

# Risk factors & triggers

## RISK FACTORS FOR ASTHMA AND TRIGGERS FOR ASTHMA ATTACKS

Many years of research have been put into trying to understand why certain people will develop asthma, and to identify possible risk factors i.e. something that increases your chances of getting a disease or condition. There are different types of risk factors:

- risk factors for developing asthma in your lifetime;
- risk factors for more severe asthma symptoms in those who already have asthma;
- risk factors for severe asthma exacerbations (attacks) in those who already have asthma: these are usually called **trigger factors** to avoid confusion.

Someone who takes their controller pumps/medication regularly is at a lower risk for all of these triggers.

Always use your medication the way it was prescribed. Always work with an action plan so that you know what to do with a severe asthma attack. Consult your doctor if your asthma is not completely controlled (see “Keeping Asthma under Control”).

Each of these risk factors is important. Having one or more of them does not mean that you **will definitely** have asthma, and **not having** these risk factors does not guarantee that you will never develop asthma. However, the more risk factors you have, the greater your likelihood of developing asthma.

Asthma can develop at any age, but the majority of patients are children and teenagers (ages 2 to 17) and asthma is found in both males and females.



### Ethnic and socio-economic background

Asthma affects people of all ethnic backgrounds. Some studies have suggested that there are some racial differences in frequency and severity of asthma, but socio-economic status and environment may be more important. Poorer communities struggle to access to chronic medication, medical care and information, and experience more asthma deaths. Asthma is definitely also more common in towns and cities compared to rural communities.

### Family history of asthma

Asthma runs in families. People whose immediate blood relatives have asthma are more likely to develop asthma themselves (mother, father, brothers and sisters). Asthma in a child is more likely if one parent has asthma, with a risk of about 1 in 5, and even more likely if both parents have asthma, with a risk of about 2 out of 3 developing asthma.

### Allergies

People who are atopic (have allergies) have a greater chance of developing asthma. Allergic rhinitis (hay-fever/sinus), eczema and severe food allergies are all risk factors for *developing asthma*, for *more severe symptoms* and for *exacerbations*. Eczema in early life may be particularly important for developing asthma and allergic rhinitis is a common trigger for asthma attacks.

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Good control of all allergic conditions is important for good asthma control. See our *Allergy and Asthma* leaflet.

## **Cigarette smoke**

Tobacco smoke is a very important risk factor, starting from before birth and continuing all through life. Tobacco is a risk factor for *developing asthma*, for *more severe symptoms* and more *asthma attacks*. Removing tobacco smoke from the household is one of the most important things that a family can do for their child's health.

## **Environmental exposures**

It is not clear whether early exposure to inhaled allergens (house-dust mites, moulds, cats, cockroaches, and pollen) may lead to asthma, but we do know that exposure to inhaled allergens in an allergic person with asthma can cause *increased symptoms*, and even *asthma attacks*.

Attention to indoor allergens such as mould and cockroaches is particularly important. Allergen avoidance is recommended if you have a proven allergy (proven via blood or skin tests), but not for asthma prevention (see "Allergy and Asthma").

## **Pollution and irritants**

Irritants affect everyone, so asthmatics need to be aware that exposure to air pollution can be a trigger for *increased symptoms*. Pollutants such as burning fossil fuels, exhaust fumes, ozone and NO<sub>2</sub> are emerging as risk factors for developing *asthma and allergies in the first place*.



## **Exposure on the job**

If you are exposed to chemicals or other irritating substances on a regular basis at work, you could be at risk for developing occupation (work-related) asthma. Risky occupations may include farming, hairdressing, painting, steel, plastics and electronics manufacturing. Work related asthma can have a devastating financial effect on a family, so it is vital to consult an allergy and/or Occupational Health practitioner.

## **Medical conditions and medication**

Medical conditions such as low birth weight and repeated chest infections (particularly viral infections) can increase your risk of developing asthma later in life. Other medical conditions such as gastroesophageal reflux disease or heartburn can worsen your asthma symptoms.

Colds or viral infections are the most common triggers for asthma attacks. If a child is going to a crèche they may have more tight chests, but colds are almost impossible to avoid. Talk to your doctor/asthma nurse about whether you should have the flu vaccination.

A range of medication can trigger asthma attacks in a small number of people. These include pain pills (e.g. aspirin and non-steroidal anti-inflammatory tablets), beta-blockers (used for heart disease and glaucoma), some cold and flu remedies etc.

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## **Obesity**

Obesity is strongly associated with asthma, although the mechanism linking the two is not clear. A raised BMI (Body Mass Index) is also linked to more severe asthma symptoms, and more frequent attacks in adults and teenagers.

## **Sports and exercise**

Some people with asthma find that exercise triggers their asthma symptoms. If your asthma is well controlled, you should be able to join in sports and exercise and have fun. Exercise is definitely not a risk factor for asthma, but is good for everyone.

If your asthma symptoms get worse during or after exercise, it could be a sign that your asthma is poorly controlled and you may need to visit your doctor or asthma nurse for an asthma review (see “Sport and Asthma”).

## **Other triggers**

- **Weather:** A sudden change in temperature, especially cold air, can trigger asthma. Allergic asthmatics can have symptoms during thunderstorms, when large quantities of pollen, in very small particles, are released into the air.
- **Emotions:** Stress, or even a fit of laughter, can trigger asthma symptoms, as can family situations such as depression, money problems, death and work-related stress.
- **Hormones:** Some women find their asthma can be affected around puberty, before their periods, during pregnancy or during menopause.



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