

## Physical exercise, as effective as medication

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*Much more than just a simple way to stay in shape, recent research has shown that regular physical exercise turns out to be as effective as some medications for reducing mortality in people affected by certain heart diseases or diabetes.*

**With its 640 or so different muscles**, which count for about 35% of body mass, the human body possesses a physiology perfectly adapted to intense physical activity. Yet, with the exception of athletes or people in professions which are physically demanding (labourers, firemen, soldiers), the majority of people accomplish little physical effort in the course of their work or their daily tasks. In Canada, for example, only 15% of the population performs the recommended 150 minutes of moderate intensity physical activity each week.

On average, an adult spends about 10 waking hours of each day performing sedentary activities, devoid of physical exertion! This situation is a direct consequence of the technological progress which has completely transformed our modern way of life: the motorized forms of transport permit us to cross large distances without effort and computers occupy a central place in an ever-growing number of professions, without even considering the avalanche of new electronic devices which continue to reduce energy expenditure in our minor actions and activities.

We thus have never been so inactive, a sedentary existence which is completely opposite to the physiology of the human body.

### EXERCISE IS LIKE A MEDICAL PRESCRIPTION

This sedentary nature has enormous consequences on health, because physical inactivity is now recognized as an important risk factor for obesity, cardiovascular disease, diabetes and some cancers (breast, colon). According to the most recent estimates, the lack of physical activity is directly responsible for more than five million deaths each year worldwide, as many as are due to tobacco<sup>(1)</sup>.

If physical inactivity is so damaging to health, is it possible to consider exercise as a form of treatment for certain diseases? To answer this question, scientists have analyzed a compilation of all of the studies which have compared the efficacy of different medications and of exercise at reducing mortality in people affected by three types of heart disease (coronary disease, heart failure, stroke) and diabetes<sup>(2)</sup>. The result of their analysis was quite striking: in many cases, exercise provided clinical improvement comparable to that seen with medication!



Thus, a person affected by a heart disease could perform exercise, without medication, to avoid dying of this condition, at the same risk of mortality as if he/she were being treated with the medications. In some cases, such as coronary disease, exercise was even slightly superior to medications, whereas in other cases such as heart failure, the medications were slightly more effective.

### CHANGE IN ATTITUDE

The beneficial role of physical exercise clearly does not signify that all medications can be rejected out of hand because these remain essential components for the treatment of many diseases.

On the contrary, these observations show the extent to which lifestyle can exercise an enormous influence on health and that people who are affected by a heart disease or by diabetes can only improve by adopting, with suitable professional supervision, regular physical exercise into their schedule. Physical activity is not simply a way of staying in shape or, even more, of controlling weight: being physically active is absolutely essential for maintaining good health.

- (1) Lee IM et al. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet* 2012; 380:219-229.
- (2) Naci H and Ioannidis JPA. Comparative effectiveness of exercise and drug interventions on mortality outcomes: metaepidemiological study. *BMJ* 2013;347:f5577.