chrétien, B. Sc.

Kinesiologist at [Dialogue Optima Global Health](#)



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When diabetes sets in...

While there is no cure for diabetes, this chronic condition can be managed. Diabetes occurs when the body loses its ability to produce or properly use **insulin**. This hormone is produced by the pancreas and allows the body to use **blood glucose**, the body's main source of energy. Blood glucose comes primarily from food, and the body also makes its own from existing reserves.

Normally, when a person's **glycemia** (blood glucose levels) rises, the body releases insulin into the bloodstream, signalling the muscles, brain and other tissue to take up the glucose. This is what prevents a buildup of glucose in the blood (**hyperglycemia**). This can lead to serious complications over the long term, including organ damage (eyes, kidneys, nerves, heart, blood vessels). In the case of a diabetic person, this blood sugar regulation is deficient.

There are several forms of diabetes (type 1, gestational, etc.). However, **type 2** is the most common and accounts for 90% of diagnosed cases. In the past, type 2 mostly affected people age 40 and up, but today the presence of the disease in young adults—and even children—is disturbing. Yet, healthy lifestyle habits can reduce the risk of this type of diabetes being diagnosed **by almost 60%**, or at least delay its onset. ■



STEEP COSTS!

1 in 10 Canadians (10%) has diabetes. The number rises to over 1 in 4 Canadians (29%) if those with pre-diabetes and those who are undiagnosed are included. Direct costs to the healthcare system are estimated to range between **3 and 4 billion dollars**. However, actual costs **are much higher**, since people with diabetes are more at risk of developing other serious problems: kidney failure, amputation, blindness, etc. The prevention and treatment of diabetes therefore becomes a social issue that goes beyond individual health problems.

Prevention plays a decisive role: without lifestyle changes, a person newly diagnosed with pre-diabetes generally develops type 2 diabetes within 5 years. ■

Active living: a key part of treatment

With type 2 diabetes, the body produces some insulin but not enough; at the same time resistance to the effects of insulin develops. As a result, it becomes more difficult for cells to absorb glucose from the bloodstream.

The medication used to treat diabetes can increase insulin production, as well as restore sensitivity to its effect. However, physical activity **enhances this sensitivity to insulin naturally**. Studies have found that this effect lasts up to 60 hours after exercise. What's more, muscles in action are powered by glucose, preventing its accumulation in the bloodstream.

In short, being active every two to three days provides lasting benefits, just like medication. Some diabetic people can even bring their glycemia within target values through exercise and avoid new medication, or reduce the needed dose.

And let's not forget the slew of benefits physical activity contributes to overall health:

- Better weight control
- Improve blood lipid levels
- Lower blood pressure
- Reduced risk of cardiovascular disease and death in general

These benefits suggest that there are other positive spin-offs for fighting the disease. So regular physical activity should be an integral part of a diabetes treatment plan. Here's what the experts recommend:

- At least **150 minutes per week** of aerobic exercise (until moderately breathless) and do not remain inactive for more than two consecutive days.
- Include **two sessions of strength-training each week**, to stimulate muscles more. There are few daily activities or sports that engage the upper body. However, the more active muscles we have, the better our body can utilize glucose, even at rest! Bear in mind that exercising with free weights has proven more effective than resistance bands in this context.
- **Avoid sitting for prolonged periods** as this increases the risk of cardiovascular disease and death. It's recommended to stand up 2-3 times per hour. ■



Get moving, for good!

Switching to an active lifestyle can be challenging. Here are some tips to get started and above all, stick with it:

IDENTIFY obstacles

- **Don't have time?** Segment your activities into 10-minute sessions spread throughout the week. Some exercise is better than none. Even if it's just for 10 minutes!
- **Don't feel like it?** Try different activities or times of day until you find a good fit.
- **It's too repetitive?** Break from the humdrum with different music, good company or new challenges.
- **Scared you'll quit?** Keep a log of your progress and the benefits you feel as an encouraging reminder. Joining a walking group or club, or taking part in a sports challenge, can motivate you to stick with it. ■



SHARE your goal

Keep your friends and family in the loop about what you're doing for some added motivation. Your loved ones will respect your workout sessions and encourage you to keep at it. You never know, they might even join you! ■



PLAN (realistically)

Plan ahead to determine the **what**, the **when**, the **where** and the **how**. Write the time and location of your chosen activity in your calendar.

Focus on what you can—not what you want to—accomplish. Keep track of your progress and don't be too hard on yourself if you skip a workout. However, if you start making a habit of this, review your program to see if your goals are realistic. It's better to start slowly and make progress than go too hard and give up. ■

In conclusion

In addition to preventing type 2 diabetes, physical activity helps control glycemia. An active lifestyle is therefore an effective (and natural!) complementary treatment for this all-too-prevalent disease. ■

Safety FIRST

To fully reap the rewards of your fitness routine, you need to do it safely. Talk to your doctor, especially if you have any health issues or if you plan high-intensity sessions. Medication adjustments or some precautions may be necessary.

You can even take it a step further and turn to a qualified physical activity professional, such as a [kinesiologist](#). This specialist will be able to advise you on a safe training program. ■

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