

INFO-PARENTS

Information on Asthma
for families and public



To Breathe's information for Parents and Public

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Asthma Genetics and Inflammation

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Genetics

Nowadays we know well that asthma is a heritable disease.

A very important number of studies show there is a genetic predisposition to the development of Asthma. This fact explains that in one family there are several people suffering asthma, and it explains the probability of having asthma increases if one parent has got asthma and its higher if both parents have it.

But genetic aspects of asthma are very complex, and it does not depend on one only gene like other well known diseases (cistic fibrosis...)

Asthma is a poligenic disorder, that means, an important number of genes are related with asthma and every gene explains the different faces of the disease. That explains how a family with twins, one can have asthma and another doesn't

As a whole we know genetics set:

- age of start of asthma,
- inflammation degree of the airways,
- severity of symptoms,
- response to medicines,
- relationship beetwen asthma and allergies,
- etc.

So it is easy to understand the importance of genetics in asthma and probably in the future, genetics will be the way for an early diagnostic and better treatments.

Inflammation in asthma

Airway inflammation is a key point in asthma management. Parents need to know that asthma is an inflammatory disease because nowadays the best treatments for asthma are oriented to improve the inflammation degree of the airway.

Children and adolescents with asthma have their airways inflamed. And this inflammation remains although asthma symptoms are not present for a long time.

This inflammation increases sensitivity to things that do not cause problems to other people. These hypersensitive airways, when a new contact with these things happen, drives a narrowing of the airways and subsequent symptoms. These things are known as "asthma triggers".

What things cause airway inflammation?

A lot of things are able to provoke asthma inflammation (and also work like asthma triggers). These things vary from person to person. The most common ones are:

- Allergens (organic substances that cause allergic reactions), for example:
house dust mites, pollens (grass, trees..), molds, pet dander, and cockroaches.
- Tobacco

- Irritants and pollutants in the air, strong fumes or odors like household sprays, paints, gasoline, perfumes...
- Respiratory infections (common cold, influenza, sore throats...)
- Exercise and Sport. But it is important to know, children and adolescents with asthma are able to practise sport. (see section about it)

