

# Application of applications of medical mud in Tambukan lake for restoration of elite sportsmen

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The aims of this work was to study the use of mud in the Tambukansky lake in the complex rehabilitation of elite athletes.

**Materials and methods.** The study involved 30 elite athletes (rugby, judo, boxing, athle-tics). For the rehabilitation of the musculoskeletal apparatus of the lower extremities of elite athletes during the intensive physical exertion, a mud applicator Tambukansky, was used. During the procedure, the athletes lay on the couch in a relaxed state for 15 minutes. At the course of the procedure, the procedures were performed daily, in total 7 procedures. To substantiate the effectiveness of mud application, methods were used: electroneuromyography (ENMG) and testing of the dynamometric characteristics of the musculoskeletal system in the robotic complex CON-TREX.

The results of the research show that after 1 session of Tambukan mud applications, elite athletes had a tendency to improve ENMG indices during stimulation at the «tarsus» point. There was a tendency to increase the amplitude of the M-response. The area of the M-response on the left leg increased significantly ( $p < 0.05$ ). With stimulation at the «caput fibulae» point, the motor speed on both legs significantly increased ( $p < 0.05$ ). With stimulation at the point “fossa popliteav”, the amplitude and area of the M-response on the left leg and the speed of motor conduction on the right leg increased significantly ( $p < 0.05$ ).

The study of the effect of the application of the course of procedures showed significant improvements in the parameters of the M-response at all points of stimulation. At the point of stimulation “tarsus” the parameters of terminal and residual latency improved, the duration of the M-response. At the point of stimulation, the “caput fibulae” improved the indicator of terminal latency. At the point of stimulation, the popliteal fossa improved the parameters of terminal latency and duration.

Comparison of the performance of the muscles surrounding the right knee joint in highly qualified female athletes before and after applying the course of 7 sessions

of Tambukan mud revealed a significant decrease in the fatigue factor of flexor and extensor muscles.

**Conclusion**

The use of mud in the Tambukanlake in the sport of higher achievements contributes to:

- enhancement of the functional capabilities of the neuromuscular and musculo-skeletal system;
- urgent recovery of athletes (mud application immediately after an intense load on the neuromuscular apparatus);
- delayed recovery;
- prevention of fatigue injuries and injuries to athletes.