

Current Research Trends in Asthma

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The prevalence of asthma has increased in Developed countries over the past 40-50 years and similar trends are emerging in Developing countries, especially as they adopt Western ways. However, several lines of evidence are emerging to suggest that prevalence of asthma has reached a plateau in many Developed countries, including Australia. One explanation for this may be that our population has reached its ‘genetic potential’, in that all children who are genetically predisposed to developing asthma now do so. Epidemiological studies in different parts of the world suggest that different factors may underlie the development of asthma. While atopy is a common risk factor in Developed countries, it may be much less important in Developing countries. The protective role of early life exposure to animals has received much recent attention but the mechanisms underlying these effects remain obscure. Birth cohort studies continue to provide valuable information about environmental factors that either increase or decrease the risk of developing asthma. However, we still have much to learn, especially when it comes to giving specific advice to prospective parents with a family history of asthma.

New trends in asthma research include pharmacogenomics and pursuit of primary prevention strategies. The idea that ‘one treatment suits all’ has long passed and new research is beginning to provide some reasons why. However, there is a long way to go before this research will impact on treatment prescription for individual patients with asthma. Several strategies aimed at the primary prevention of asthma have been mooted. Recent evidence firmly suggests that allergen avoidance in early life is not a successful strategy, with low-dose allergen exposure proving to be a risk for allergic sensitization. Pharmacological prevention with anti-histamines has been shown to be unsuccessful in preventing the development of asthma in high risk children. We are currently trialling a different approach. We are attempting to mimic the natural development of immunological tolerance to inhaled allergens using an immunophylactic approach. Time will tell whether this is any more successful than current strategies.