

Abstract

Title: The influence of bicycle saddle position on muscle tone of the triceps surae muscle

Objectives: The aim of this thesis is to find out what is the effect of changing the bicycle saddle position on muscle tone of triceps surae muscle. And whether the higher seat position will also increase muscle tone of the calf muscle.

Methods: The thesis is divided into the theoretical part, where there is the information from the scientific literature on the subject and a practical part.

The theoretical part includes anatomical descriptions and rheological properties of skeletal muscles, muscle tension and its regulation. Part of it is also the biomechanics of cycling, bike geometry and the options of bicycle seat setting and also the risk implications of the incorrect bicycle seat position.

The practical part was prepared as a research by measuring of muscle tone by the myotonometer. For measurement was used the triceps surae muscle of the seven probands on the dominant lower limb. The measurement were twice two weeks apart with the different bicycle seat height.

Results: The measurement results confirmed that change of bicycle saddle position has an influence on the muscle tone and that the higher saddle position will also increase muscle tone of the calf muscle.

Keywords: bicycle saddle position, saddle setting, muscle tone, triceps surae muscle, myotonometer