eczema development, and 18 with decreased risk of SCORAD $\geq 10$. Three of these variants were associated with a significant risk reduction in all 3 variables. Only 2 variants provided similar risk reductions in those who received HN019.

CONCLUSIONS. This study found that supplementation with Lactobacillus rhamnosus strain HN001 could reduce the risk of atopy and eczema development in subjects with TLR genetic variants typically associated with a higher risk of these diseases.

REVIEWER COMMENTS. This study highlights the growing interest in the use of probiotics for the prevention and treatment of atopic disorders. Several studies have shown reduction in eczema risk, but the mechanism in which probiotics accomplish this has been unknown. The authors demonstrate the role of probiotic interaction with TLR SNP variants, identifying a novel mechanism through which risk reduction occurs. The study also suggests that this intervention should begin early, during pregnancy, to have significant benefit.

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Maternal Consumption of Dairy Products, Calcium, and Vitamin D During Pregnancy and Infantile Allergic Disorders


PURPOSE OF THE STUDY. To assess the effect of maternal consumption during pregnancy of dairy foods, calcium, and vitamin D on allergic disorders in Japanese children aged 23 to 29 months.


METHODS. Data were obtained using the Kyushu Okinawa Maternal and Child Health Study (KOMCHS), a prospective prebirth cohort study. Participants returned the application form and questionnaires were obtained from patients at obstetric hospitals in Okinawa. Diet history of maternal intake was assessed from April 2007 to March 2008. The questionnaire, completed by the mother, also elicited maternal and paternal history of asthma, atopic dermatitis, and allergic rhinitis.

RESULTS. Infants with mothers in the highest quartile for dairy product ingestion during pregnancy had a significant reduction in the risk of infantile eczema. A reduced risk of physician-diagnosed infantile asthma was significantly associated with higher maternal intake of cheese during pregnancy. Among mothers with yogurt and calcium consumption during pregnancy, physician-diagnosed infantile atopic dermatitis was found to be significantly inversely diagnosed. Increased risk of eczema was seen among mothers with high Vitamin D intake during pregnancy.

CONCLUSIONS. Among offspring of mothers with high intake of total dairy products, cheese, yogurt, and calcium during pregnancy, the risk of infantile eczema, physician-diagnosed asthma, and physician-diagnosed atopic eczema may be reduced. There may be an increased risk of infantile eczema associated with higher maternal intake of vitamin D during pregnancy.

REVIEWER COMMENTS. Interest in the use of supplements and possible effects on atopy is growing. The significance of exposure during gestation is important in the long-term health of children, as seen in this study. This study raises interesting questions regarding exposure to foods via maternal intake during gestation and later development of atopic disease. Because the use of vitamin D supplementation is increasing, the authors remind us that there may be a risk of infantile eczema, and therefore further studies are warranted.

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Cesarean Section and Chronic Immune Disorders


PURPOSE OF THE STUDY. This study was designed to investigate the cesarean mode of delivery as a possible risk factor for the development of several chronic immune disorders.

STUDY POPULATION. All full-term children born between January 1973 through January 1, 2012, were identified through the Danish Medical Birth Registry. Two and a half million children were born in the selected period (1973–2012), and after excluding preterm births, stillbirths, births to mothers born before 1952, and individuals with missing data, 1.9 million children were included in the analysis.

METHODS. The authors compared cesarean versus vaginal delivery and the incidence of selected immune-mediated diseases: asthma, systemic connective tissue disorders, juvenile arthritis, inflammatory bowel disease (IBD), diabetes type 1, immunodeficiencies, celiac disease, leukemia, and psoriasis. Forearm or elbow fractures were used as negative control conditions. Confounding variables were chosen a priori as gender, parity, birth weight, attained age, calendar time (3-year groups), season of birth, maternal age, and maternal illness (eg, maternal diagnosis of the disease in question).
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