

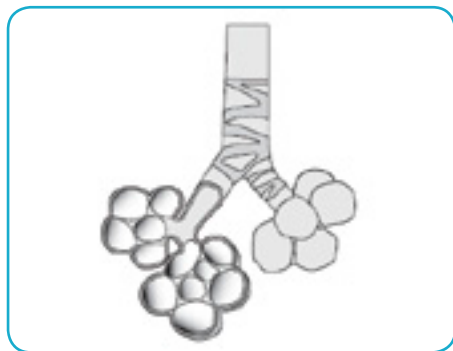
Patient Guide



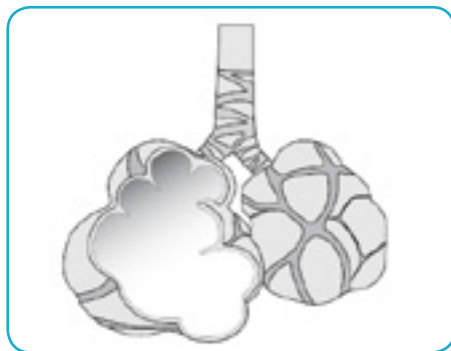
Endobronchial Valve Treatment of Emphysema Patients



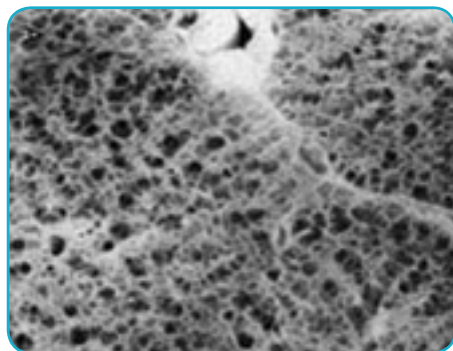
Emphysema is included in a group of diseases called Chronic Obstructive Pulmonary Disease, COPD. Emphysema accelerates the destruction of the walls of the air sacs (alveoli) of the affected lung, reducing the elasticity of the lung tissue, meaning air is trapped in the lung. This trapped air can cause the lung to enlarge (hyperinflate), taking up more space in your chest and making breathing more difficult. This can result in dyspnea (shortness of breath) and lack of stamina.



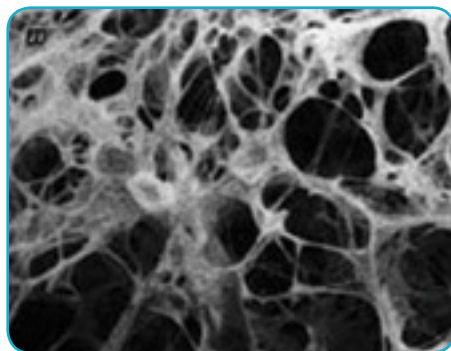
Healthy alveoli (with large surface area)



Diseased alveoli (enlarged with small surface area)

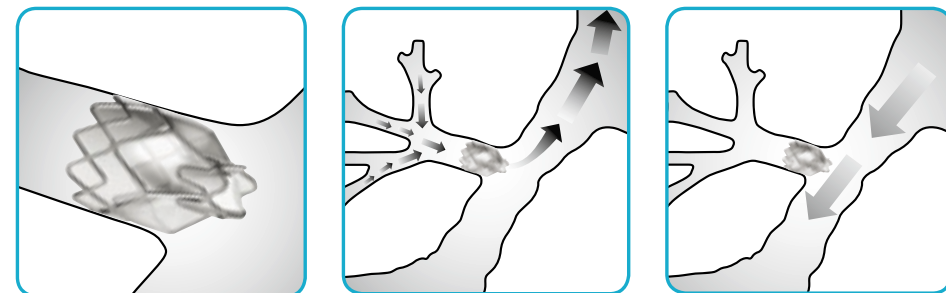


Normal lung tissue



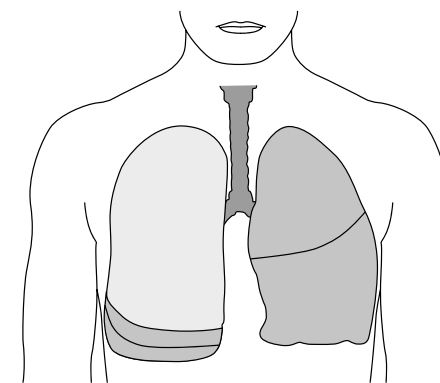
Lung tissue with emphysema

Lung volume reduction with valves

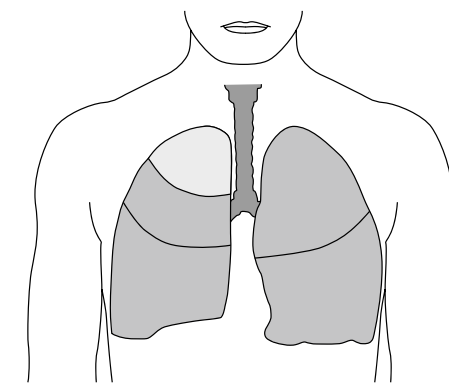


The lung is divided into compartments (lobes) and the valves are placed in the airways of one of the lobes of the lung. The valves allow air and secretions to pass out through the valve but not back in. This may result in the lobe shrinking in volume and may allow more healthy parts of the lung to expand and take part in the exchange of oxygen and carbon dioxide.

Lung volume reduction with valves aims to reduce the volume in an enlarged part of the lung.



Before volume reduction. The diseased part is enlarged and compresses healthy part of the lung.



After lung volume reduction. The diseased part is reduced in volume allowing healthy part of the lung to expand and function better.

Who is suitable for treatment?

Lung volume reduction may be suitable for you if you have emphysema and suffer from shortness of breath. Your Doctor will discuss the treatment options with you and decide which treatment is most suitable.

Common tests to determine if you are suitable for lung volume reduction treatment:

- Spirometry or pulmonary function test, PFT, is a test that measures your lung function. Parameters such as Residual Volume (RV) and Forced Expiratory Volume (FEV) will be taken as a measure of your condition.
- X-ray and CT scan of your lungs will show the distribution of the emphysema which is important when planning the treatment.
- Scintigraphy or perfusion scan can give information about which part of your lung is most affected by the emphysema.
- 6 Minute Walk Test is a measure of your stamina and shows how far you can walk during 6 minutes.

The examinations above may be performed to determine if you are suitable for lung volume reduction treatment. They will also give parameters for comparison as to how you have responded to the treatment at later follow-up.

How is the treatment performed?

Before valve treatment you will receive anesthesia to make the treatment as comfortable as possible. Your airways will be examined via mouth or nose through a bronchoscope (a fiber optic camera). Through the bronchoscope your airways are assessed for presence of channels that communicate between the lobes of your lungs (collateral ventilation). If little or no collateral ventilation is detected valves (normally 2-5) will be placed in the suitable lobe. The procedure will take approximately 45 minutes.



Valves for lung volume reduction. The valves are approximately 4mm in diameter and 10mm long.

After you have been treated

You will stay in hospital after the procedure for observation and X-ray to rule out any possible complications.

Where in the lung are the valves placed?

