

Play yourself healthy: Soccer as treatment for lifestyle-related diseases

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Other parallel experiments on both women and men further demonstrates that a regular game of soccer affects numerous cardiovascular risk factors such as maximal oxygen uptake, heart function, elasticity of the vascular system, blood pressure, cholesterol and fat mass far more than e.g. strength training and just as much if not more than running.

Each of the experiments were controlled randomized studies where the [soccer](#) groups were compared to other exercise groups and inactive controls. The soccer experiments are part of a large-scale research project on soccer and health carried out at the University of Copenhagen, four Danish University Hospitals, the Swiss Federal Institute of Technology and the Schulthess Clinic in Zurich.

Project Leader and Associate Professor at the University of Copenhagen Peter Krstrup recaps the results: "Our research shows that soccer is a versatile and intense form of exercise that provides a positive effect on cardiovascular risk factors in a large group of untrained adult men and women," and continues: "Based on the results, soccer can be recommended as part of the treatment for high [blood pressure](#) and as broad-spectred prevention of cardiovascular diseases."

Small games, big gains

When untrained children, teens, adults and older people play soccer,

their pulse rate remains high and they perform multiple intense actions like sprints, turns, kicks and tackles. ´

"Our analyses also showed that the pulse rate and activity profile is the same in small-sided games where only 4, 6, 8 or 14 people play. In other words, it is very easy to obtain a combination of cardio and strength training with soccer," concludes Krstrup

Research partner Lars Juel Andersen from the Clinic of Sport Cardiology at Gentofte Hospital, Denmark, believes that the results are good news for the millions of people worldwide, suffering from high blood pressure: "It is well known that physical inactivity is a substantial risk factor in developing cardiovascular diseases in itself, but it is new that a pleasurable team sport like soccer is effective in treating high blood pressure".

Furthermore, associate professor Peter Riis Hansen from Gentofte Hospital suggests that football may have other favourable effects on the [vascular system](#), namely a reduction of arterial stiffness, which has been associated with improved cardiovascular outcomes.

About the project

Led by Professors Peter Krstrup and Jens Bangsbo from Department of Exercise and Sports Sciences, University of Copenhagen, 50 researchers from seven countries have studied the physical, psychological and social aspects of soccer and the results are remarkable. A number of scientific articles from the project are published on 2 February 2010 at a seminar at the University of Copenhagen and later this month the *Scandinavian Journal of Medicine and Science in Sports* will publish a special edition issue entitled "Football for Health" containing 14 scientific articles from the soccer project.

The research project has received funding from FIFA - Medical Assessment and Research Centre (F-MARC), The Danish Ministry of Culture, TrygFonden, United Federation of Danish Workers (3F), The Danish Football Association, Team Denmark and The Danish Sports Confederation.

Further research plans:

The researchers have specific plans to examine the effect of soccer on other patient groups such as people with diabetes II and cancer. The research group is also planning a follow-up study of the long-term effects of soccer on [high blood pressure](#) and preliminary stages of osteoporosis.

A planned collaboration with an international network of researchers from, among others, England, Italy, Portugal, Switzerland, Germany, Norway, Sweden, USA, Kenya and Iran will examine the cardiovascular and muscular-skeletal effects of soccer and other ball games such as basketball, handball, volleyball and floorball on inactive and overweight children and inactive elderly people.

Provided by University of Copenhagen

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