

# Asthma

## Why is it getting more common?

As a pharmacist I have seen much anecdotal evidence and many studies to show that asthma is getting more common in Ireland and Western countries. I often get asked by customers in the pharmacy why this is the case. As an asthma sufferer myself, I decided to look into it more. However, for those who suffer from asthma or an interest in it, I have a far more detailed article on Asthma (and its treatment) on the Whelehans website or simply ask in Whelehans for a copy. The following article simply deals with reasons why asthma is getting more common.

### What is asthma?

Asthma is a long-term condition that can cause a cough, wheezing and breathlessness. The severity of the symptoms varies from person to person. In Ireland, respiratory diseases are the third commonest long-term illness group after cardiovascular and musculoskeletal diseases, with asthma being the second most common single condition reported.

### Causes

With asthma, the airways become over-sensitive and react to things that would normally not cause a problem, such as cold air or dust. Muscles around the wall of the airway tighten up, making it narrow and difficult for the air to flow in and out. The lining of the airways swell and sticky mucus is produced. This makes it difficult for air to move in and out and why the chest has to work so much. Tightening of muscle around the airways can happen quickly and is the most common cause of mild asthma. The tightening of muscle can be relieved with a reliever inhaler (usually a blue inhaler like a Ventolin<sup>®</sup> inhaler). However, the swelling and build-up of mucus happen more slowly and need a different treatment. This takes longer to clear up and is a serious problem in moderate to severe asthma.

### Facts about asthma

The exact cause of asthma is not known. According to the Asthma Insights and Realities in Ireland (AIRI) report in 2002, 470,000 people have asthma in Ireland meaning approximately one in 8 of the population suffer from it. Ireland has the fourth highest prevalence of asthma in the world after Australia, New Zealand and the UK. The Irish Pharmaceutical Health Care Association (IPHA) reported there were 600,000 GP consultations for asthma in 1997 and it is likely this figure has risen since.

There is a strong genetic link. If a parent has asthma, the risk of their child getting it doubles. If both parents have it, it doubles again. And, if one in a family has asthma, the risk of the other children getting it increases, but it is not known by how much. In adults, it is more common in women than men. Asthma can start at any age, but most commonly starts in childhood. Adult onset asthma may develop after a respiratory tract infection. In many cases, asthma disappears during teenage years.

Many asthma sufferers also suffer from other allergic conditions such as hayfever, eczema and hives. Asthmatics who also have hayfever find that their symptoms get worse during hayfever symptoms. In fact, research by allergy UK found that 69% of asthmatics who also had hayfever found their symptoms worsened during hayfever season. Asthma has got more common in recent years. The incidence of asthma among 13 and 14 year olds has increased by 40% from 1995 to 2003. The exact reason for this is not known. Many aspects of modern living such as changes in housing, diet and a more sterile home environment may have contributed to the rise in asthma over recent decades.

## Facts about asthma in children

Asthma in children is more common in boys than girls. Children who develop asthma at a very young age are more likely to 'grow out' of the condition as they get older. If asthma is moderate to severe during childhood, it is more likely to continue into adulthood.

During the teenage years, the symptoms of asthma disappear in about three-quarters of all children with the condition.

Known risk factors for the development of asthma in children include:

- a family history of asthma, or other related allergic conditions (known as atopic conditions) such as eczema, hayfever or allergic conjunctivitis
- developing another atopic condition
- being exposed to tobacco smoke, particularly if the child's mother smoked during pregnancy
- being born prematurely
- being born with a low birth weight

A child with asthma should be taught to recognise the initial symptoms of an asthma attack, how they should respond, and when they should seek medical attention. Some children are less likely to develop asthma than others. Studies have found those children who are given fewer antibiotics and those who live on or near farms have less asthma than children with different backgrounds. Medical researchers explain this with the 'hygiene hypothesis'.

## The 'hygiene hypothesis'

The 'hygiene hypothesis' is a theory that lack of exposure in early childhood to infectious agents means that the child's immune system has not been activated sufficiently during childhood. This lack of exposure is down to our super clean world of modern living including anti-bacterial washes, antibiotics and general sterility where children are not exposed to germs in a similar manner to previous generations of children. The theory is that because the immune system is "not activated" during childhood; this leads to the immune system becoming over sensitive to common substances such as pollen, dust-mite, animal fur; leading to the higher incidence of auto-immune conditions like asthma, hayfever and eczema in recent years.

One of the first scientific explanations of this theory was by a lecturer in epidemiology from the London School of Hygiene and Tropical Medicine, David P Strachan, who published a paper on the theory in the *British Medical Journal* in 1989. He noticed that children from larger families were less likely to suffer from autoimmune conditions like asthma. Families have got smaller in the Western world over the last forty years, meaning lower exposure to germs and infections. It is over the same period that health authorities have seen an explosion in autoimmune conditions such as asthma. Further studies have been conducted since supporting the theory. For example, studies show that autoimmune diseases are less common in developing countries, however when immigrants from developing countries come to live in developed countries where living environments are more sterile, these immigrants suffer from increased levels of autoimmune conditions like asthma and the rate of autoimmune conditions like asthma increases the longer immigrants live in developed countries. It is a difficult to advise parents accurately on what is the best way to bring up their children in relation to this theory. All parents want the best for their children and common sense tells us all that cleanliness is important. No health care professional will be able to give you exact advice. In my opinion, a balanced view is to ensure children are administered important vaccines but “allow kids be kids”, let children play outside with friends and try not to worry about them coming in contact with dirt and germs, but always be cautious with children with life threatening food allergies.

This explanation may not be the exact reason that asthma is increasing in Ireland, however according to medical journals and studies published in recent years it goes some way to explaining the increase.

**Disclaimer: Please ensure you consult with your healthcare professional before making any changes recommended**

**References available in Whelehans Pharmacy upon request**

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