

## EMPHYSEMA THERAPY

Information brochure for valve therapy in the treatment of emphysema.

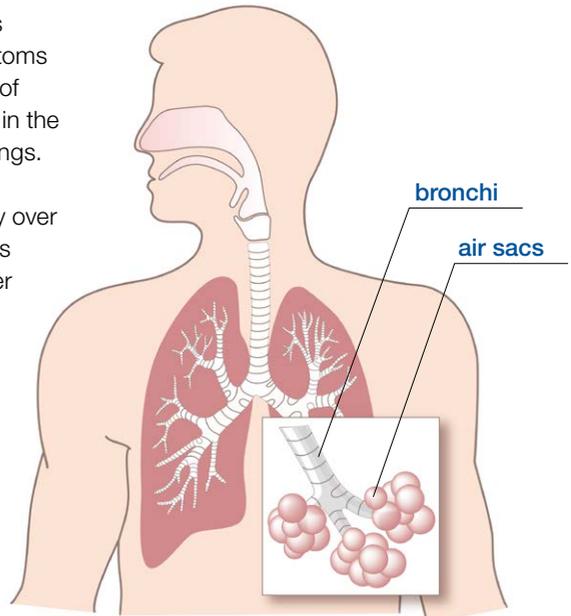


## PATIENTS WITH EMPHYSEMA

With every breath, lungs deliver oxygen to the rest of the body to perform essential life functions. Lungs are made up of tiny air sacs which absorb the oxygen in the air you breathe. In patients with emphysema, these air sacs are gradually destroyed and lose their elastic strength, which makes it difficult for air to exit the air sacs. This allows air to become trapped in the most diseased areas of the lungs. The trapped air interferes with the function of the healthier areas of the lung, which adds to difficulty in breathing.

Every affected person's experience is different, but the characteristic symptoms include chronic coughing, shortness of breath, frequent colds, a tight feeling in the chest, and increased mucus in the lungs.

The symptoms usually develop slowly over many years. As a result, most patients only consult a doctor when they suffer breathlessness—even when exerting themselves only a little.



*Upper and lower respiratory tract: the air flows through the nose/mouth, trachea and bronchi to the air sacs.*

# TREATMENT CHOICES

Treatments for emphysema include drugs, oxygen, or in some cases, surgery. Surgery may not be appropriate for some patients, depending on their health status. Doctors advise patients on the appropriate therapy options.

## **If symptoms are mild, doctors frequently recommend:**

- Avoiding smoking and other risk factors
- Having vaccinations against flu and pneumonia
- Short-acting drugs to expand the bronchi (bronchodilators), taken as needed

## **Additionally in the case of moderate symptoms:**

- Long-acting drugs to expand the bronchi (bronchodilators), taken as a regular medication
- Pulmonary rehabilitation with exercise to strengthen the lungs, including power, stamina and relaxation elements, as well as training in correct use of inhalation systems

## **Additionally in the case of severe symptoms:**

- Cortisone spray as a regular medication
- Oxygen treatment
- Bronchial valve therapy (IBV Valve Procedure)
- Surgery (lung transplant, for example)

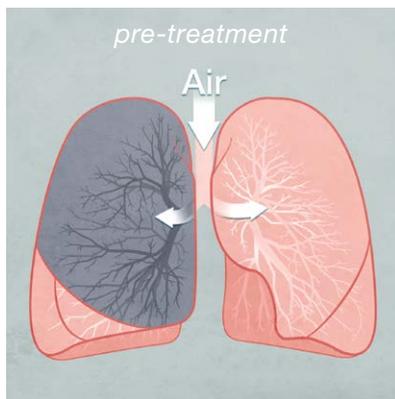
## THE IBV VALVE PROCEDURE

The IBV Valve is a small, umbrella-shaped, one-way valve that is placed inside the airways of a lung. It is used to redirect air from the less healthy to the more healthy parts of the lung.

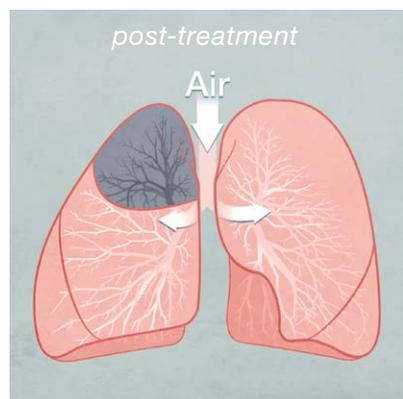
This helps to reduce over-inflation while letting trapped air and fluids escape. The volume of the treated part of the lung is reduced, allowing healthier parts of the lung to expand and function more normally. This helps to reduce over-inflation and may improve overall lung function and quality of life for people living with emphysema.

