

# LIFE

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13

## THE BIG SNEEZE

What is allergic rhinitis anyway?

By CHANPREET KHURANA

While other schoolchildren spent their fortnightly tuck money on biscuits and chocolates, Gayathri Sreedharan used her allowance for extra packs of Kleenex from the Rishi Valley on-campus provisions store. "I spent my entire school years with a tissue in hand," Sreedharan, now 24, says. Yet she was not immediately diagnosed as suffering from allergic rhinitis (also called hay fever). "Those days in India, and I am talking about 1985 here, people didn't understand the concept of hay fever," says Anjana Sreedharan, Gayathri's mother, who suffers from bronchial asthma.

"When she was young, the doctors would tell me she had gotten an 'allergic cold'," Anjana Sreedharan says, adding that going away to the relatively pollution-free environs of Rishi Valley actually helped improve her daughter's condition.

### The allergy up your nose

"Allergic rhinitis, as the name suggests, is a kind of allergy of the nose, an oversensitivity," says Vikram Jaggi, medical director of the Asthma, Chest and Allergy Centre in New Delhi and Gurgaon. But to what? To "irritants" that people unaffected by the condition wouldn't respond to in the same way.

Dr Jaggi adds, "Hay fever is an old term and a rather unfortunate one because it is often not caused by hay alone and there is no fever." That last is, in fact, one of the ways to distinguish it from a viral infection (such as the common cold), he notes.

### Immune confusion

Your body's immune system starts picking up on signs of what might be dangerous to it early on in life. The immune system is like a clean slate and maturation occurs quickly, explains Dr Jaggi. Like a growing child, it is pre-programmed to learn—in this case, to identify potential health threats and attack them.

However, because of widespread vaccination drives in industrialized and even developing nations, the immune system (which, in the absence of such initiatives,

would be busy warding off threats posed by other, more dangerous pathogens) is left relatively free to focus on otherwise minor environmental irritants.

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#### Fighting back

Once the body reads a molecule or biological cell, such as dust or pollen, as being dangerous to it, it produces what is known as immunoglobulin E, or IgE—an antibody whose structure is adapted specifically to the object perceived

as a threat. These IgEs then attach themselves to mast cells (also part of the immune system) in the body. The process is known as sensitization.

When an irritant (such as pollen or dust) to which the immune system of an individual is "sensitized" enters the nasal passage, it fits into the already present IgE antibodies on the mast cells, much as a key fits into a lock. Mast cells contain within them a cocktail of chemicals, including histamines—one of the most important mediators of allergies in the body. When the allergen fits into the IgE structure, it completes a circuit of sorts. This triggers a reaction that causes the membrane or wall of the mast cells to rupture, releasing the histamines contained within. This results in symptoms that include a runny nose, watery eyes and difficulty in smelling things. It's basically a system-wide emergency signal spreading through your body, alerting it to a potential threat while simultaneously trying to wipe out the threat.

#### Call cancel

It is this emergency signal that is your "allergy". "I take zinc supplements and antihistamines when the symptoms get worse," Gayathri Sreedharan says, explaining how she copes when her allergies worsen. It's the most common "treatment" sufferers adopt, perhaps because it is the easiest one. "But antihistamines only combat the symptoms without going into the reason," says Dr Jaggi.

There are other, more thorough options to recover your quality of life—which is badly affected, as sufferers well know. While most may think a runny nose and sneezing a nuisance at worst, Dr Jaggi says studies indicate the impact of allergic rhinitis on the quality of life is comparable with that of moderately severe heart disease or diabetes. Sreedharan recalls she was often irritable, and did not participate much in outdoor sports while growing up.

Studies have also shown a link between allergic rhinitis and poor performance in examinations. The disease affects the overall quality of life, including the capacity to learn. One way to root out the problem, he adds, is to opt for hyposensitization or specific immuno therapy.