Abstract

We assessed whether any household dust reduction intervention has the effect of increasing or decreasing the development or severity of atopic disease. Electronic searches on household intervention and atopic disease were conducted in 2007 in EMBASE, MEDLINE, and the Cochrane Central Register of Controlled Trials. We included randomized controlled trials comparing asthma outcomes in a household intervention group with either placebo intervention or no intervention. Meta-analyses on the prevention studies found that the interventions made no difference to the onset of wheeze but made a significant reduction in physician-diagnosed asthma. Meta-analysis of lung function outcomes indicated no improvement due to the interventions but found a reduction in symptom days. Qualitatively, health care was used less in those receiving interventions. However, in one study that compared intervention, placebo, and control arms, the reduction in health care use was similar in the placebo and intervention arms. This review suggests that there is not sufficient evidence to suggest implementing hygiene measures in an attempt to improve outcomes in existing atopic disease, but interventions from birth in those at high risk of atopy are useful in preventing diagnosed asthma but not parental-reported wheeze.

Keywords

Asthma, Atopy, Meta-analysis, Randomized Controlled Trial, Systematic review