

EMS RESEARCH

EMS training in professional sports

Based on EMS research done by Andre Filipovic and Dr Heinz Kleinoeder (2013)

The origins of electro muscle stimulation (EMS) training trace back to the field of medical science and applied rehabilitation. In recent years an increasing number of research publications highlighted the benefits of this type of training for professional and recreational athletes. A systematic review of sport science research by the German Sport University Cologne in 2011 established that EMS training is a promising alternative to conventional strength training. Apart from enhancing strength parameters and motor abilities, the time efficiency factor is an added advantage in professional sports. Since the introduction of whole body EMS training devices, as used at BODYTEC, research shows significant improvement of training in maximum strength, speed, jumping and running performance.

Research description and outcome

The EMS research by Filipovic and Kleinoeder focused on the benefit EMS training could have for professional soccer players. 22 professional soccer players from a German soccer team participated in EMS training over a period of 14 weeks and were tested 4 times during the research period on the following areas:

- Strength performance
- Speed and sprint performance
- Jumping performance
- Kicking speed

The results of the EMS research revealed that the players who incorporated EMS training into their workouts improved significantly in all tested areas. The evaluation of the individual tests showed:

- (Maximum) strength performance increased on average by 30.07 %
- Jumping performance increased on average by 9.14 %
- Speed and sprint performance increased on average by 19.38 %
- Kicking speed increased on average by 16.3 %

Results and conclusion

All in all, the results of Filipovic and Kleinoeder's EMS research highlights the effectiveness of EMS training and also supports other research done on athletes in different sport disciplines. The authors concluded that whole body EMS training is an effective and more time efficient alternative to conventional strength training in high performance and professional sport.