Correspondence

Reply

To the Editor:

We thank Dr Hoekstra[1] for his interest in our article[2] and for providing us with the opportunity to clarify some important questions. The early detection of atopy is indeed important. All of the infants in our study were at high risk due to their parental history, and we performed skin prick tests at 6 months of age. We classified lower respiratory infections as being severe only if they were associated with wheeze or fever (>38°C for at least 24 hours). The relationship between respiratory infections and the subsequent development of asthma is complex and conflicting. Several studies have reported inverse relationships between larger family size and day-care attendance with hay fever, asthma, and wheezing, and the authors have hypothesized that these protective effects are modulated through increased early postnatal respiratory infections acquired from other children. We have also reported a protective effect of 1 or 2 upper respiratory infections in the first year for asthma at 6 years of age in a community birth cohort, but 1 or more wheezy lower respiratory infections increased the asthma risk in the same cohort.[3] The majority of these studies, including our own, have relied on parental recall on the number of infections their children have experienced, and few details are available on type or severity of these infections. It is likely the majority of these infections were of a mild, self-limiting nature.

Other studies of infants hospitalized with severe bronchiolitis have reported increased risk of subsequent asthma and persistent wheeze.[4] In our prospective community study, we documented the occurrence as well as the severity of all infections the children experienced in infancy and reduced recall bias through close follow-up of all episodes of infection. We were thus able to report that it is the concurrent occurrence of severe wheezy or febrile lower respiratory infections with atopy that was associated with the adverse outcomes of persistent asthma. Although it is probably not advisable or possible to prevent children from exposure to all types of respiratory infections, it may be prudent to advise parents of young babies to reduce the severity of respiratory infections through simple hygienic measures, breast-feeding, and immunization. In addition, infants should not be exposed to environmental tobacco smoke, and women should be encouraged not to smoke during pregnancy.

This study highlights the need to develop effective anti-inflammatory measures to shield the developing airways of young children from the deleterious effects of viral or atopy induced airway inflammation in early childhood as an effective strategy to prevent later asthma.

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