

## **Electromuscular stimulation (EMS) of the whole body musculature - An innovative method to relieve urinary incontinence**

(BOECKH-BEHRENS W.-U./SCHÄFFER, G., unpublished dissertation, University of Bayreuth, 2002).

### **Aim of study**

The objective of this study was to investigate the effects of EMS training on urinary incontinence.

### **Methodology**

The presence, type and the intensity of urinary incontinence complaints were investigated in 49 individuals with back ailments with the help of initial and subsequent questionnaires (GAUDENZ 1979). A largely slight to moderate form of urinary incontinence was present in 17 individuals (15 women, 2 men) averaging 47 years of age.

10 units of EMS training, twice per week, each lasting 45 minutes, were carried out with the following training parameters: pulse duration 4 s, pulse interval 2 s, frequency 80 Hz, rise time 0 s, pulse width 350 s. In the process, a period of about 25 minutes of supervised training, during which various static exercise positions were assumed, followed a habituation period lasting 10-15 minutes in each case for the adjustment of individual pulse strengths. The training period concluded with a five-minute relaxation program (pulse duration 1 s, frequency 100 Hz, rise time 0 s, pulse width 150 s).

### **Results**

An alleviation of urinary incontinence complaints was achieved in 64.7% of the cases. 23.5% became complaint-free. A decrease in complaints occurred in 24.4%, and 35.9% saw no change. These results corresponded somewhat to the improvements that have been reported for treatments of incontinence with special, local electromuscular therapies (cf. Eriksen 1987, Sebastio 2000, Salinas Casado 1990, Meyer 2001).

### **Conclusion**

Whole body EMS training represents an effective training system. It achieves therapeutic goals such as relief from incontinence and back complaints and preventive goals such as muscle formation, body contouring and improvements in mood, vitality, body stability and general performance.