

Is Vitamin D intake in pregnancy linked to asthma and allergies in children? (*PLoS One. 2014;9:e99856*)

Epidemiological studies suggest an association between vitamin D intake during pregnancy and risk of asthma and allergy in the offspring. To investigate the interdependence of cord blood 25-hydroxy-vitamin D [25(OH)-Vitamin D] levels and investigator-diagnosed asthma and allergy-related conditions during preschool age, the cord blood 25(OH)-Vitamin D levels were measured in 257 children from the Copenhagen Prospective Studies on Asthma in Childhood (COPSAC) at-risk mother-child cohort. Troublesome lung symptoms, asthma, respiratory infections, allergic rhinitis and eczema, at age 0-7 yrs were diagnosed exclusively by the COPSAC pediatricians strictly adhering to predefined algorithms. Objective assessments of lung function and sensitization were performed repeatedly from birth. After adjusting for season of birth, deficient cord blood 25(OH)-Vitamin D level (<50 nmol/L) was associated with a 2.7-fold increased risk of recurrent troublesome lung symptoms, but showed no association with respiratory infections or asthma. There was no association between cord blood 25(OH)-Vitamin D level and lung function, sensitization, rhinitis or eczema.

Given the high rates of Vitamin D Deficiency in Indian population and the increasing incidence of allergies and asthma in children, this may be a potential way to reduce morbidity. However, the results need to be replicated in interventional studies.

Is fast food/Western diet really bad for us? (*Nutr J. 2014;13:61.doi: 10.1186/1475-2891-13-61*)

While numerous changes in human lifestyle constitute modern life, our diet has been gaining attention as a potential contributor to the increase in immune-mediated diseases. The Western diet is characterized by an over consumption and reduced variety of refined sugars, salt and saturated fat. The objective of this Review article was to detail the mechanisms for the Western diet's impact on immune function. The author reviewed the impacts and mechanisms of harm for our over-indulgence in sugar, salt, and fat, as well as the data outlining the impacts of artificial sweeteners, gluten, and genetically modified foods; attention was given to revealing where the literature on the immune impacts of macronutrients was limited to either animal or *in-vitro* models versus where human trials existed. Detailed attention was given to the dietary impact on the gut microbiome and the mechanisms by which our poor dietary choices were encoded into our gut, our genes, and were passed to our offspring. While today's modern diet may provide beneficial protection from micro- and macronutrient deficiencies, abundance of macronutrients that compose our diet may all lead to increased inflammation, reduced control of infection, increased rates of cancer, and increased risk for allergic and auto-inflammatory diseases.

Do probiotics help prevent eczema? (*Arch Dis Child. 2014;pii: archdischild-2013-305799*)

This randomized controlled trial evaluated a multistrain, high-dose probiotic in the prevention of eczema. Women from 36 weeks gestation and their infants younger than 6 months received daily, either the probiotic mix or placebo. The main outcome measured was physician-diagnosed eczema at age of 2 years. Infants were followed up by questionnaire. Clinical examination and skin prick tests to common allergens were done at 6 months and 2 years. The cumulative frequency of diagnosed eczema at 2 years was similar in the probiotic (34.1%) and placebo arms (32.4). The cumulative frequency of skin prick sensitivity at 2 years was reduced in the probiotic (10.5%) compared with the placebo arm (18.5%). The statistically significant differences between the arms were mainly in sensitization to cow's milk and hen's egg proteins at 6 months. Atopic eczema occurred in 9 out of 171 children in the probiotic arm and 21 out of 173 in the placebo arm. The study did not provide evidence that the probiotic either prevented eczema or reduced its severity. However, the probiotic seemed to prevent atopic sensitization to common food allergens, and so potentially reduce the incidence of atopic eczema in early childhood.

Does frenotomy improve breastfeeding difficulties in Infants with tongue tie? (*Pediatr Int. 2014;Jun 30:doi: 10.1111/ped.12429*)

The aim of this systematic review was to critically examine the existing literature regarding the efficacy of tongue-tie division in infants with ankyloglossia. An electronic literature search was systematically conducted from usual databases. The literature search yielded 4 randomized clinical trials and 12 observational studies for analysis. The quality of the literature was rated in regard to the two most important outcomes (sucking/latching and nipple pain) and five less important outcomes (milk supply/milk production, continuation of breastfeeding, weight gain, adverse events, and dyad distress). There was an overall moderate quality of evidence for the efficacy of frenotomy for the treatment of breastfeeding difficulties in infants with ankyloglossia. No major complications from frenotomy were reported.

These results need to be interpreted with caution in the Indian context where parents suspect tongue tie in virtually every child with speech delay or poor feeding. Here, in most cases there is no evidence of ankyloglossia. Many a times, frenotomy is done 'routinely' in children with feeding problems/ delayed speech, and this practice needs to be discouraged in favor of a moderate approach wherein only children with clinically significant tongue tie and feeding problems are operated.

GAURAV GUPTA
docgaurav@gmail.com