Editorial

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All development needs scientific evaluations in different forms. Football (soccer) is no exception. Although the game may be played different in different parts of the world, the basic character is the same. Football is a high intensity, intermittent sport putting large demands on all energy systems in the human body. Its medical, physiological and psychological prerequisites and consequences are numerous. Therefore it is interesting to note that modern football science is only about 20 years old. When I wrote the review "The Physiology of Football" in 1986 [1] I summarized what was known at that time - data from more general physiological and medical research together with results from some of my own studies performed with fairly simple methods.

Nowadays we have access to modern techniques for studying both the player and the game. We know much more about factors influencing the player. And the game itself has also changed during the last decades. In European football midfield players now-a-days run 12-13 km, which is 10-15 % longer than 20 years ago. The top speeds may not have changed so much but the number of sprints and their lengths have definitely increased. In addition, the increased number of games per player in world class football together with tactic evaluations have enhanced the total stress on the players. So even if it is interesting to note that modern physiological data in essence confirms what was known 20-30 years ago, there are still urgent needs for studies on football from all different science angles. This is why journals specializing on football and translating science information to practical knowledge are so important.

What is known about football?

My answer is – "less than we think". If we look at the game itself there are lots of publications on football tactics and related matters, but these publications are mostly observations and personal experiences. This is, of course, valuable information but as far as I know, very few have used scientific methods for developing the game. The same is true for the psychological and physiological part of it. Many (including myself) have used football as a mean to study other things. For instance, we studied the effect of two games, separated by 20 hours, on junior players [2, 3]. The result showed that the testosterone levels and the immune system were depressed more than 3 days afterwards. Even if studies like these are important for the basic physiological and medical knowledge of the consequences of repeated games in a tournament, the following question is more important. If we have tournaments for young players, how can we act to avoid the negative effects of serial games?

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Another important questions are: How to develop young players with exceptional qualities? We know that only a few of them reaches top level football. Do we stress them too hard in young ages or should we let them “develop without specializing in football” until passing puberty? Who has a scientific answer? Regarding the negative side of football: How can we avoid arthrosis after a ruptured anterior crucial ligament of the knee? Are there different rehabilitation methods for the young vs the grown-ups or the male and female player? Medical doctors, orthopaedic surgeons, physiologists, psychologists, nutritionists and others can certainly form many other questions of importance for the player and the game.

To publish scientific information and discuss its importance for football is one way to bridge the gap between the scientist and the practitioner. Without it – as I see it - football will not develop.

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