

ROLES OF DIETARY FIBRES IN THE PREVENTION OF NONCOMMUNICABLE DISEASES

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ABSTRACT

Dietary fibres are non-digestible carbohydrates (cellulose, hemicelluloses, pectins, gums and mucilages, β -glucans, lignin, etc.) with important physiological roles in the digestive tract, as well as beneficial effects in maintaining optimal weight and preventing obesity or in the prevention of noncommunicable diseases. The classification of dietary fibres is based on the physical properties such as water solubility, fermentability and viscosity, these characteristics determining the physiological and systemic effects of fibres.

Functional roles of dietary fibres in the intestinal tract include effects on digestion and absorption, gut motility, colonic microflora, and gastrointestinal immunity that contribute to the systemic effects of these food components.

The direct protective effect of dietary fibre in the etiology of coronary heart diseases is represented by decreasing the lipids levels in plasma (soluble / viscous dietary fibers lower total cholesterol and LDL-cholesterol, and possibly triglycerides). Dietary

fiber modifies insulin resistance by producing short chain fatty acids through colon fermentation, an useful mechanism in diabetes management and increase the bacterial conversion of bile acids, thus protecting the intestinal mucosa from prolonged contact with bile acids and other mutagens, an important mechanism in preventing the risk of cancer.

High fibre foods include whole grains, some fruits and vegetables, and dietary fibre can be considered a marker for these foods. The recommended daily intake of dietary fiber is 14 g fiber / 1,000 kcal / day, respectively 14-31 g fiber / day for children and 26-38 g fiber / day for adolescents and adults.

Knowing the many benefits of dietary fiber and the fact that the prevention of noncommunicable diseases begins from childhood, it is important that the high-fiber foods to be included in the daily diet of children from school age.

Keywords: **dietary fibre, functional fibre, high-fiber foods, noncommunicable diseases**

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