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Familias, Pediatras y Adolescentes en la Red. Mejores padres, mejores hijos.

Allergy and asthma are not the same

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People often refer to **allergy** and **asthma** as if they were the same illness.

When a family is informed that his child suffers from asthma, it is often asked "What is he allergic to?". If an infant is allergic to some food or atopic dermatitis, his family may ask about the future risk of developing asthma or rhinitis and allergic conjunctivitis.

But **allergy and asthma are not the same**. Somebody can be allergic and may not suffer from asthma. Contrastingly, it is possible to suffer from asthma and not being sensible to allergens (it happens in 10-30% of people who suffer from asthma). Both illnesses have a genetic basis but related to different genes. However, the same person can often suffer from asthma and allergy.

What is allergy and what is its cause?

"Not everyone can be allergic, not at all". In order to "be allergic", there must be genetic predisposition (this is, it is inherited in the genes) that is called **atopy**.

With this genetic basis, children immune system responds with reactions to hypersensitivity to some protein substances that contain allergens. The usual antibody that controls allergic reactions is immunoglobulin E.

In respiratory allergy (asthma or rhinitis or allergic conjunctivitis), **aeroallergens** (called this way because they are in the air that we breathe) provoke this immunological reaction when touching the respiratory tract (nose, bronchus) or the eye conjunctive. Examples of allergens are: some proteins of the **mite** digestive tract (microscopic arthropods that live in a house dust, such as *dermatophagoides farinae* o *pteronysinus*); tree, bush, grass or weed **pollen**; epithelium or dandruff, **animal** saliva or urine (cats, dogs, hamsters, guinea pigs, rabbits, horses, cows), **humidity fungi** (as *alternaria alternata* or *cladosporium herbarum*).

What is asthma and how is it observed?

Asthma is a chronic respiratory illness (it lasts for a whole life) caused by the inflammation of the mucous membrane that covers the inner part of the lung bronchi. This inflammation makes bronchi tighten and block (bronchoconstriction) and the bronchus respond exaggeratedly (bronchial hyper-responsiveness) to different trigger factors: tobacco, respiratory infections, exercise, cry, laugh, strong smells (varnish, paint) or also aeroallergens.

Asthma is observed because of episodes of **cough, fatigue, tightness** in the **torax** and "**pitos**", above all at night or when doing exercise. Although it is less frequent, there can be children and teenagers who suffer from asthma who have these symptoms more persistently (not as episodes but many days in a week or in a month, so that they have no symptom free periods).

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In our country, one out of 10 children approximately suffers from asthma. Up to 80% of them will have started with the symptoms before being 6 years old.

Pre-school children have as the main **trigger factor** of asthma episodes **viral** respiratory infections. As children grow and get older, they tend to be fewer so that in school pupils and teenagers the main trigger factors are **aeroallergens**; also **exercise** (that can affect more as asthma is less controlled) and exposure to **tobacco** smoke, that is another important trigger factor. That is the reason why every child and teenager live in an **environment which is free from tobacco smoke**.

Why is it important to know if a child with asthma suffers from allergy?

- From a diagnostic point of view, some **allergy tests** can be done. They can be done in vivo (on skin) or in vitro (through a laboratory test with a blood sample). With these tests, it can be known what we are sensitive to and, according to the symptoms, relate them with some of these allergens (not all sensitivities provoke illness symptoms).
- From the treatment point of view, it is important to know it since 70-90% of school children are sensitive to any aeroallergen. It is very important to know to which aeroallergen (or which ones) each child is sensitive to since aeroallergen **avoidance measures** are essential for asthma **treatment and control**.
- From the prognosis point of view, allergy allows to **identify** from a very early age who is **at risk** of developing other allergic illnesses in the future, such as asthma. For example, lactants who have a high degree of immunoglobulin E against egg yolk or cow milk allergens are very likely to develop aeroallergen sensitivity and rhinoconjunctivitis and asthma symptoms when being 7-10 years old. **Allergy (atopy)** is the most important **risk** factor (that increases likelihood of suffering from an illness) so that a pre-school child with asthma keeps on having the same symptoms at school, as a teenager and as an adult.

Bibliography.

- Host A, Andrae S, Charkin S, Díaz-Vázquez C, Dreborg S, Eigenmann PA, et al. Allergy testing in children: why, who, when and how? *Allergy*. 2003; 58: 559-69.
- Documento de posición de La Sección Pediátrica de la Academia Europea de Alergia e Inmunología Clínica (EAACI) donde se establecen recomendaciones sobre por qué, a quién, cuándo y cómo realizar estudios de alergia en niños.
- Mora Gandarillas I, Morell Bernabé JJ y Grupo de Vías Respiratorias. Protocolo de Identificación de la Alergia. *El Pediatra de Atención Primaria y la Identificación de la Alergia*. Protocolo del GVR (publicación P-GVR-3) [consultado 12/10/2011]. Disponible en url: www.aepap.org/gvr/protocolos.htm [2].
- Otros Protocolos del Grupo de Vías Respiratorias de la Asociación Española de Pediatría de Atención Primaria. Disponible en url: www.aepap.org/gvr/protocolos.htm [2].
- Castillo JA. Uso racional de las pruebas diagnósticas: la exploración del niño alérgico. *Form Act Pediatr Aten Prim* 2009; 2(1): 42-49. E Disponible en url: www.fapap.es/numero-actual?id=3 [3]
- Morell Bernabé JJ, Bamonde Rodríguez L, Mora Gandarillas I, Pascual Pérez JM. Diagnóstico etiopatogénico del asma. En: Cano A, Díaz CA, Monton JL editores. *Asma en el Niño y Adolescente*. 2º edición. Madrid: Ed

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Ergon: 2004.