

MIND
your
BODY

Healthy Spaces

Joyce Teo finds out the dangers of a climbing PSI and what precautions those with respiratory problems should take

If and when the haze returns, those with respiratory problems such as asthma and chronic lung conditions – for example, chronic obstructive pulmonary disease – will need to be vigilant.

They are more prone to attacks due to the smoke or pollen in the haze and may develop coughs, runny nose, and have shortness of breath, sneezing and tightness in the chest.

Children, the elderly and pregnant women are also slightly more vulnerable than healthy people.

The main air pollutant during the haze period here is particulate matter (PM) that is less than 2.5 microns in size, or PM2.5. These are a thirtieth of the diameter of a strand of human hair and can get into the lungs and pass easily into a person's bloodstream.

Studies show that continuous exposure over several years to these particles can cause cardiovascular problems, such as stroke, and chronic respiratory diseases in children, such as asthma.

Getting haze-ready

Buddhist monk Shi You Guang, a severe asthmatic, knows this too well. Last year, the haze in Singapore soared to record levels, prompting the Government to distribute millions of N95 masks from its stockpile.

The three-hour Pollutant Standards Index (PSI) level hit its highest of 401 on June 21 last year.

A PSI value of 51 to 100 falls within the “moderate” range, while readings between 101 and 200 are considered “unhealthy” and above 300, hazardous.

It was around mid-June last year that Mr Shi returned from an overseas trip. He was coughing badly and felt breathless. Then the asthma attacks started.

“Over the next few days, I felt tightness in the chest and my wheezing worsened till I found it hard to eat and walk,” he said.

He was hospitalised soon after.

In February, he went for bronchial thermoplasty, a procedure that helps to keep the airways open. This is for a patient with severe asthma who cannot control his condition despite regular use of inhalers and steroids.

“It improved my tolerance level when I am exposed to my triggers. For example, when exposed to cigarette smoke, I will not have a bad asthma attack,” said Mr Shi.

When the haze strikes this time around, he will not need to have nebuliser treatment day and night just to keep his lungs open.

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Continued on next page

Tips on keeping indoor air clean

Continued from Page 3

But Mr Shi still has to avoid the triggers. "Bronchial thermoplasty patients can still experience asthma attacks, but the number and severity of these attacks are reduced," said his doctor, Associate Professor Lee Pyng, from National University Hospital's division of respiratory and critical care.

She added that a patient must continue to use inhaled therapy even after the procedure, but at a lower dosage, based on his doctor's advice.

For asthmatics and those with other lung and heart conditions, here are what to take note of when haze conditions worsen.

AVOID THE HAZE

To reduce the rate at which particles are entering your home, close the windows and stay indoors if possible.

The Health Ministry's health advisory states that a person with chronic lung disease or heart disease should avoid prolonged or strenuous outdoor physical exertion once the PSI level goes above 100. When the reading crosses 200, he should avoid outdoor activities altogether.

Dr Liew Woei Kang, a consultant paediatrician at SBCC Baby & Child Clinic at Gleneagles Medical Centre, added it would be better for children to minimise outdoor activities when the PSI reading exceeds 100.

Wearing an N95 mask may help if you have to head out of the house.

Dr Liew, who is also the president of the Asthma and Allergy Association, said N95 masks are much better than normal surgical masks in filtering out dust particulates.

"However, it is generally uncomfortable to wear an N95 mask for prolonged periods of time. The mask should ideally be fitted and tested to ensure an adequate seal."

CLEAR THE AIR

Get a good air purifier to clean the air and make sure the filters of your air-conditioning units and purifiers are clean and well-maintained.

"Look out for air purifiers with high-efficiency filters that help remove small particulate matter and allergens from the air, without posing any ozone concerns," said Dr Ang Keng Been, president of the Indoor Air Quality Society Singapore.

This is particularly so for those with lung disease.

"Consumers need to be aware of products with ioniser features, as the process of creating ions in the air may release the harmful by-product ozone, which can trigger asthma and other lung inflammatory conditions," he said.

DRINK UP AND STAY ALERT

Drink plenty of water and visit the doctor if you have breathing difficulties. A person with heart and lung conditions is more vulnerable and may have symptoms even when the PSI level is not very high. He should seek medical attention promptly if he feels unwell.

If you are an asthmatic, keep your inhaler in your pocket at all times, advised Prof Lee.

Move indoors or seek help from the doctor if symptoms worsen, she said. Do not forget to practise priming – the spraying of one or more puffs in the air before use, so that the inhaler dispenses the right dose of medicine, she added.