

# **ABSTRACT**

## **Title**

Comparative Analysis of Bipedal and Quadrupedal Locomotion

## **Purposes**

Comparison of biped's and quadruped's step motion and comparison of the activity of their m. latissimus dorsi and m. gluteus medius during different kinds of locomotion.

## **Method**

Surface electromyography combined with kinematography analysis used synchronized video recording.

## **Results**

The activity of upper limbs during the biped's walk showed its delay-action compared with activity of quadruped's anterior limbs. The character of the chosen muscles of upper limbs is stabilization because of action in the open kinematic chain. Quadruped's action is in the closed kinematic chain and chosen muscles of all his limbs have locomotive function like chosen muscles of biped's lower limbs.

## **Key words**

Surface electromyography, quadrupedy, bipedy, musculus latissimus dorsi, musculus gluteus medius