

## **Abstract**

The goal of this bachelor thesis is to summarize the information about the possibilities of the physical exercise in individuals with the spinal cord injury. The work presents various types of the physical activity and describes their effect on metabolism and body composition. It also includes the information about the frequency, the duration and the intensity of exercise.

The interruption of the somatomotor and somatosensory pathways in patients with spinal cord injury leads to the reduction of their physical activity. As a consequence of that, their metabolic profile and body composition get worse. Early after the injury, the patients suffer from the massive muscle atrophy and the rise of the amount of adipose tissue. These changes have a negative effect on metabolism of lipids and carbohydrates. It results in the development of dyslipidaemia and insulin resistance, sometimes even in type 2 diabetes mellitus. These secondary complications worsen the quality and the length of life of the patients with the spinal cord injury. Better understanding of these issues is necessary to improve the quality of health care for these people.

The work includes a short questionnaire. Its goal is to describe the current situation of patients with the spinal cord injury in the Czech Republic. The questionnaire was filled in by 15 patients of the Rehabilitation Institute Kladruhy and of the Paraplegic Centre.