

Current food allergy trends in Asia Pacific

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Prevalence of allergic diseases varies substantially worldwide. In 1998, the International Study of Asthma and Allergies in Childhood (ISAAC) reported 20-fold to 60-fold differences in the prevalence of asthma, allergic rhinoconjunctivitis and atopic eczema symptoms, between collaborating centers worldwide.¹ Subsequently, comparison of ISAAC 1998 and 2001 survey data from Bangkok, Thailand, showed that the prevalence of these three major allergic diseases in children had significantly increased: asthma, relative risk (RR) =1.19 ($p < 0.001$); allergic rhinoconjunctivitis, RR =1.33 ($p < 0.0001$); and atopic eczema, RR =1.59 ($p < 0.0001$).²

Younger age-groups bear the greatest burden of food allergies. As with respiratory allergies, food allergies exhibit considerable heterogeneity in prevalence, trigger agents, clinical manifestations and risk factors across Asia. The prevalence of immunoglobulin E (IgE) mediated food allergy among children in Bangkok, Thailand, was estimated to be approximately 0.45%.³ The most common trigger foods among younger children (6 months–3 years) included cow milk and egg, while seafood, especially shrimp, was a major cause in older children (3–6 years). In a study of 3–7 year-olds in Chiang Mai, Thailand, the prevalence of IgE-mediated food allergy on oral food challenge (OFC) was 1.1%,⁴ with shrimp being the chief culprit. Interestingly, ant eggs were also implicated in causing severe reactions. The specific food allergies seen most commonly in Chinese infants are similar to those in Thailand; however, higher rates have been reported. Apparently healthy infants ($n = 497$), ages 0–12 months, attending routine health visits at the Children's Hospital of Chongqing Medical University had a skin-prick test and those who reacted were given an OFC; the results showed an overall prevalence of food allergy in this cohort of

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3.8%, with egg (2.5%) and cow milk (1.3%) being the most common allergens.⁵

There is evidence that patterns and prevalence of food allergies in Asia differ from those in other populations, possibly due to dietary differences. For example, the World Allergy Organization has identified cow milk protein allergy (CMPA) as a major problem in certain European countries, with epidemiological studies revealing challenge-confirmed CMPA prevalence of 1.9% in Finland, 2.16% in the Isle of Wight, United Kingdom, 2.22% in Denmark, 2.24% in the Netherlands, and 4.9% in Norway.⁶ Retrospective analysis of pediatric records in an Australian Capital Territory specialist allergy practice, showed a consistent rise in the incidence of food allergies among children below age 5 years. Nearly half of all the children referred, developed food allergy over a 12-year period (1995–2006), with peanut, egg, cow milk and cashew nut being the most commonly reported allergenic foods.⁷ During the same period, there was a 12-fold increase (from 11 to 138) in the number of diagnosed patients and food-anaphylaxis-related hospitalization rates also increased. Increased incidence of hypersensitivity to peanut was likewise observed in the Isle of Wight population over 10 years from 1986–1996.⁸ Although less common in Asia, the incidence of peanut allergy has also been observed to be increasing.

Rising prevalence of food allergies signifies an equivalent increase in unmet healthcare needs. Addressing these problems requires comprehensive epidemiological and socioeconomic studies to ascertain the true magnitude of the burden and impacts of food allergies in Asia. It is also important to have regionally-relevant and pragmatic guidelines for diagnosis and treatment that address specific

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needs of individual patients from different geographic locales and ethnicities. These goals cannot be achieved without collaborative research on disease causation and management.

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