LIVER

Dietary links to NAFLD in nonobese patients

Increased dietary cholesterol and decreased dietary polyunsaturated fatty acids (PUFAs) may contribute to nonalcoholic fatty liver disease (NAFLD) in nonobese individuals, according to a new report.

NAFLD is commonly associated with obesity and nutritional intake is thought to have an important role in its development. NAFLD can also be present in nonobese individuals; however, how nutritional factors contribute to the disease in this group of patients is poorly understood.

Enjoji and colleagues assessed the nutritional intake of obese and nonobese patients with NAFLD to investigate whether differences in their nutritional intakes existed. Although total energy and carbohydrate intakes were significantly higher in obese patients than in nonobese patients, cholesterol intake was significantly increased in nonobese patients. Levels of PUFA intake were significantly reduced in nonobese patients compared with levels in patients who were obese.

The researchers suggest that these dietary differences may contribute to the development of NAFLD in nonobese individuals. PUFAs improve insulin resistance; reduced levels of dietary PUFAs might, therefore, adversely affect insulin homeostasis. Increased consumption of cholesterols might induce the *de novo* synthesis of fatty acids in hepatocytes, thereby contributing to disease development.

> “...these dietary differences may contribute to the development of NAFLD in nonobese individuals”

Although these findings remain to be validated, they identify a potential pathway by which NAFLD might develop in nonobese individuals. The researchers hope their results will provide new targets for the development of agents for the treatment of NAFLD.

Susan J. Allison

Original article Yasutake, K. *et al.* Nutritional investigation of non-obese patients with non-alcoholic fatty liver disease: the significance of dietary cholesterol. *Scand. J. Gastroenterol.* **44**, 471–477 (2009).