SPORTS STRENGTH TRAINING WITH EMS

As one of the world's most recognised athletic trainers using whole body EMS, Thomas Ott gives recommendations for its proper use in strength training for professional athletes

EMS training can be successfully transferred to sports-specific movements, benefiting a range of athletes

"I've used EMS Training in professional sports since 2009. Through my work at Müller-Wohlfahrt Orthopaedic Centre in Munich I dealt with professional athletes from different sports every day. Over the years, EMS training has become an important part of my training both in the area of rehabilitation after injury and strength & conditioning.

Often the little things are the deciding factor in winning at world championships or at the Olympics. This is why many athletes like Usain Bolt take the opportunity to use EMS training to bring them into top form. Individually dosed and adapted to the requirements of the respective sport, it can give a decisive level of advantage. From my long-term experience in strength & conditioning with professional athletes I can recommend EMS training for increasing performance and giving the athlete the extra boost that could make a difference in their results.

SPORT-SPECIFIC TRAINING

As a trainer, it's your job to make athletes better at their sport by improving their condition and cognitive skills. For that purpose, strength training is done with sports equipment and the accompanying exercises in order to make it even more beneficial for the athlete.

Similarly, EMS training can be transferred to sport-specific movements and simultaneously have a positive influence on strength development. Using EMS during sport-specific movements can increase intra- and inter-muscular coordination, and therefore enhance performance. At this level, this can give a definitive advantage for the athlete.

Ott works with professional athletes on a daily basis

EMS can be easily integrated into the weekly training routine at any stage of preparation for competitions.

Maximum and explosive strength can both be increased through higher muscle activity and improved movement speed. This is done by activating the fast-twitch fibres first, developing movement speed and explosiveness. In principle, it can work with the same programmes as those used for conventional strengthening.

It's important to ensure that the settings and intensity can be adapted to the training goals – if the goal is to move fluidly and without disruption, then you should choose a longer pulse rise or even continuous current.

Recovery plays an important role in every athlete's life and reducing recovery times by increasing blood flow after an intense training, combined with other measures, can have a huge impact on performance. Using recovery and metabolism programmes with EMS can shorten recovery times even more. But if an athlete is going to do EMS training, his or her entire weekly training programme must be taken into consideration.

The more training units that the athlete undertakes, the more relevant the selected parameters of the EMS training are and particularly the chosen training time in relation to the technical and competitive training units in order to ensure sufficient regeneration time.

The implementation of EMS training offers athletics coaches a great opportunity to improve the athlete's condition whilst taking into account functional aspects. In this case, the focus should not be technical training.

This is the technical trainer's job and as far as possible should be carried out under real-life conditions for the particular sport.

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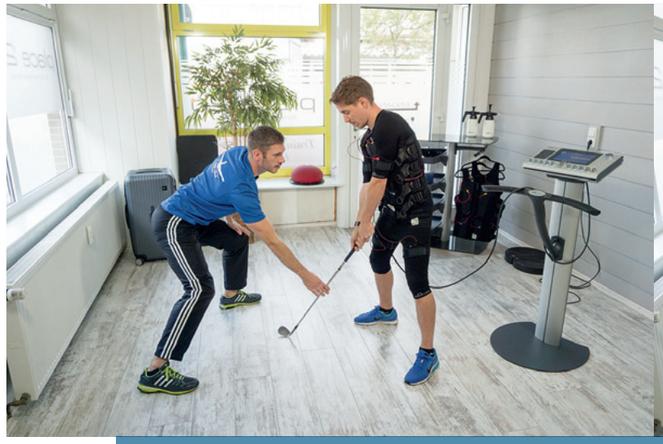

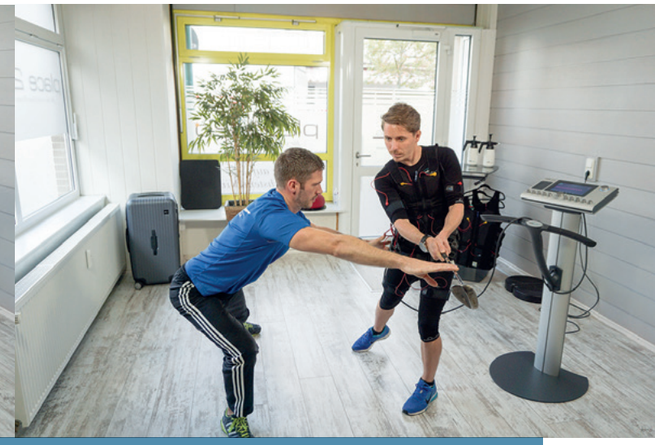

The explosive power of hard-to-train core muscles – key for many athletes – increased by up to 74 per cent

In sports studies, whole body EMS increased maximum athletic performance by up to 30 per cent

WHAT EFFECTS OF EMS TRAINING HAVE BEEN PROVEN IN STUDIES AND ARE RELEVANT FOR COMPETITIVE SPORTS?

In addition to the proven improvements in strength and muscle building, the results are particularly interesting in terms of improvements in maximum strength and high-speed strength, the important components in maximum performance:

- Whole body EMS increased the maximum performance (product of speed of movement and strength) of athletes of up to 30 per cent in sports studies.
- The long-term effects are particularly impressive: Increases in speed were recorded up to three weeks after the last training session.
- Compared to other high-speed strength methods, EMS training is the only training method that results in an increase in maximum performance – while typical high-speed strength and maximum strength methods only achieve increases during the strength units, combined with higher mechanical loads.
- The speed of the contractions in the muscles increased by an average of 22 per cent after 8 training units. The maximum performance of the abdominal muscles that are important for almost all kinds of sport can be increased by around 67 per cent.
- The explosive power of the hard-to-train core muscles was found to have been improved by up to 74 per cent.
- The CK values were used as a measurement for intensity and were approx.imately 40 per cent higher after whole body EMS training than in conventional training – often a crucial factor in building up muscle mass and according to many experts the sign of an effective training session.

The effects recorded up until now can be significantly increased by making appropriate changes to the training parameters. In these particular studies quite low intensities were chosen.