

Consumption of Fat Burners Leads to Acute Liver Failure: A Systematic Review protocol

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Abstract : Prevalence of obesity and overweight is increasing due to sedentary lifestyles and busy schedules of people that spend less time on physical exercise. To reduce weight, people are finding easier and more convenient ways. The easiest solution is the use of dietary supplements and fat burners. These are products that decrease body weight by increasing the basal metabolic rate. Various reports have been published on the consumption of fat burners leading to heart palpitations, seizures, anxiety, depression, psychosis, bradycardia, insomnia, muscle contractions, hepatotoxicity, and even liver failure. Case reports and series are reporting that the ingredients present in the fat burners caused acute liver failure (ALF) and hepatic toxicity in many cases. Another contributing factor is the absence of regulations from the Food and Drug Administration on these products, leading to increased consumption and a higher risk of liver diseases among the population. This systematic review aims to attain a better understanding of the dietary supplements used globally to reduce weight and document the case reports/series of acute liver failure caused by the consumption of fat burners. Electronic databases like PubMed, Cochrane, Google Scholar, etc., will be systematically searched for relevant articles. Various websites of dietary products and brands that sell such supplements, Journals of Hepatology, National and international projects launched for ALF, and their reports, along with the review of grey literature, will also be done to get a better understanding of the topic. After discussing with the co-author, the selection and screening of the articles will be performed by the author. The studies will be selected based on the predefined inclusion and exclusion criteria. The case reports and case series that will be included in the final list of the studies will be assessed for methodological quality using the CARE guidelines. The results from this study will provide insights and a better understanding of fat burners. Since the supplements are easily available in the market without any restrictions on their sale, people are unaware of their adverse effects. The consumption of these supplements causes acute liver failure. Thus, this review will provide a platform for future larger studies to be conducted.

Keywords : acute liver failure, dietary supplements, fat burners, weight loss supplements

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