

Title of the thesis: The influence of inline skating on the knee joint.

Abstract:

Inline skating is one of the fastest growing sport activities not only in the USA and the Western Europe but in the entire Czech Republic as well. Many people understand inline skating as a possible leisure activity – a fitness activity such as jogging, other do the inline skating as a supplementary summer sport to crosscountry skiing and other see it as an attractive means of transport. Many non-experienced enthusiasts as well as recreational and top athletes have tried to move on inline skates. There are available skating products of various quality and price on the market.

The thesis deals with influence of inline skating on the entire structures and functions of a knee joint. Apart from the physiological effects on respiratory, cardiovascular system etc. exists a topic which has not been talked about: that is the influence of a periodic and repeating movement on the locomotory system and especially on the knee joint. The skate's construction, its rigidity, individual skating technique and the status of skater's locomotory system as well as the quality of surface seem to have fundamental importance in this aspect. The quality of the surface together with fast skating may cause significant vibrations.

Key words: inline skating, rheological characters of knee joint, mechanical properties of ligaments, vibrations