



# CERULEAN

ADVANCED FITNESS AND WELLNESS™

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*Included are the full-length peer reviewed medical research papers. For your convenience, we have also included short summaries of each article with quotes taken directly from the corresponding research study.*

## **ELECTRICAL MUSCLE STIMULATION MAY IMPROVE STRENGTH, RECOVERY AND PERFORMANCE IN HEALTHY INDIVIDUALS AND ATHLETES**

### **Effects of an Electrostimulation Training Program on Strength, Jumping, and Kicking Capacities in Soccer Players**

*Billot et al., Journal of Strength and Conditioning Research, May 2010, Vol. 24 (5), pp. 1407-1413*

Summary: “In this French study, a Compex Energy Device was used to investigate the effect of a 5-week electrostimulation (EMS) training program on muscular strength (quadriceps), kicking velocity, sprint and vertical jump performance in soccer players.”

“The athletes were tested after 3 and 5 weeks training and at both assessments, they showed significant improvements in quadriceps muscle strength as well as in ball speed performance, while these improvements were not seen in the control group.”

### **Effect of Three Different Between-Inning Recovery Methods on Baseball Pitching Performance**

*Warren et al., Journal of Strength and Conditioning Research, March 2011, Volume 25 (3), pp. 683-688*

Summary: “In this Californian study, the authors compared the effectiveness of three forms of recovery in order to determine which one was most effective after an inning of pitching in baseball.”

“The active EMS recovery with the Compex Sport produced the highest reduction in blood lactate levels as compared to other recovery methods which had no significant effect on blood lactate... The authors recommend electrical muscle stimulation as the recovery method of choice for baseball pitchers because of superior blood lactate clearance and better self-reported recovery.”

### **Physiological Changes in Muscles and Nerves Electromyostimulation Training Effects on Neural Drive an Muscle Architecture**

*Gondin et al. Medicine & Science in Sports & Exercise, 2005, Volume 37(8) pp. 1291-129*

Summary: “With electrical muscle stimulation being largely employed as a means of strength training, the authors of this French study wanted to investigate the adaptations that occur in the muscles and nerves that are subject to electrostimulation.”

“It was concluded that the strength gains with EMS training are associated with neural as well as muscular adaptations.”

“CPX testing is an inexpensive and totally noninvasive technique used for the objective evaluation of cardiac and pulmonary function.”

## **CLINICAL STUDIES PROVE THE EFFECTIVENESS OF ELECTRICAL MUSCLE STIMULATION**

Summary of another 6 studies in single document provided on Compex website