Medicine for Managers

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Hay Fever

In the spring a young man's fancy lightly turns to thoughts of . . . hay fever! (with apologies to Alfred, Lord Tennyson). It is not just a problem for young men. Hay fever is thought to affect about one in five people at some time and is the most commonly occurring form of allergy. Pollen, first recognised by Blackley as the culprit in 1859, is now known to cause hypersensitivity reactions.

The type of hay fever depends on the time of year in which it occurs and which, in turn, depends on the pollen implicated. Spring hay fever is usually the result of tree pollen, early summer hay fever results from grass pollen and pollen from weeds causes symptoms throughout the spring and summer months.

Hay fever is worst when the pollen counts are high. Some unlucky individuals are sensitive to more than one type of pollen and the symptoms persist through the whole spring and summer. Indeed exceptionally they may last until November in particularly atopic (sensitive) individuals.

So, why do sufferers get hay fever? Simply a pollen particle is an antigen. Normally the body will neutralise any antigen by the creation of a protein called an antibody.

The mechanism is designed to protect the body against things such as infections which the body recognises as a threat and in the case of pollen it wrongly does so.

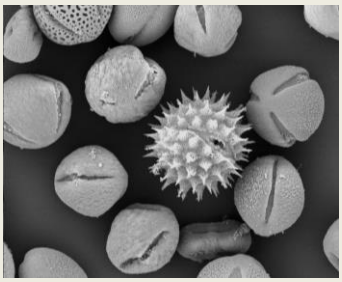
If the body is repeatedly exposed, the reaction may get more and more vigorous resulting in the wheezing, watering eyes and nasal congestion.

It is not understood why the immune system works as it does in hay fever but the risk of developing it does seem to be more likely if the individual inhales cigarette smoke during early childhood, if he or she is an 'allergic type' of person and also if there is a family history.

The symptoms of sneezing, nasal congestion, watering eyes, throat irritation,

coughing and wheezing are well known to every sufferer and the congestion may cause earache, headache and sinus pain.

People who suffer from asthma may develop worsening symptoms when hay fever develops. For a proportion of sufferers the symptoms of asthma, cough, wheezing, breathlessness and tightness in the chest, occur only when the hay fever is present.



Pollen under the electron microscope

The diagnosis of hay fever is usually not in doubt. The classic symptoms and its development at about the same time each year eliminates suspicion of other causes.

However, on occasion it may be necessary to confirm the diagnosis such as when the symptoms have unusual features in terms of severity, frequency or duration. In such circumstances a patient may be referred by the GP for allergy testing by an immunologist.

The techniques used for identifying the nature of the allergens are either skin patch or prick testing or blood testing. If the skin testing technique is used, the allergen will produce a local allergic reaction and the skin will become slightly red, puffy and itchy confirming the hay fever diagnosis. The blood test is used in circumstances where skin testing is inappropriate (such as in eczema sufferers and where patients are taking steroid or antihistamine medication).

The test is used to identify the antibody that is manufactured by the body in response to the pollen (specific immunoglobulin E –IgE) and confirms that the symptoms are indeed due to pollen.

The mainstay of treatment of hay fever is with antihistamines, which can be cheaply purchased over the counter at the pharmacy. Loratadine, cetirizine and fexofenadine are once-daily treatments which do not generally have side effects such as drowsiness.

Other more traditional antihistamines such as chlorphenamine (*Piriton)* may be at least as effective but drowsiness can be more problematic. The drugs act by blocking the effect of histamine, which is released by the body in response to allergen challenge.

They are commonly effective in treating the sneezing, watering eyes and the sensation of itching (but not of the congestion) although in a significant group they are disappointing in their efficacy. Antihistamines are available, not only as tablets, but as nasal sprays.

Steroid drugs can be used to treat hay fever. Most commonly they are used to reduce nasal inflammation which is caused by the reaction of the nasal lining to the

pollen. Therefore a steroid nasal spray may be prescribed.

Very occasionally, in cases of severe hay fever, a long-acting steroid injection may be given to suppress the allergic features. The drug (for example triamcinolone *[Kenalog]*) is given by deep intramuscular injection and produces marked improvement.

The injection is used only rarely these days in the most severe of cases because of the risks of long acting steroids, such as suppression of the body's ability to fight infection and the possibility of depression of the body's own steroid production.

Other treatments are aimed at controlling the symptoms. Nasal decongestants may control the 'blocked nose' feeling and eye drops such as cromoglicate (*Opticrom*) may reduce inflammation and itching in the eyes.

These agents are available cheaply over the counter at the pharmacy. Another key approach is to avoid pollen exposure by remaining indoors, avoiding cigarette smoke, avoiding animals or bringing fresh flowers into the house.

Sadly for many hay fever is an annual burden which causes distress and misery. Although new sufferers develop every year, a crumb of comfort is that thousands of sufferers cease to have symptoms because the repeated exposure causes them to desensitise themselves.

So, for a reasonable year, stock up with treatments, avoid exposure and hope that your defence mechanism successfully eliminates the problem.

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