

by Amy Winter

Eating apples may do more than keep the doctor away.

A study published in *Thorax Online* states that mothers who eat apples during pregnancy might reduce the chances of their children developing asthma later in life.

In the study, researchers from the Netherlands and Scotland followed the food intake of approximately 2,000 pregnant women. The researchers then looked at the children's airway development five years later. They found a lower risk of childhood asthma in the children whose mothers consumed apples during their pregnancy.

"The present study suggests beneficial associations between maternal apple intake during pregnancy and wheeze and asthma at age five years," the study stated.

Asthma, which is an inflammatory condition in the bronchial airways, is the most prevalent chronic condition associated with childhood, according to the American Lung Association. In 2004, approximately 4 million children experienced an asthma attack, while others suffered from undiagnosed or "hidden" asthma. Asthma is considered the third most common cause for children being hospitalized, which leads to many student absences, according to the National Center for Health Statistics.

Named after the Greek word for panting, asthma occurs when the functioning of the airways becomes over-reactive. This causes swelling, muscle contraction and an increase in mucus production. These problems can lead to tightness in the chest, coughing, wheezing and even shortness of breath, according to the Lung Association. Several risk factors may be responsible for the onset of asthma. The Web site medicinenet.com list the factors as:

- A family history of asthma.

- Regular respiratory infections.

- Low birth weight.

- Contact with tobacco smoke before and/or after birth
- Allergies.

According to medicinenet.com, the symptoms for parents to look for are:

- Rapid breathing.
- Chest pain.
- Wheezing.
- Feeling tired.
- Common coughing spells.

There are no clear answers to why more children are getting asthma; however, some experts believe children are in contact with more allergens and cigarette smoke. The American Lung Association pinpoints five main reasons that trigger asthma symptoms and irritate the lung tissues:

- Exercise: Running can start an asthma attack in more than 80 percent of children.
- Infections: Respiratory infections, such as the flu.
- Allergy: indoor inhalants (dust, feathers, mold, pets) or outdoor inhalants (molds and pollens).
- Irritants: cigarette smoke, air pollution, paint fumes and aerosol sprays.

- Weather affects outdoor inhalants (wind may blow allergens).
- Emotional stress: asthma attacks may occur after crying, laughing or yelling.

The study looked at medical evaluations for asthma when the children reached the age of five.

Asthma can be detected in children through symptoms, medical history and a physical exam. During the exam, the doctor listens to the child's heart and lungs. If needed, children may undergo a chest X-ray and a test of the lungs. These tests calculate the amount of air in the lungs and how fast it is exhaled. This determines the severity of the asthma.

Asthma is not curable but can be controlled through medication. Parents will most likely give their child medicine using a home nebulizer or breathing machine, according to medicinenet.com. The child inhales the medicine by breathing through a face mask.

Apple intake was the key connection between prenatal food and the drop in asthma risk in the children.

According to researchers, their findings "suggest that an apple specific effect, possibly because of its phytochemical content, such as flavonoids."

The phytochemicals or plant chemicals found in an apple's skin are known as flavonoids and polyphenols. These phytochemicals have been found to prevent certain cancers and heart disease, according to healthyeatingclub.org

Apples, of course, are not only beneficial for children with asthma-related problems.

The researchers cited other studies on apples that found the "intake of apples as a significant source of flavonoids and other polyphenols (which) has been beneficially associated with asthma, bronchial hypersensitivity and lung function in adults."