

Letter to the editor

Rapeseed oil does not cause allergic reactions

In their interesting study, Poikonen et al. (1) concluded that turnip rape and oilseed rape seem to cause allergic reactions in young children with atopic dermatitis. It is noteworthy that the study was carried out using crushed seeds of turnip rape and oilseed rape and not with rapeseed oil. However, the authors raise a question, whether biologically meaningful amounts of allergenic proteins are present in oilseed rape oils. Accordingly, a few clarifications should be made.

Crushed rapeseeds (containing both turnip rape and oilseed rape) contain approximately 39–44% oil, and 22–24% protein (2). When seeds are pressed or extracted to edible oil, called rapeseed oil, they go through a thorough purification process, which means that the final product is pure oil and thus free from allergy-inducing proteins. Crushed seeds are not used in foods as such, and so the real exposure to them is not likely. Thus, one should be very careful when suggesting oilseed rape to be a

food allergen, which can lead people to avoid rapeseed oil – with no real reason.

Rapeseed is the most commonly used oilseed plant in the Nordic countries. Current Nordic nutrition recommendations suggest that the intake of saturated fat should be limited to approximately 10% of the total energy intake (3). In practice, this means that monounsaturated and polyunsaturated (n-6 and n-3) fatty acids in margarines and vegetable oils should substitute saturated fat in diet. Regarding the risk of coronary heart disease, a healthy diet as regards the heart is recommended to include monounsaturated fats up to 20% of total calories, twice more than polyunsaturated and almost three times more than saturated fats (4). Rapeseed oil has an excellent fatty acid composition, and in addition to the monounsaturated fats it is a good source of essential polyunsaturated n-6 and n-3 fatty acids, which are needed, e.g. to prevent skin dryness. Moreover, the best low-density lipoprotein/high-density

lipoprotein cholesterol ratio is achieved by using rapeseed oil (5). It has been shown that early lifestyle-related factors and exposure to risk factors in childhood induces changes in arteries that contribute to the development of atherosclerosis in adulthood (6). Accordingly, considerable caution should be followed in drawing conclusions and interpreting the results into public. Vegetable oils are an essential part of the population-based recommended diet in general, and rapeseed oil should not be avoided – whether the person is suffering from atopic dermatitis or not.

Helena Gylling

*Professor of Clinical Nutrition,
Department of Clinical Nutrition,
University of Kuopio and
Kuopio University Hospital,
Finland.*

E-mail: helen.gylling@uku.fi

References

1. Poikonen S, Puumalainen TJ, Kautiainen H, Burri P, Palosuo T, Reunala T et al. Turnip rape and oilseed rape are new potential food allergens in children with atopic dermatitis. *Allergy* 2006;**61**:124–127.
2. Raisio plc. *Analysis Report 2005*, Finland, Raisio 2005.
3. Nordic Council of Ministers. *Nordic Nutrition Recommendations 2004*. Copenhagen, Denmark, 2004.
4. Expert panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Executive summary of the Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). *JAMA* 2001;**285**:2486–2497.
5. Pedersen A, Baumstark MW, Marckmann P, Gylling H, Sandström B. An olive oil-rich diet results in higher concentrations of LDL cholesterol and a higher number of LDL subfraction particles than rapeseed oil and sunflower oil diets. *J Lipid Res* 2000;**41**:1901–1911.
6. Viikari JS, Niinikoski H, Juonala M, Raitakari OT, Lagstrom H, Kaitosaari T, et al. Risk factors for coronary heart disease in children and young adults. *Acta Paediatr Suppl* 2004;**446**:34–42.