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# The effect of air pollution on asthma sufferers

Asthma is a lung condition where inflammation in your airways makes the muscles around your airways go into spasm. This cuts the air getting into your lungs, causing symptoms of shortness of breath, wheezing, chest tightness and cough.

### Is asthma dangerous?

Most asthma symptoms can be controlled. But if you have a severe asthma attack, it's important to seek medical help quickly, as occasionally asthma can be life-threatening. Getting treatment early is crucial to prevent this. Symptoms to worry about include:

- Being too breathless to finish a whole sentence (or to speak at all).
- No relief of symptoms from taking your 'reliever' inhaler.
- Breathlessness with a very fast heartbeat.

I always expect a surge of patients experiencing flare-ups of asthma and COPD in autumn and winter, when viral infections causing coughs and colds can affect the airways, reducing the amount of oxygen the lungs can pass on to the bloodstream and the body's vital organs. Any form of exercise increases the body's need for oxygen, making symptoms worse. That's why when pollution levels are high, The government advises anyone with lung or heart problems to avoid unnecessary exercise and to carry their 'reliever' inhaler with them.

Hay fever sufferers are also more prone to asthma, and high pollen counts, causing severe hay fever symptoms, can make asthma worse too. Most hay fever sufferers are allergic to grass pollen, making their peak time for symptoms May to July. Others are more affected by tree pollen and suffer most from March to May.

In children, asthma is usually caused by allergy. Young people with asthma often have other 'allergic' conditions like hay fever or eczema in the family. When asthma starts in adulthood, allergy is less likely. The most common triggers include:

- Cigarette smoke (including passive smoking).
- Catching a cold.
- Irritation of the airways from perfumes or chemicals (including home cleaning products).
- Occasionally, chemicals or dust at work.

## Is it something in the air?

Air pollution is all too common a problem nowadays, especially in large cities. The consequences of this are a high risk of breathing problems, especially for those with lung problems such as asthma, chronic obstructive pulmonary disease (COPD), the elderly and those with heart problems.

Long gone, fortunately, are the days of the old 'London Smog', where thousands of people died every year from complications of the blanket of pollution that covered the city. In the UK, we don't tend to see the same very high levels as the world's highest-ranking polluted cities, Beijing, New Delhi, Santiago in Chile, and Mexico City. The combination of sulphur dioxide (produced when fossil fuels are burned, and the major culprit in acid rain) and nitrogen dioxide from motor vehicles and generators, is a toxic mix. Cities - like Los Angeles, surrounded on three sides by mountains - find pollutants trapped under a layer of warm air and unable to escape. But low wind speeds noted in the UK seem to be contributing to a similar effect, with pollutants not being blown away.

Early warning symptoms of being affected by this level of pollution include sore, irritated eyes and throat and coughing. Asthma and COPD sufferers in particular may also get short of breath or wheezy, especially if they exercise and particularly outside. Otherwise healthy people are unlikely to come to significant harm, but even they should look out for these symptoms and avoid excessive exercise.

Warm weather may be enticing, but if pollution levels are high there are some people who should enjoy sunny days through the window from the comfort of their own home. There are few occasions where I actively tell people to avoid exercise, but where it might be actively bad for your health, even I will make an exception.

## How can I help myself?

- Don't smoke (obviously!) and avoid smoky rooms.
- Avoid sudden changes in temperature.
- If your symptoms are brought on by exercise or allergy to animals,
  take your reliever. inhaler before you exercise or visit your sister's cat!
- Get a 'flu jab every winter from early October.
- Get a pneumococcal vaccination every 10 years.
- Take regular treatment (tablets and/or eye or nose drops) for hay fever, if you have it - hay fever symptoms can worsen asthma.

It's crucial to have regular checks if you have asthma, to see how you're doing. Your doctor should discuss an 'asthma management plan', with advice on what to do it your symptoms get worse. He may recommend increasing your preventer inhaler when you get a bad cough, for instance. If you have a severe attack of asthma which leaves you too breathless to speak or isn't relieved by your inhaler, you must seek urgent medical help.

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