

# Living with **Pulmonary Fibrosis**

## Hypersensitivity Pneumonitis



Centre of Research Excellence in  
Pulmonary Fibrosis



Lung  
Foundation  
Australia

# What is Hypersensitivity Pneumonitis?

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Hypersensitivity Pneumonitis (HP) is a lung condition caused by an immune response/reaction to an inhaled dust or a substance, often referred to as an allergen. Breathing in allergens can cause an immune reaction in the lungs (hypersensitivity) resulting in lung inflammation (pneumonitis).

## What causes HP?

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There are a range of types of inhaled materials that can cause HP in the lungs, most of which are naturally occurring and organic. Some common inhaled materials that can cause HP include:



Mould in the home or workplace



Bird feathers and droppings



Composting and gardening mulch



Bacteria in contaminated water  
(commonly found in hot tubs or spas)



Grains and other farming materials



Farm animals



Bacteria or moulds from woodwind  
and brass musical instruments

Most people with HP are exposed to the allergen at places where they spend a lot of time, such as their home or workplace. The more frequent and prolonged the exposure, the higher the chance of developing HP.



### **Did you know?**

A classic cause of HP is exposure to bird feathers and droppings, commonly known as bird fancier's lung. Many types of HP have similar common names such as 'hot tub lung' and 'cheese maker's lung', named after the culprit allergen.

## **Who develops HP?**

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Some people with certain jobs or who live in certain environments may be at greater risk of HP. However, HP is a reasonably rare condition - much less common than other lung conditions such as asthma. In fact, many people are exposed to allergens on a day-to-day basis with no effect on their lungs. Although researchers are not entirely sure, the likelihood of developing HP may be affected by family history, genetics and other factors like cigarette smoking and vaping.

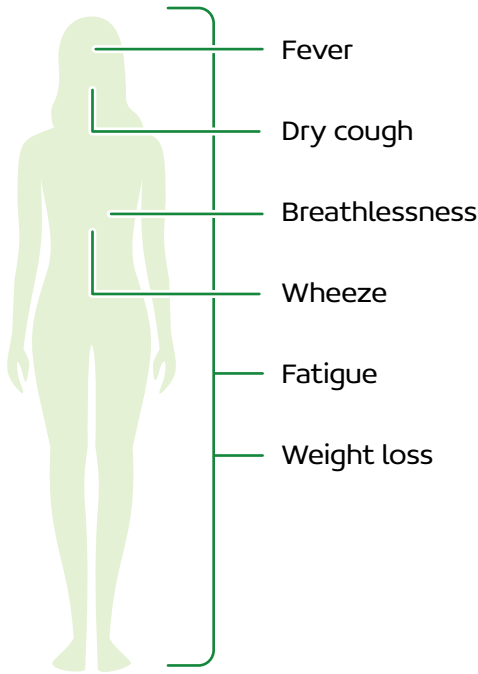
## **What are the symptoms of HP?**

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People with HP can experience a variety of symptoms. Some may last a few days, or in some cases months or years. Some people's symptoms may improve when they are away from the allergen that has led to the immune reaction, for example, when they go on holidays.

## Common symptoms of HP

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Many of the symptoms of HP are similar to other lung conditions, so you should discuss them with your doctor to make sure the right diagnosis is made.

## How is HP diagnosed?

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Your doctor will discuss your symptoms with you. They will want to work out how long you have had symptoms, and how they have progressed over time. Your doctor will take a detailed history of your home, hobbies and work environment and they will usually need to do a physical exam and listen to your lungs.

## A diagnosis of HP may be made after the completion of some tests:

### GP

Your GP may order some preliminary tests prior to considering whether to refer you to a lung specialist (also known as a respiratory specialist)

- **Chest X ray and CT scans:** Can identify typical types of lung inflammation seen in HP
- **Lung function** (breathing) tests
- **Blood tests**



### Respiratory specialist

If you are referred to a respiratory specialist, they may consider more investigations if your diagnosis is not entirely clear

- **Bronchoscopy:** A small flexible camera is used to look into your lungs while you are under a light anaesthetic. Fluid or biopsy samples may be taken to help confirm a diagnosis of HP and test for other problems, like lung infections.
- **Lung biopsy:** May be considered in some difficult-to-diagnose cases. This is performed under anaesthetic.

A respiratory specialist may discuss difficult cases with other healthcare professionals to work out the best diagnosis and treatment plan (also known as a multidisciplinary meeting).

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*HP is now diagnosed as fibrotic or non-fibrotic forms. The treatments for either type of HP may be different.*

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It is important to determine whether symptoms are persistent, as this may be a sign of permanent scarring, known as fibrotic HP.

Despite a thorough assessment, a culprit allergen is not found in up to two thirds of cases of HP.

# How is HP treated?

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## Avoidance

If something has been found to be causing HP, it is very important to avoid breathing this allergen to stop further lung inflammation



## Medication

A respiratory specialist may consider medications to reduce inflammation or scarring on the lungs:

- Anti-inflammatory medications (also called immunosuppressive medications), such as prednisone or mycophenolate can be used for some types of HP
- Anti-fibrotic medications such as nintedanib may be used when there is progressive scarring on the lungs due to HP



## Quit smoking

As always, quitting smoking is very important for lung health



## Vaccinations

Vaccinations for common viruses, such as influenza and COVID-19 are strongly recommended



## Exercise

Participating in a pulmonary rehabilitation program can help reduce breathlessness and improve your quality of life



## Oxygen therapy

You may be prescribed oxygen if you develop low levels of oxygen in your blood

## Do people recover from HP?

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Lung inflammation due to HP may be reversed in some cases by avoiding further exposure to the offending allergen. This is often helped by taking anti-inflammatory medications. If fibrotic HP has already developed, the scarring is permanent and may worsen in some cases, even with avoidance of further allergen exposure.



Your doctor will discuss your individual circumstances with you and determine if medication is required to stabilise your condition.

## LUNG FOUNDATION AUSTRALIA SERVICES

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Information and Support Team



Lung disease information resources



Education webinars



Support groups



Peer-to-peer connections



Referral to pulmonary rehabilitation and Lungs in Action exercise programs



E-newsletter

## EXTERNAL LINKS

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Pulmonary Fibrosis Foundation    [www.pulmonaryfibrosis.org](http://www.pulmonaryfibrosis.org)

Canadian Pulmonary Fibrosis Foundation    [www.cpf.ca](http://www.cpf.ca)

We thank the individuals who contributed to content and expert review of this fact sheet, in particular the primary author, Dr Robert Sheehy, Respiratory and Sleep Physician.

### Produced in collaboration with:



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