

Summary:

Activity of the selected muscles during snowboarding and differences between drift and carving turns

The study deals with differences in muscles activity between drift and carving turns during snowboarding. The surface EMG electrodes were used for the EMG activity recording. The measured data were transferred into a PC computer for a consequent evaluation using KAZE5 software. The movements during the turns were synchronously recorded using a digital camcorder. Each phase of the movement was complemented with a corresponding EMG activity. The aim of the study was to analyse the synchronous EMG activity and the spatial movement of the selected muscles during a single turn cycle, i.e. a backside and a frontside turn). In the majority of the selected muscles, the EMG activity during carving turn was significantly higher than the activity during drift turn. The highest EMG activity was recorded during backside turn in two muscles: mm.gastrocnemii and mm. tibiales. We also recorded local maximum of m. obliquus abdominis ant. dx. during carving backside turn. Further more, the EMG curve of m. obliquus abdominis ant. sin. is very similar to the EMG curve of m. gastrocnemius sin.

Keywords: drift turn, carving turn, muscle chain, electromyography (EMG), posture, muscle activation.