



American Academy of Pediatrics Study

Effects of HEPA Air Cleaners on Unscheduled (Asthma Related) Hospital Visits for Children Exposed to Secondhand Tobacco Smoke

Over the years at Austin, we have been involved in extensive research to find new ways to eliminate air borne pollutants and help those suffering from various respiratory diseases. So when we were given the opportunity to supply the air cleaners for a study carried out by the prestigious American Academy Of Pediatrics, we saw a chance to increase our understanding of the disease and help the many thousands of American children that are living with it.

Today a staggering 24 million Americans suffer from asthma and nearly half of those are children. It is generally thought the main factors that contribute to asthma are a combination of genetics and our environment. Environmental factors include dust mites, pollution, pet dander, molds, chemicals and tobacco smoke.

Medications such as inhalers and steroids are used in part, to treat the condition. However, sufferers must also avoid these environmental triggers, which is not always easy to do.

In a unique study carried out by the *American Academy of Pediatrics*, a group of children diagnosed with asthma and who are regularly exposed to second hand tobacco smoke (SHS) were monitored over a 12-month period. The aim of the study was to measure the effects of using an Austin HEPA air cleaner in the children's home environment, with a view to reducing the number of unscheduled hospital visits.

Previous studies have revealed that children exposed to SHS are 1.5 times more likely to develop asthma than children in smoke free homes. Consequently, a remarkable 130,000 children in the US have asthma as a result of SHS. Furthermore, exposure to SHS can trigger asthmatic symptoms such as wheezing, coughing, chest tightness and shortness of breath.

The researchers monitored 225 children aged between 6 and 12, for a 12-month period. The children were split into 2 groups, each child in the first group was assigned 2 Austin Air HEPA air cleaners. Our air cleaners are certified to remove 99.97% of all air borne particles over 0.3 microns (a particle of 10 microns is invisible to the naked eye). The advanced filter technology combines Medical Grade HEPA and HEGA Carbon Cloth (High Efficiency Gas Absorption).

Each child in the second group was assigned 2 identical air cleaners but with non HEPA filters, containing only a basic pre-filter cloth. The assignment of the machines was completely random and no one in the research team or the study group knew who had which machine. The air cleaners were to be run in the bedroom at night and in the main family room during the day. Each air cleaner was equipped with a monitor to ensure that they were run for a sufficient length of time.

The objective of the study was to establish whether asthma related unscheduled hospital visits could be reduced when using HEPA filtration at home. The results showed a significant difference between the 2 groups. Over a 12-month period, the number of visits to the emergency room for the group using HEPA filtration was reduced by a remarkable 18.5%, confirming what we at Austin have known for many years.

By improving the quality of air for our customers and specifically those with severe respiratory problems, we can help to alleviate many of the symptoms associated with diseases such as asthma.

This trial is the first of its kind. Despite the fact that the cause of asthma for many thousands of children can be attributed to SHS exposure, no previous trials have studied the use of HEPA air cleaners as a treatment for children exclusively. And no trials involving HEPA air cleaners have studied children with asthma in environments where there is SHS.

The results of this study suggest that by using an Austin Air HEPA air cleaner, the lives of thousands of children can be changed. By using an air cleaner at home and improving indoor air quality, up to 18.5% of emergency room visits can be completely eliminated. Furthermore, by reducing the need for emergency treatment, we can potentially reduce the number of asthma related deaths in the US today.