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Chapter 9

"DIETS FOR PREVENTING HEPATIC STEATOSIS"

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ABSTRACT

Hepatic steatosis is a lipid metabolic deregulation that affects millions of people worldwide and that may lead to more severe chronic liver diseases such as steatohepatitis, hepatic fibrosis, cirrhosis, or cancer. Surprisingly, the potential of diets, food groups, foods, and/or compounds to prevent hepatic steatosis prevalence has been only rarely studied in humans.

The reasons for this are unclear. Yet, plant- and animal-based foods contain several bioactive compounds that are able to limit excess fat deposits, mainly triglycerides; they are called lipotropes and are used in commercial nutritional complements such as fat burners or lipotropic complexes.

Although the most recognized lipotropes are choline, betaine, *myo*-inositol, and methionine, and to a lesser extent carnitine, many other food compounds have the ability to exert a lipotropic effect, e.g. some B vitamins, polyphenols, fiber, and organosulfur compounds.

However, while most studies have been carried out in animal models of steatosis, the few human studies that have been conducted were concerned mainly with beverages like coffee or tea and with isolated lipotropes like betaine, carnitine, and polyunsaturated fatty acids. Studies associating solid food groups or dietary patterns with hepatic steatosis have almost never been performed. Therefore, the main objectives of this chapter will be to examine the state-of-the art about human studies and lipotrope consumption, and to discuss the lipotropic potential of food products with emphasis on grain products that are both cheap and lipotrope-dense foods. The adequacy between real lipotrope consumption and human needs will also be discussed.

ABBREVIATIONS

ABF, animal-based food

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