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Letter to the Editor

Dairy product subgroups and risk of type 2 diabetes

Ibsen *et al.*[1] conducted a prospective study to investigate the association between dairy product subgroups and subsequent risk of type 2 diabetes. The hazard ratio (HR) of low-fat yogurt products against whole-fat yogurt products for incident type 2 diabetes was 1·17 (95 % CI 1·06, 1·29). In addition, HR of whole-fat yogurt products against low-fat milk, whole-fat milk and buttermilk products for the incident type 2 diabetes were 0·89 (95 % CI 0·83, 0·96), 0·89 (95 % CI 0·82, 0·96) and 0·89 (95 % CI 0·81, 0·97), respectively. The authors concluded that intake of whole-fat yogurt products in place of low-fat yogurt products, low-fat milk, whole-fat milk and buttermilk were preventive nutrients for incident type 2 diabetes. I have some concerns about their study.

First, the authors recommended whole-fat yogurt products for the prevention of type 2 diabetes. In contrast, O'Connor *et al.*[2] conducted a nested case–cohort study to investigate the association between total dairy product intake, several types of dairy product intake and the risk of developing incident type 2 diabetes. Low-fat fermented dairy product intake, especially yoghurt intake, was inversely associated with incident type 2 diabetes, presenting an HR of 0·72. In addition, high-fat dairy products were not associated with incident type 2 diabetes. Although the study design differed, inconsistent results should be specified by further study.

Second, Guasch-Ferré *et al.*[3] also recognised that whole-fat yogurt intake was associated with a lower risk of type 2 diabetes, although the intake of animal fat was associated with higher incident type 2 diabetes. As the type of dietary fat had different risks for type 2 diabetes, the association between whole-fat yogurt products and lower incident type 2 diabetes should be analysed by a meta-analysis of prospective studies.

Finally, there is a report that the association of dairy products and incident prediabetes or diabetes varied by the type of dairy product and by the baseline glycaemic status[4], although there is an inverse dose–response relationship between the amount of high-fat dairy products and incident type 2 diabetes. From the biological mechanism, the intake of high fat from dairy products, not from meat, would be protective for type 2 diabetes[5].

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Tomoyuki Kawada

Department of Hygiene and Public Health, Nippon Medical School, Tokyo 113-8602, Japan

email kawada@nms.ac.jp

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