

Emphysema & chronic bronchitis.

What is emphysema?

Emphysema, or 'lung rot', is a degenerative disease of the lung tissue. It destroys the tiny air sacs in the lungs slowly over many years. The lungs cannot repair this damage. Emphysema is an irreversible disease.

The main symptom of emphysema is a feeling of breathlessness that gradually becomes more severe over the years. The damage to the lungs occurs for many years before the effects are felt. While it does not result in as many deaths as lung cancer or heart disease, it is a debilitating illness involving the erosion of the lungs.

Almost all cases of emphysema are from cigarette smoking and it tends to be a late effect of long-term smoking. Most smokers of around twenty cigarettes per day have some degree of emphysema.¹

What is chronic bronchitis?

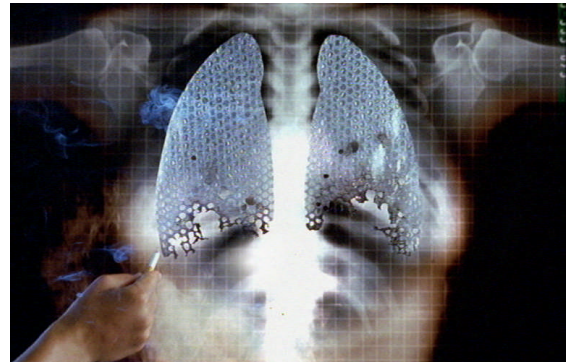
Chronic bronchitis is the excess production of mucus in the lungs' air passages in response to constant irritation by tobacco smoke. Tobacco smoke also contains irritant gases that impair the cleaning mechanisms of the lungs. In combination, they result in constant coughing, phlegm production and obstruction of the small airways in the lungs.

Irritation of the bronchial tubes over a long period hampers the airflow and cleaning mechanisms. The bronchial tubes then make an ideal place for infections to develop.

The overproduction of mucus tends to stop when smoking stops.

What are the effects of emphysema and chronic bronchitis?

Emphysema causes shortness of breath that gradually worsens over the years as smoking continues. At first, there may only be slight shortness of breath every morning and evening. Then a short walk may be enough to produce breathlessness and wheezing. With further damage, breathing may become a major effort. By the time a smoker feels short of breath, the lungs are already damaged.



Chronic bronchitis is characterised by a persistent cough with excess phlegm and the tendency to develop throat and lung infections more frequently.

Emphysema and chronic bronchitis are slow, progressive diseases and commonly cause years of sickness and suffering. Patients with emphysema and chronic bronchitis are vulnerable to heart and lung failure and other potentially fatal conditions. The effects of chronic bronchitis and emphysema can be much more severe in people who have an underlying lung disease, such as asthma.

Emphysema can be prevented by:

- Not smoking.
- Avoiding anything that will irritate the lungs, such as dust or cold air.
- Ensuring that any chest infections, such as flu and bronchitis, are treated properly.

A smoker who already has emphysema can prevent further damage by stopping smoking and doing regular, moderate exercise. If symptoms such as shortness of breath, cough or phlegm production persist, medical advice is recommended.

Can emphysema be treated?

Emphysema cannot be treated. The damage to lung tissue in emphysema is permanent and irreversible. However, doctors can help by making life more comfortable for patients with the disease. Antibiotics may be prescribed to treat chest infections; physiotherapy is used to drain phlegm from the lungs and to teach patients to relax and breathe properly.

In severe cases of emphysema, when a lot of lung tissue is destroyed, oxygen may be needed.

How does smoking cause COLD?

Chronic Obstructive Lung Disease (COLD) describes the permanent airflow obstruction developed by cigarette smokers.² It comprises three separate, but often related, disease processes:

- Emphysema
- Chronic bronchitis
- Swelling and narrowing of the lungs' airways

Cigarette smoke contains many chemicals, as well as cancer-causing substances, that interfere with the body's method of filtering air and cleaning out the lungs. There are also irritants that cause direct damage to lung tissue.³

Cigarette smoke causes the overproduction of mucus and paralyses the cilia - tiny hair-like structures - that line the airways and clean out dust and dirt. Paralysis of the cilia means mucus and toxic substances accumulate, resulting in congestion of the lungs.⁴

Long-term exposure of lung tissue to irritants in tobacco smoke destroys the normal lung structure. The tiny, delicate spaces - called alveoli - where the oxygen is transferred to the blood, are broken down, reducing the amount of lung tissue available for the gas exchange.

This destruction of lung tissue also causes the collapse of the tiny airways that pass air to and from the alveoli, decreasing the amount of oxygen transferred to the blood.

Call the Quitline 13 QUIT (13 7848)

The Quitline 13 QUIT (13 7848) is a confidential telephone based service primarily designed to help smokers quit smoking. The Quitline can also provide assistance to the family and friends of smokers and others requesting information about smoking. If you are not fluent in English an interpreter service is available.

By calling the Quitline (for the cost of a local call) you can:

- Be sent a free Quit Pack
- Get help to plan your quit attempt
- Take advantage of talking to specially trained Quitline advisers
- Take part in the free call-back and follow-up service

References

Unless otherwise stated, all material is taken from Reference 1.

1. US Department of Health and Human Services. *The Health Consequences of Smoking: Chronic Obstructive Lung Disease. A report of the Surgeon General*. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, Office on Smoking and Health, 1984.
2. US Department of Health and Human Service. *Reducing the Health Consequences of Smoking: 25 Years of Progress. A report of the Surgeon General*. Rockville, Maryland: US Department of Health and Human Service, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1989.
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4. Hopkin J. Genetics and lung disease [editorial]. *Br Med J* 1991;302:1222-1223.