



“Psychology Works” Fact Sheet: Asthma in Children

What is Asthma?

Asthma is a medical condition that involves inflammation of the airway in the lungs. Asthma currently has no cure and is therefore considered a chronic condition. While some children can outgrow asthmatic symptoms, asthma often requires long-term management. The primary symptom of asthma is recurrent cough, and it can also include symptoms such as shortness of breath, wheezing, or chest tightness. It is the most common chronic condition around the world affecting children’s lower airway.

Asthma affects about 8.3% of children (Akinbami et al., 2016). Boys are more likely to have asthma up until adolescence (i.e., 11-12 years old), but girls are more likely to have it during adolescence and into adulthood. Several factors exist that might put a child at a higher risk of developing asthma or experiencing asthmatic symptoms. Primary risk factors can include obesity, being exposed to smoke or alcohol during pregnancy or after birth, being around other chemicals or toxins in the environment (e.g., pesticides), living in a dusty residence or area, or having a history of respiratory infections. There is also a genetic component to asthma: 35-95% of children with asthma will also have a parent with the condition. In fact, a primary factor of asthma is the genetic tendency to develop allergic disease. Finally, children living in poverty and residing in certain areas of Canada are more likely to have asthma. This indicates that many types of privilege (such as socioeconomic, geographic, and racial privilege) can play a role in asthma, and highlights that marginalized groups typically face asthma at higher rates.

If your child is suspected of having asthma, a medical doctor may confirm a diagnosis by using a simple breathing test like “spirometry”, where your child would be asked to exhale into a sensor after taking a deep breath in. An asthma diagnosis is usually based on a decrease or obstruction of airflow, and the diagnosis can usually be confirmed if symptoms improve after the use of a bronchodilator. Bronchodilators and other asthma treatments are explained in the next section.

How is Asthma Treated?

Treatment for asthma in children is usually based on how severe symptoms are. Your doctor may suggest a bronchodilator (i.e., “reliever puffer”) as the first treatment approach, to help relax muscles in the lungs and widen the airway. For children whose lungs seem to function pretty well but who are dealing with occasional daytime symptoms, reliever puffers like salbutamol are often the only necessary treatment. These puffers are designed to provide a quick relief of symptoms.

For children with more long-term symptoms, inhaled steroids (i.e., “controller puffer”) like mometasone might be suggested to help control symptoms. Doctors generally work with families and children to find the best dose of medication.





If bronchodilators or inhaled steroids are not effective at any dose, doctors might search for other diagnoses because bronchodilators or inhaled steroids have been found to work for most children with asthma. Other issues that might cause asthma-like symptoms are allergies, sinusitis (an inflammation of the sinuses), acid reflux, physical activity (e.g., running or playing sports), reactions to certain fungi, or problems with vocal chords.

For severe cases of asthma, a doctor might prescribe medication that can be taken orally, often combined with bronchodilators or inhaled steroids. These medications might involve oral corticosteroids like prednisone, or alternate medications that are designed to reduce inflammation in the airway. Doctors might suggest medications given by injection (e.g., allergen immunotherapy or omalizumab) in cases where other treatments are not successful or not recommended.

In addition to medical treatments, psychological interventions for asthma may be suggested for many reasons. For example, certain situations may "trigger" asthma symptoms, such as intense exercise or being in cold weather for too long. So, psychological treatment may involve recommendations about how to identify these triggers and limit them to manage symptoms, while still finding ways to engage in enjoyable activities. Taken together, management for asthma may involve a combination of medical and psychological interventions which can often be difficult to implement and navigate for families.

What Can Psychologists Do to Help?

Psychologists can help with several aspects of asthma management, including those described below:

a. Perceiving Symptoms

Children or adolescents may sometimes have difficulty describing their symptoms or how their medications are helping to control symptoms. Approximately 15-60% of asthma patients struggle to describe symptoms (Janssens et al., 2009), which can lead to an overuse of medication.

Psychologists can help children and adolescents learn ways to identify and describe their symptoms comfortably. This is often accomplished by helping focus increased attention on bodily sensations and recognizing situations in which symptoms may present themselves. Psychologists can similarly help children recognize "trigger" situations, in which symptoms might be more likely to arise (e.g., in cold weather). By optimizing the way that children can describe symptoms and recognize triggers, management of asthma can be improved.

b. Coping

Asthma is often a stressful illness that requires tough adjustments in psychological, emotional, and behavioural areas. Psychologists can help children and families by discussing strategies that could help them cope with asthma.

Some situations are particularly challenging for children and families with asthma, such as moving to a new school or switching to a new medication. A psychologist can work with families to promote helpful





coping strategies such as problem-solving rather than unhelpful strategies such as ignoring or denying issues. Research has shown that using helpful coping styles can have a positive effect on children's quality of life (Braido et al., 2012).

c. Adhering to Treatment

There are many factors that can get in the way of children and families adhering to the treatments that are prescribed or suggested by healthcare providers. Some of these interfering factors can include misunderstanding how to take medications, embarrassment about taking the medications in public, denial surrounding the illness, difficulties incorporating treatments into a daily schedule, forgetfulness, or lack of knowledge about the importance of management.

