

ANALYSIS OF FOOD SUPPLEMENTS FROM THE CATEGORY “FAT BURNERS”

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Background: Food supplements that are claimed to acutely accelerate fat metabolism or increase energy expenditure, interfere with fat absorption, increase fat oxidation during exercise, and/or lead to long-term metabolic-promoting changes are known as “fat burners”. In order to improve sports performance, they are among the most popular sports supplements (whether for professional and/or recreational athletes).

Methods and Objectives: The aim of this paper was to review and analyze the composition of food supplements from the category “fat burners” that are present on the market of the Republic of Serbia. Data on food supplements from the category “fat burners” on the market of the Republic of Serbia were obtained through a photographic repository that was previously collected with the consent of the competent manager of the sales facility. The data was also found on the official websites of specialized online stores for sports supplements. Data collection was carried out during July-August 2023 in the area of the city of Belgrade.

Results: 30 different food supplements from the category “fat burners” were recorded on the market of the Republic of Serbia. Out of a total of 30 (100%) food supplements analyzed, 20 (66.67%) products contain L-carnitine as an active ingredient, caffeine is found in 12 (40%) products, as well as green tea extract, while the presence of synephrine, which mainly derived from bitter orange extract recorded in 7 (23.33%) products. In most cases, these are polycomponent products in terms of active ingredients.

Conclusion: According to the Australian Institute of Sport (AIS), of the mentioned active substances, only caffeine belongs to the group of approved supplements (group A). This means that there is an evidence that confirms the effects of caffeine and shows that it really improves athletic performance if used as prescribed. Given that none of the remaining active ingredients, including the most abundant L-carnitine (belongs to group B consisting of supplements that are still under research and consideration), are not in group A, for none of them there are studies proving their effectiveness as “fat burners”.

Keywords: food supplements, fat burners, sports supplements, caffeine, L-carnitine