

Abstract: This doctoral thesis deals with the kinesiological analysis of the athletic run – sprint. The aim of the thesis is the time characteristics comparison and switching on of the muscles which are working during the sprint before and after the performance of special running exercises. It is becoming much more important to use the special training procedures during training sessions. The special running exercises are performed almost daily during training sessions of sprinters. The question is to what extent their performance is evident on the activation of muscles. The qualitative and quantitative results show the activation of muscles during sprint before and after the performance of the special running exercises. The main tool of the research was the surface EMG analysis of muscles during a 30-metre long sprint. The content of the research were two comparative analysis, where 8 proband participated – interindividual and intraindividual. During the evaluation process we considered the quantitative and qualitative components. On the basic of the reached results we may say that there is no difference between the run before and after the performance of special running exercises.

Keywords: Sprint, special running exercises, electromyography, ANOVA