

Functional foods for weight management: Dietary Fiber – a systematic review

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ABSTRACT

It has been estimated that more than 1.5 billion adults are overweight or obese worldwide [1], rendering obesity a global epidemic [2]. Obesity is associated with significant morbidity, including type 2 diabetes, cardiovascular disease, osteoarthritis and some cancers [3]. Thus, obesity is clearly a medical issue, its costs impacting heavily on health care systems in both developed and developing nations [4]. The combined impact of transmissible and chronic disease in the third world is particularly devastating to the very health care systems with fewest resources [5].

Because obesity has been identified as a major health issue, treating obesity is an important goal. However, weight loss management has proven notoriously difficult. It is well documented that reduced energy intake and increased energy expenditure may reduce body weight in the short term, but obesity relapse in the long term is anticipated [6]. In a study of overweight or obese US adults who weighed $\geq 10\%$ less than their maximum body weight the year prior to the survey (n=1310), 33.5% regained $> 5\%$ during that year [7].

Despite its somewhat unimpressive success rate, "lifestyle" weight management remains the first line intervention for obesity treatment [8]. Lifestyle weight management can be defined as interventions based on energy restriction (weight loss diet); increased energy output (exercise); and/or behavioral change (cognitive or behavior therapy). Functional foods have been explored as a tool for enhancing lifestyle weight management.

Functional foods evaluated for their efficacy as obesity interventions can be divided into two broad categories: 1) foods which suppress appetite and increase satiety; and 2) foods which enhance thermogenesis. The present review will focus on those foods thought to act by increasing satiety and suppressing appetite.

Key words: Obesity, weight loss, systematic review, dietary fiber