WHY CARDIO IS IMPORTANT

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High aerobic fitness is linked to longer lifespan, less disease, higher quality of life and reduced socio-economic burden.
Cardiorespiratory fitness

Cardiorespiratory fitness is a measure of a person’s ability to work with large muscle groups for longer periods of time. This is also referred to as aerobic fitness. Research has shown that aerobic fitness is extremely important for health. It is one of the strongest predictors for mortality and risk factor for several lifestyle diseases such as cardiovascular disease and type 2 diabetes. At the same time cardiorespiratory fitness is directly related to physical performance – both in terms of ability to handle daily living tasks and athletic performance.

Association between cardiorespiratory fitness and expected lifetime

Several large studies have shown that there is an inverse association between aerobic fitness capacity and mortality. In fact, a recent study showed that there is no upper limit to this. The more fit you are, the longer your expected lifetime. The mechanism behind this is two-fold. Aerobic exercise reduces the risk of most of the major lifestyle diseases like cardiovascular disease, diabetes and certain forms of cancer. This, of course, directly affects expected lifespan. Additionally, aerobic exercise also increases functional capacity, prevents cognitive decline and improves self-perceived quality of life. Factors that all are central to maintaining a sense of purpose in life and a self-sustainable lifestyle even at old age.

Aerobic exercise as medicine

Cardiorespiratory exercise is increasingly seen as a way of treating medical conditions. Aerobic exercise has been systematically used as prevention and rehabilitation after cardiovascular disease. In more recent times new research has shown, that the same treatment effect is relevant for many other diseases. A study published in JAMA in 2017 showed that among newly diagnosed type 2 diabetics, more than half of the test group were free of medication after one year. In this study, cardio was not the only part of the intervention, but it was the central part of the physical activity. Also, when it comes to conditions related to mental function, aerobic exercise is recognized as a key factor. In young people and adults, it improves cognitive function and prevents depression. For the more elderly it prevents cognitive decline and specifically reduces the risk for Alzheimer’s disease and dementia.

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Socio-economic value of increasing population fitness

As low aerobic fitness is related to development of several diseases and risk of early death, initiatives that succeed in increasing aerobic fitness at population level could have a huge impact on public healthcare costs. The actual economic implications of improved fitness are difficult to estimate, but several research studies have looked into healthcare costs of physical inactivity and since poor fitness is a direct consequence of physical inactivity, this can be used as a relevant approach.

A study published in Lancet in 2016 estimated that the worldwide cost of physical inactivity to be around $68 billion including productivity losses due to physical inactivity related deaths. By increasing fitness by only a few percent in the most inactive part of a given population, significant economic effects will be seen from reduced expenses for medication, healthcare, absence and early retirement. The question is not if initiatives that improve population fitness are worth investing in? The only question is, how to do initiatives that actually work?

What does it take to do efficient aerobic exercise?

It is known that physical activity with both low and high intensity can induce major health benefits. However, exercise performed with low intensity requires longer sessions compared to high intensity exercise, which can induce considerable improvements, even with bouts of very short duration. Interestingly, high intensity interval training (HIIT), has been shown to be a feasible exercise form for most groups, including people with lifestyle diseases. As time constraints are often given as an explanation, or excuse, for lack of exercise, it makes sense to offer exercise modalities that are highly time efficient.

The optimal strategy for physical activity for most people would be to satisfy current recommendations for daily physical activity and combine this with weekly sessions of targeted exercise. Preferably these would be in the form of interval training where high peaks of effort can be repeated several times. For most people the easiest way to do this is by running or using low impact equipment like stationary bikes and cross trainers. This is only effective if the equipment offers sufficient workloads for the required intensities to be met.

Summary

A higher level of fitness is associated with a better chance for a long healthy life with a high functional capacity – not just physically, but also mentally. In the case of diseases, aerobic exercise is one of the most effective things that can be done to reduce symptoms or reverse pathology. Aerobic exercise can be done in a time-efficient and motivating fashion, when performed on exercise equipment that supports adequate intensity options. On society level, investments that improve population fitness are highly cost-effective.

References

KOMPAN SPORT & FITNESS

KOMPAN Fitness Institute has a mission to create effective exercise equipment and make it available in the outdoors to gain a public health effect. Freely available outdoor gyms have the potential of bringing people together and make training accessible for all. The KOMPAN Fitness Institute collaborates with universities and follows scientific research closely. The accumulated knowledge is leveraged in product development with user tests and functionality design. The aim is to create fitness equipment of the same quality and equally effective as you would expect from a commercial indoor gym.