ABSTRACT

Charles University in Prague

Faculty of Pharmacy in Hradec Králové

Department of Biological and Medical Sciences

Student: Jaroslav Oswald

Supervisor of master thesis: PhDr. Zdeňka Kudláčková, Ph.D.

Title of master thesis: Supplementation modes for athletes

The aim of this work was to process information about selected dietary supplements and forbidden substances in sports, and also to give an overview of selected laboratory parameters monitored during training in specific types of athletes.

Taking dietary supplements affects performance of active athletes. Supplementation with various dietary supplements can increase muscle mass, improve strength dispositions and help with fat reduction. It is a safe way to stimulate physical activity. It has been proven that usage of anabolic steroids leads to muscle mass increase and strength growth, but this usage is also accompanied with several undesirable side effects.

Case reports of three different types of athletes show the differences between a natural user and an anabolic steroids user. The anabolic androgenic steroid user has shown a significant improvement in strength and performance, but he has also noticed some side effects (a slight decrease in testosterone levels after a cycle and an increase in prolactin levels). An amateur bodybuilder and long-term user of doping has shown significantly increased levels of liver enzymes, which are most likely caused by the abuse of anabolic steroids.

Key words: dietary supplements, anabolic androgenic steroids, athlete, supplementation