

Street football boosts fitness and health in socially deprived men

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Research carried out by the Copenhagen Centre for Team Sport and Health in Denmark shows that street football (soccer) improves fitness and multiple health markers in homeless men. After only 12 weeks, the participants had better postural balance and higher muscle mass and bone mineralization, along with lower fat percentage and LDL cholesterol and higher aerobic fitness and exercise capacity.

Sixteen original scientific articles about the health effects of football

were published on June 19 in the *Scandinavian Journal of Medicine & Science in Sports*. One of these articles describes the fitness and [health effects](#) of street football in 20–50-year-old homeless men. The Copenhagen researchers, led by Professor Peter Krstrup of the Copenhagen Centre for Team Sport and Health, University of Copenhagen, conclude that there are multiple positive effects of football for socially deprived men.

Street football minimises the risk of falls and fractures

"We found that homeless men gained 1.1 kg of muscle and improved postural balance by 40% after only 12 weeks of street soccer," says Krstrup. "At the same time, the soccer training stimulated bone formation, as indicated by a 27% increase in plasma osteocalcin and a 1% higher bone mineralisation in the upper body. Altogether, these data provide clear evidence that street soccer minimises the risk of falls and fractures in a population that has a 460% higher risk of being hospitalised with sudden trauma."

Homeless men boost fitness and cardiovascular health through football

"Street soccer played 2–3 times per week over 12 weeks also elevated maximal oxygen uptake by 11%, lowered fat mass by 1.7 kg and reduced LDL cholesterol by 13%, which corresponds to a decrease in the risk of cardiovascular disease of as much as 50%," says Morten B Randers Thomsen, a research fellow of the Department of Nutrition, Exercise and Sports at the University of Copenhagen. "Along with a health hat-trick of improved cardiovascular, metabolic and musculoskeletal fitness, the homeless men also improved their [exercise capacity](#), seemingly with improvements in cycle performance and intermittent exercise

performance of 8 and 45%, respectively."

A call for street football for the homeless

"Less than a thousand players are currently playing in the World Cup, but an estimated 400 million people are playing football worldwide. There is a potential for many more players. Football seems to be a great type of fitness training for most people. Not only does it encourage varied, intense training, it is social and it can be played anywhere," says Krusturup. "The impressive results of the present study can be explained by the fact that the homeless men had very high heart rates during every single street football session and performed hundreds of fast runs, sideways runs, turns, shots and tackles. We also observed a very high attendance rate, which is promising for future adherence to physical activity."

Professor Krusturup concludes: "There seems to be great potential for improving the quality of many people's lives if local authorities can organise street football groups for homeless and socially deprived people."

The scientific study

The researchers at the Copenhagen Centre for Team Sport and Health have conducted numerous training studies involving football and other sports.

In the present study, 55 homeless men living in Copenhagen were included in a control group or invited to attend 4v4 street football training sessions 2–3 times a week for 12 weeks. The participants had an average age of 37 (range: 20–50) years and were all untrained. A comprehensive testing battery was used before and after the 12-week

intervention period, including DXA scans, blood sampling, maximal oxygen uptake tests and postural balance, bicycle performance and intermittent exercise tests.

More information: The special issue of the *Scandinavian Journal of Medicine & Science in Sports* on the topic of football for health in collaboration with the FIFA Medical Assessment and Research Centre (F-MARC) was published on June 19. [onlinelibrary.wiley.com/doi/10 ... 24.issue-s1/issuetoc](https://onlinelibrary.wiley.com/doi/10.1111/sms.12424)

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