Psychologists can help children and families identify barriers that might be getting in the way of adhering to treatments. For example, they can share relevant strategies and educate families about the importance of taking medication and structuring the day to incorporate treatment activities. Psychologists can then help children and families make practical changes to help them adhere to medications.

Adherence can become particularly challenging when children are becoming more independent and beginning to take their medications themselves. Many parents are highly motivated to help their children adhere to their medications, but it can often be difficult to translate responsibilities from parent to child during this period of increasing independence. Psychologists can focus on areas such as motivation and setting reminders to help older children remain adherent as they become more independent.

d. Parent-Guided Strategies

Parenting a child with asthma can be particularly challenging, especially since children with asthma have been shown to demonstrate more emotional and behavioural challenges than their peers without asthma. Parents who have children with asthma may report higher levels of stress or psychological distress as a result.

A psychologist can work with caregivers (either alone or together) to troubleshoot issues related to caregiving such as managing stress, regulating emotions, coping effectively, optimizing parenting approaches, improving the ways parents and other family member interact with children, and helping with adherence to medications.

e. Navigating Anxiety Associated with Asthma

Children with anxiety symptoms or anxiety disorders can face particular challenges when navigating their asthma. A primary source of distress among children higher in anxiety involves beginning to associate anxiety-related shortness of breath with asthma.





Psychologists can help children and families recognize that shortness of breath is also a common symptom of anxiety, and they can help children develop strategies to distinguish between, and think differently about, the situations that might be inducing breathing problems due to anxiety versus asthma. They might also discuss ways to regulate worry (e.g., relaxation exercises) that arises in the face of true asthma symptoms.

What Types of Interventions Do Psychologists Use to Help with Asthma?

Psychologists might use several different types of therapies or techniques when providing help for asthma-related concerns. Two common types of therapy are described below.

a. Cognitive-Behavioural Therapy (CBT)

Cognitive-Behavioural Therapy (CBT) is a psychological treatment approach that uses strategies focused on thoughts, feelings, and behaviours. Many of the strategies mentioned on this fact sheet may be incorporated into a CBT plan to address difficulties with asthma. For example, a CBT plan often involves education about the illness, identifying behaviours that interfere with treatment, and addressing anxiety associated with symptoms.

With regard to the "cognitive" piece of CBT, psychologists can help by engaging children and families in discussions about thoughts that might interfere with their management of asthma. For example, thoughts about medication being "unimportant", assumptions about what children believe their peers think about asthma medications, or parental fears about children taking medications incorrectly can all interfere with optimal asthma management. Psychologists using a CBT model will typically help children and families improve their functioning by helping them notice unhelpful thoughts about asthma, "challenge" these thoughts, and engage in behaviours to test and support more helpful thoughts.

b. Acceptance and Commitment Therapy (ACT)

Acceptance and Commitment Therapy (ACT) focuses on acceptance and mindfulness strategies that can help people engage in behaviours connected to their values.

Psychologists who use ACT can help parents to be aware of their thoughts and feelings surrounding asthma, to accept and adapt to challenging situations, and to take actions that allow them to help their children in a value-driven way.

ACT has also been found to be useful with adolescents directly. Psychologists can work with adolescents in areas similar to parents: increasing awareness of thoughts and feelings, heightening acceptance and flexibility in asthma-related situations, and making health-related decisions that are linked to their values.





Are Psychological Interventions Effective?

The short answer is, yes; psychological interventions are effective for asthma! Research has demonstrated that psychological interventions involving educational, cognitive, behavioural, and family components are beneficial for children and adolescents (Oland et al., 2017). These interventions have been shown to be helpful in homes, school settings, and medical settings.

However, it is worth noting that most of the research conducted on childhood asthma has been conducted in unique ways. For example, studies have often included children with different levels of asthma or have tested the level of children's symptoms using different tools. This has made each set of research findings quite different from one another. A large review of psychological interventions for childhood asthma was proposed in September 2019 (Sharrad et al., 2019), so it is likely that findings from this review will emerge to shed further light on asthma management.

Even though psychological interventions have been shown to be effective (and often very important for improving outcomes for families), since medical management is the primary treatment for asthma, families should contact a medical doctor if they suspect a diagnosis of asthma or believe there are problems with the current medical management of a child's asthma.

Helpful Resources?

Visit these websites for useful asthma resources:

1. Asthma Canada: <https://asthma.ca/>
2. The Canadian Lung Association: <https://www.lung.ca/>
3. The Children's Asthma Education Centre: <http://asthma-education.com/>
4. You Can Control Your Asthma: <https://cumming.ucalgary.ca/research/icancontrolasthma>
5. The Canadian Thoracic Society: <https://cts-sct.ca/guideline-library/>

For More Information:

You can consult with a registered psychologist to find out if psychological interventions might be of help to you. Provincial, territorial and some municipal associations of psychology often maintain referral services. For the names and coordinates of provincial and territorial associations of psychology, go to <http://www.cpa.ca/public/whatisapsychologist/PTassociations/>.

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Your opinion matters! Please contact us with any questions or comments about any of the *Psychology Works* Fact Sheets: factsheets@cpa.ca

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