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FOOTBALL FOR HEALTH

LESSONS FROM THE 4TH WORLD CONFERENCE ON SCIENCE AND SOCCER

BY RICHARD BUCCIARELLI

The 4th World Conference on Science and Soccer was held in Portland, Oregon, on June 4th-7th, 2014.

Researchers, academics, sports scientists, as well as practitioners in soccer-specific strength and conditioning, athletic therapy, sport psychology, and sports medicine descended upon Portland for three days to share their research, knowledge, and ideas. I have attended several of these conferences before, and for a soccer fitness coach like me, the best thing about them is the opportunity to learn new and exciting pieces of evidence-based theoretical knowledge, which can then be put into practice in the weight room and/or on the pitch.

The conference in Portland was no different, as it was both a great educational experience and also a fantastic opportunity to network with other soccer and fitness professionals. One particular presentation, however, stood out to me both for its originality and for its practical applications.

Dr. Peter Krustrup, Ph.D., a professor of exercise physiology at the University of Copenhagen in Denmark, who has also worked with the Danish Men's and Women's National teams, as well as several other professional soccer clubs in Europe, has for several years been the lead researcher in a group of studies titled "Football for Health". The basic premise of the Football for Health studies has been to examine the difference in health effects between playing soccer and other more

traditional forms of exercise (including strength training, jogging, and interval running) on a variety of markers of health (including muscle mass, cardiovascular endurance, and body composition).

The rationale for studying the health effects of playing soccer is quite simple. Recent studies have indicated that there are a total of 400 million "soccer players" in the world. Of those, there are only about one million considered "elite" – professional and national team players.

The other 399 million – a staggering number – are mainly youth and/or adult competitive and/or recreational players, who will not make a career out of playing soccer, and thus are simply playing the game for enjoyment and physical fitness.

Dr. Krustrup and his team were interested in examining how participation in recreational soccer – comprising three hours per week of playing the game – affects the physical fitness of this large and growing number of people from around the world. The following is a summary of the results from one of the main Football for Health studies, titled "Recreational football as a health promoting activity: a topical review", and how the results of this study can have a powerful impact on youth/adult soccer players both here in Canada, as well as around the world.

(Note: there were several dozen studies done comparing soccer to other forms

of physical activity on many different populations, including healthy youth/adults, the elderly, and in people with diseases such as heart disease, diabetes, cancer, osteoporosis, and others. For the purpose of this article, I will focus on the results from the one main study that was conducted using healthy adults).

GENERAL ORGANIZATION:

Participants in this study were untrained men between the ages of 25 and 40, who were randomly assigned into 5 groups (listed below) and tested using a variety of physical and physiological measurements pre- and post-training intervention.

1. Soccer group: participated in 3 sessions per week of recreational soccer, 1 hour per session, for 12 weeks.
2. Jogging group: participated in 3 sessions per week of 60-minute jogging, for 12 weeks.
3. Interval running group: participated in 3 sessions per week of 60-minutes interval running, for 12 weeks.
4. Strength training group: participated in 3 sessions per week of 60-minutes strength training, for 12 weeks.
5. Control group: restricted to no physical activity for 12 weeks.

RESULTS AND CONCLUSIONS:

Soccer was second only to interval running in terms of % improvement in VO₂ Max (a common indicator of aerobic endurance) and more importantly, the sport was also shown to have a far greater

effect on change in body fat percentage than any other method of training, including jogging or interval running. Soccer elicited a greater increase in muscle mass, and leg bone mass, than jogging or interval running, and more importantly, a similar increase in muscle and bone mass as compared to strength training.

The Football for Health studies have made a strong case for promoting participation in recreational soccer as a means of achieving better overall health, which includes cardiovascular and musculoskeletal health. The reason soccer is so effective is that, based on the results of these studies, the sport was shown to be the one form of exercise that will elicit significant improvements in both aerobic endurance, body composition, and muscle/bone strength.

IMPLICATIONS:

In order to be ready to meet the physical demands of participation in recreational soccer, individuals should consider combining their soccer training with a program of aerobic endurance, speed/power, strength, and flexibility training.

By combining running and strength training with soccer, players of any age and level of ability will ensure that they get the most out of their soccer practices and games. The benefits of this type of combination training include:

- Ability to run faster and jump higher in training/games
- Increased endurance and the ability to perform more running throughout training/games
- Greater muscular strength which will reduce the likelihood of injuries while playing soccer

By focusing on fitness training, any recreational soccer player will ensure that they can be ready to meet and exceed the sport's physical demands, be pre-emptive in the prevention of possible injuries, and maximize the enjoyment and physical fitness benefits that will come out of

playing the sport they love.

At Soccer Fitness, we have recognized the need for supplemental fitness training to prepare the body for recreational soccer. We have just launched Soccer Fitness Gols, an online community and mobile fitness app, to meet this need. The Soccer Fitness Gols mobile app combines soccer-specific training, customized workouts, performance monitoring, practical workout schedules, and social connectivity to give every user a science-based and truly soccer-specific fitness training experience. With the World Cup capturing the attention of the entire planet this month, what better time to get back in shape using the world's most popular sport? Soccer Fitness Gols can help you do just that.



Richard Bucciarelli is a sport scientist and co-founder of Soccer Fitness Gols (beta version of the app is available NOW through Google Play on all Android smart phones). Richard recently presented his research involving high speed/high incline treadmill running, at the 4th World Conference on Science and Soccer in Portland, Oregon, in June 2014. For more information about Richard and Soccer Fitness Gols, visit www.soccerfitnessgols.com.

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