

The Association Between Respiratory Syncytial Virus Infection and the Development of Childhood Asthma

A Systematic Review of the Literature

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Background: The relation between early respiratory syncytial virus (RSV) infection and later emergence of episodes of wheezing/asthma remains a subject of debate. We carried out a systematic review of studies of the association between RSV infection in the first 36 months of life and the subsequent development of asthma/bronchial hyperreactivity.

Methods: A literature search for original studies on RSV respiratory infection published in English or Spanish over the last 21 years was conducted in the bibliographic databases Medline, Embase, and Índice Médico Español, and in the Cochrane library. Articles were included if they described original studies of confirmed RSV infection in children under 3 years of age, and had defined outcome variables. The methodologic quality of articles included in the review was evaluated according to the Hadorn criteria.

Results: The review included 12 original articles that respond to the research question. The studies evaluated showed that RSV lower respiratory tract infection is associated with an increased risk for subsequent development of asthma/recurrent wheezing, and that this association becomes progressively smaller with increasing age.

Conclusion: On the basis of this systematic review of the literature, it can be concluded that a significant association exists between RSV infection in childhood and the long-term development of subsequent episodes of recurrent wheezing or asthma. However, the methodologic quality of the articles evaluated is limited, and hence additional studies are needed, ideally, with specific therapeutic interventions aimed at reducing RSV replication.

Key Words: respiratory syncytial virus, asthma, bronchiolitis, infants

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