After the procedure, patients may be required to stay in the hospital for a minimum of one night.

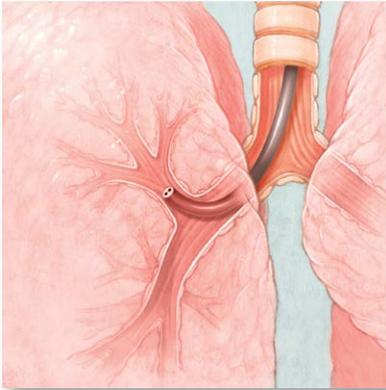
Although the valves are meant to be permanent, they are designed to be removable if necessary.



*Over-Inflated Lung*



*Diseased Parts Reduce, Healthier Parts Expand*



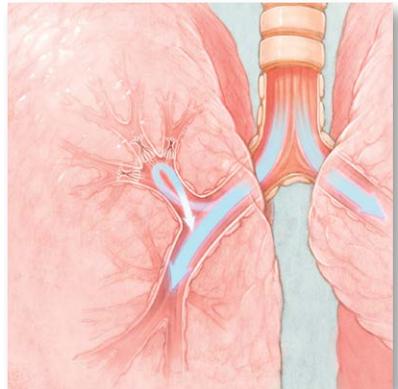
Surgery is not needed to place valves in the airways of the lung. The IBV Valves are placed using a bronchoscope.



The valve is placed in the airway using a catheter that goes down the bronchoscope. Once the valve is in the airway, it expands and contracts with breathing.



More than one valve will be placed. The valve allows trapped air and fluids to flow past it, but blocks air from entering the diseased part of the lung.



The valve redirects air to healthier parts of the lung and reduces over-inflation.

## FAQS ON VALVE THERAPY

### **Can valve therapy improve breathing and quality of life?**

Yes. Patients may experience improvements in breathing capacity, stamina and quality of life.<sup>1,2,3</sup>

### **Can anyone benefit from valve therapy?**

No, valve therapy only works in select patients with heterogenous emphysema and evidence or markers of low collateral ventilation such as complete fissures.<sup>1,2,3</sup> A doctor may prescribe breathing tests and a CT scan to see if patients qualify. It should not be used in patients unable to tolerate a flexible bronchoscopy procedure or who have active asthma, bronchitis or clinically significant bronchiectasis.

### **Is an operation required for valve therapy?**

No, the one-way valve is positioned by a doctor during a bronchoscopy (lung endoscopy).

### **What are the potential complications of valve therapy?**

Valve therapy is a minimally invasive procedure that is well tolerated by most patients, but is not without risks. Potential complications associated with bronchoscopy and/or valve placement include, but are not limited to, COPD exacerbation, death, infection in the tissue distal to a valve, local airway swelling or edema at site of valve implantation, and pneumothorax.<sup>1,2,3</sup>

### **How long does it take for the valve therapy to work?**

If the treatment is a success, benefits may be felt in as little as 30 days, but can sometimes take several months to achieve maximum benefit.<sup>1,2,3</sup>

### **Where can valve therapy be performed?**

Lung specialists can provide information on the therapy, and refer qualified patients to lung clinics and university hospitals where valve therapy is performed.

### **What should be done after bronchoscopy?**

A hospital stay may make sense after undergoing valve therapy. Lung specialists check the function of the valves and rule out any side effects. If a patient suddenly feels unwell after valve therapy and is acutely short of breath, they should visit their nearest hospital immediately and inform the doctors about the valve therapy. Although the valves are meant to be permanent, they are designed to be removable if necessary.

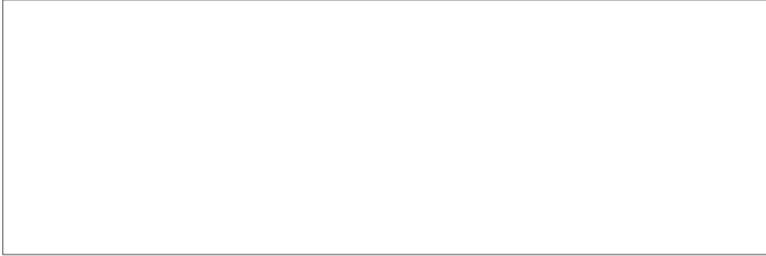
*For full prescribing information, refer to the Instructions for Use or visit [www.spiration.com](http://www.spiration.com).*

<sup>1</sup> Eberhardt. CHEST 2012; 142(4): 900-908

<sup>2</sup> Sciruba. NEJM 2010; 363: 1233-1244

<sup>3</sup> Springmeyer. Thorac Surg Clin 2009; 19(2): 247-253





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