

# Football improves strength in men with prostate cancer

June 19 2014

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Some of the participants in the FC Prostate Cancer research project after a training session. Credit: 'Copenhagen Centre for Teamsport and Health'.

Men with prostate cancer aged 43–74 achieve bigger and stronger muscles, improve functional capacity, gain positive social experiences and the desire to remain active through playing football for 12 weeks. These are the findings of the "FC Prostate" trial, jointly conducted by the University Hospitals Centre for Health Care Research at The Copenhagen University Hospital, Rigshospitalet and the Copenhagen Centre for Team Sport and Health at the University of Copenhagen.

Some of the participants in the FC Prostate Cancer [research project](#)

after a training session. Download free press photo [here](#). Credit: 'Copenhagen Centre for Teamsport and Health'.

The acclaimed *Scandinavian Journal of Medicine & Science in Sports* is today publishing two articles on recreational football (soccer) for 43–74-year-old men with prostate cancer. The first article shows that twice-weekly 1-hour football training sessions for 12 weeks produce an increase in muscle mass and muscle strength despite concurrent androgen deprivation therapy. The second article describes how recreational football is a promising novel approach for health promotion in prostate cancer patients as the participants regain pride in their bodies, develop team spirit and mutual concern increasing their motivation for long-term participation in sport.

## **Regained body pride and strong social cohesion**

"This is the first study of its kind in the world, and the results clearly show the potential of recreational football in the rehabilitation of prostate cancer patients," says project leader Julie Midtgaard, a psychologist at The Copenhagen University Hospital Rigshospitalet.

"Just 12 weeks of football training resulted in the men regaining control and developing a unique exchange of feelings and recognition centered around the sport."

The attendance rate was high over the 12 weeks, and many of the participants are still playing football two years after the project began.

"The provision of football proved to be a good way of developing friendships between the men and a unique model for men with prostate cancer to take responsibility of their own health without giving up their claim to feel and behave like men," concludes Midtgaard.

## **Bigger and stronger muscles in spite of anti-hormone treatment**

"Androgen deprivation therapy through medical castration is an effective treatment of prostate cancer patients but has adverse effects in the form of reduced muscle mass, higher fat percentage and reduced physical activity," explains Professor Peter Krstrup, who co-initiated the study with Midtgaard and has been studying the effects of recreational football for the past 10 years.

"Twelve weeks of football training increased muscle mass by half a kilo in the football group in spite of the anti-hormone treatment and contributed to a 15% increase in muscle strength. The players in the FC Prostate team thus achieved excellent gains in [functional capacity](#) as a result of 12 weeks of football training, measured among other things as a 8% improvement in performance in the stand-sit test," says Krstrup.

"Our study also showed that recreational football was fun and inclusive for the participants in FC Prostate, and for every training session the intensity was high, with an average heart rate of 85% of the participants' maximum heart rate," says Krstrup.

## **Football is good rehabilitation for prostate cancer patients**

"Previously, we showed that recreational football is effective for preventing and treating lifestyle diseases. With this study, we can add that recreational football can also be used for rehabilitation of a large group of [cancer patients](#)," says Krstrup.

Midtgaard concludes: "The study indicates that men with prostate cancer benefit greatly from recreational football, both physically and mentally.

It has also proved to be easy to keep the men involved in physical activity once they have started playing football. They look forward to going to training and enjoy it tremendously when they get there. The next step is to evaluate the effectiveness of football in a more natural setting. Therefore we are delighted that we have received the necessary funding to pursue an even bigger project in collaboration with the Danish Football Association in which more than 300 [prostate cancer](#) patients will be invited to play football in local [football](#) clubs in Denmark."

**More information:** The two articles are today being published in a special issue of the *Scandinavian Journal of Medicine & Science in Sports* on the topic of football for health.

Provided by University of Copenhagen

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