

Pediatric Asthma: Help Kids Breathe Easier

Dr. Tanvi Chawla

How common is it?

Asthma is one of the most common chronic diseases of childhood, effecting approximately one in four primary school children in Australia and over 6 million children worldwide.

In children, asthma is the leading cause of emergency hospitalization and is the number one chronic condition causing elementary school absenteeism. It has the potential to appear suddenly with severe symptoms and due to this, it is essential that asthma be diagnosed and treated correctly.

What are the Contributing Factors?

The development of asthma is multifactorial and based on a number of genetic & environmental factors. The following is a list of factors that play an important role in the development of asthma.

Allergen exposure: it is well known that sensitivity to environmental allergens (eg. pollen, dust mite & pet hair) predisposes children to the development of asthma.

Diet: It has been demonstrated through scientific studies that diets high in fat and low in omega 3 fatty acids and Vitamin C & E are associated with the progression of asthma.

Lack of exercise: Children with low levels of exercise are prone to the occurrence of regular respiratory distress. Exercise is essential to maintain the healthy structure of the respiratory system as it stretches the bronchial tubes of the lungs which helps in reducing resistance to breathing.

Pre-natal care: Recent studies have also demonstrated that factors such as young maternal age, poor maternal nutrition, cesarean delivery, prematurity, low birth weight, and lack of breastfeeding all contribute to the likelihood of developing asthma.

What Happens during an Asthma attack?

The lungs of an asthmatic is highly sensitive and reacts to allergens such as pollen, inhaled irritants, strong odors, fumes or even medication (eg. Aspirin). When exposed to these allergens, the body produces an inflammatory response. This response occurs in a three step process and involves the narrowing of the airways which results in the reduced capacity of the lungs to breathe.

Initially, the muscles surrounding the airways tighten & the lining of the airways begin to swell. This is followed by mucous production which further narrows and obstructs the airways, making it difficult for the child's lungs to breathe. Children are more susceptible to asthma as their airways are much narrower than those of adults and consequently only a small trigger is required to produce a profound response.

Symptoms

The symptoms are particularly worse at night (early morning hours) or after exercise and include the following:

- Chest tightness
- Difficulty breathing
- Wheezing
- Rapid breathing & heart rate
- Visible use of neck muscles during breathing

Asthmatic patients are typically asymptomatic in between attacks. Generally, the symptoms have a circadian rhythm and worsen during sleep, typically around 4am in the morning.



Danger Signs (IMMEDIATELY CALL AN AMBULANCE)

Symptoms worsening at a rapid rate

Wheezing, chest tightness, shortness of breath even after taking relieving medication.

Severe anxiety due to shortness of breath

Severe shortness of breath, blue lips or inability to speak.

Decreased level of alertness, such as severe drowsiness or confusion

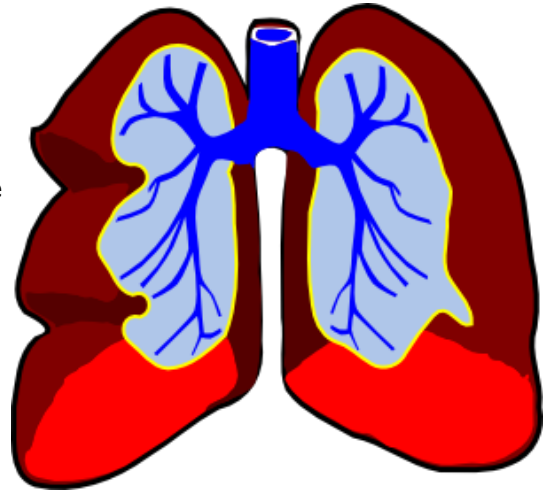
Pediatric Asthma: Osteopathic Assistance

Dr. Tanvi Chawla

How can Osteopathy Help?

Although there is currently no cure for asthma, appropriate treatment and care can reduce the associated complication and make it easier to live a healthy active life. While Osteopaths appreciate the role of **anti-inflammatory medication** in the management of **asthma**, they also strongly believe in addressing the musculoskeletal component of the body. Osteopaths work in conjunction with other health care professionals with the common goal of producing the best outcome possible for your child.

It is important to remember that breathing depends on the complex interplay between the respiratory and musculoskeletal systems. It not only involves the upper & lower respiratory tract, but also the rib cage, sternum, clavicles, spine and the diaphragm. The integrity of the muscles attached to these skeletal structures and the extensibility of the surrounding fascia, ligaments & tendons also play a crucial role in this process of breathing.



Children with asthma often have labored breathing during an asthma attack. This places a significant amount of stress not only on the lungs but also surrounding muscles & joints, especially the diaphragm, rib cage & neck muscles. Osteopathy utilizes a holistic approach to address these components to improve the chest's bio-mechanics & mobility. Osteopathy also works on improving the circulation, nerve supply and lymphatic drainage of the airways and lungs. The primary aim of Osteopathic treatment is to alleviate the additional physical stresses placed on the body from the recurring attacks of asthma and make breathing easier for your child.

Self Management

In between treatments remember the following key points:

Avoid allergens: Known allergies and triggers such as pollen, dust mites, pet hair, strong odors, cold temperatures, high humidity & intense exercise, should be avoided.

Remain hydrated: It is very essential for asthmatic children to remain hydrated, as it will assist in reducing the mucous build up in the upper respiratory tract and therefore assist in alleviating the symptoms.

Remain active: Children with asthma should be physically active and encouraged to participate in sporting activities & exercises. However, the intensity should be regulated and activities which cause the symptoms associated with asthma should be avoided.

Follow exercises: Breathing exercises learnt during treatment should be encouraged on a regular basis to enhance the integrity of the lungs & diaphragm.

If you would like to assist your child in management of Asthma, you might like to visit **Dr Tanvi Chawla** at our Vitalchi Wellness clinic in Blackburn or call 03 9894 0014 for an appointment.

Reference

DiGiovanna, EL., Schiowitz, S. & Dowling, DJ. (2004), An osteopathic APPROACH TO DIAGNOSIS AND TREATMENT 3RD Edition. Lippincott, Williams and Wilkins: Philadelphia

Ward, R.C. (1997) Foundations for Osteopathic Medicine. Williams and Wilkins, Baltimore.

<http://emedicine.medscape.com/article/1000997-overview>

<http://www.nlm.nih.gov/medlineplus/ency/article/000990.htm>

<http://www.merckmanuals.com/professional/sec05/ch048/ch048a.html>

<http://www.health.gov.au/internet/main/publishing.nsf/Content/health-mediarel-yr1999-mw-hmc8.htm>

http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_WhatIs.html

<http://www.everydayhero.com.au/event/stayinyourpis201>

<http://coeh.berkeley.edu/ucpehsu/Asthma.htm>