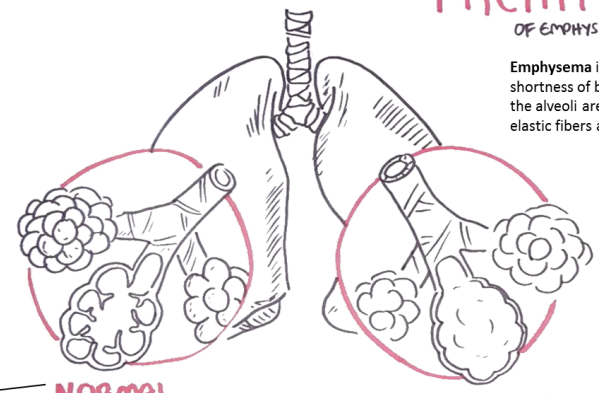
TREATMENT OF EMPHYSEMA

Emphysema is a type of **lung disease** that causes shortness of breath. In a person with emphysema, the alveoli are damaged. The alveoli walls, the elastic fibers are damaged and lost.

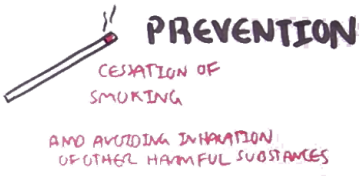


Here are **normal** alveoli. It is not damaged. It still **contains the alveoli walls**.

Alveoli with emphysema, on the other hand, are damaged. The **walls are damaged**. The elastic fibers are lost, and this makes breathing difficult and uncomfortable.

Now, emphysema is usually not a disease by itself. Many **people with emphysema also have chronic bronchitis**. A combination of the two lung diseases is commonly called **chronic obstructive pulmonary disease or COPD**. Lung damage from emphysema emphysema and COPD is **irreversible**. The quality of life for a person suffering diminishes as the disease progresses, which is quite sad.

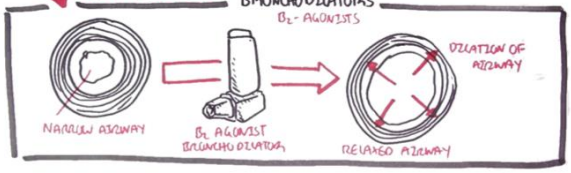
The most important step in **preventing emphysema** and COPD, and slowing down its progression,



Quit smoking because smoking is the **main cause** of emphysema. And another important preventative measure is to also **not inhale substances** they may harm the lungs. For example, air pollution, or certain fumes

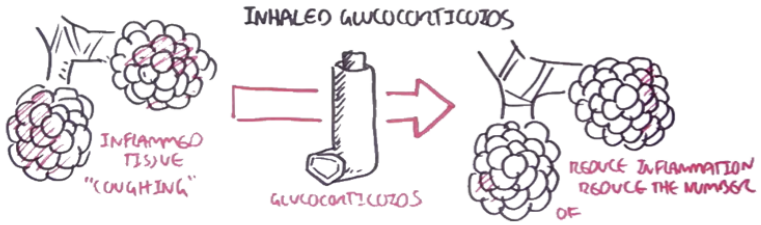
There are, of course, **pharmacological treatments** available out there that aims, um, in reducing the symptoms associated with emphysema, as well as to prevent exacerbations. One of the main drugs used are **bronchodilators**, the beta-2 agonists. These medications widen the airways, allowing the person to breathe better, easier.

Because, for example, if we take a **cross section** of the bronchial of this individual with emphysema, the **airways are narrow**. Because the smooth muscles are contracting, there may be also a lot of mucus being produced here.



And so if we administer a beta-2 agonist inhaler, which is a **bronchodilator**, this will **relax the airways**, relax the bronchial smooth muscles, which will allow the person to breathe easier. Bronchodilators will reduce symptoms and improve lung function.

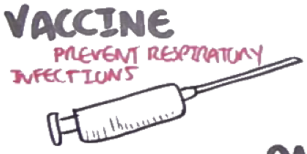
Glucocorticoid inhalers can also be given to a person with emphysema. And this is to **treat the exacerbation periods**. These are painful periods when the symptoms are more severe, more prominent. Administration of ~~glucoto-~~, glucocorticoids, ~~uh,~~ which is an **anti-inflammatory drug**, will **decrease the pain cause by inflammation**, which is associated with emphysema



~~So for example,~~here ~~-~~We have an inflamed lung. And if, and if the person takes glucocorticoids the **inflammation will subside**. The number of exacerbation episodes, ~~um,~~ will be reduced.

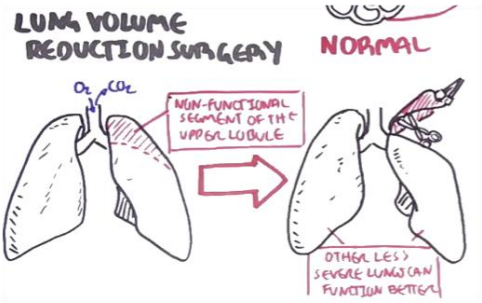
Oxygen therapy is an important treatment for people with emphysema if they exhibit **hypoxemia**. Hypoxemia is when you have **low oxygen levels in the blood**. And so, um, if an individual has hypoxemia, they require oxygen therapy daily. About 15 hours or more per day. Oxygen therapy can improve survival rates.

Vaccines are advised to prevent **respiratory infections**. Respiratory infections such as pneumonia can exacerbate the symptoms of emphysema. Also, because emphysema is as a result of a chaotic immune response in the lungs, it is necessary that people with emphysema get regular vaccinations.

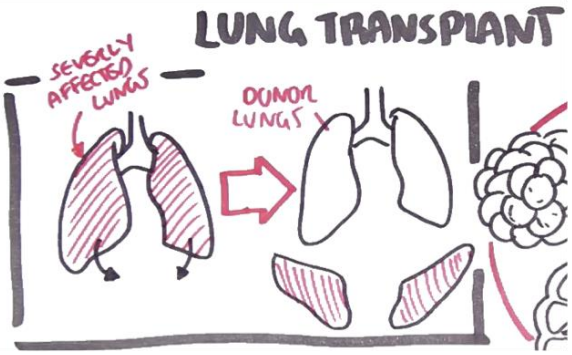


If a person does contract an infection, and is suffering from **chronic bronchitis**, for example, **antibiotics** are used to clear up and manage the infection.

Lung volume reduction surgery is used in **severe cases**. Typically, in COPD. This is where a non-functioning part of the lung is removed.



This non-functioning part of the upper lobule. **Removing this non-functioning part** of the lung will allow the other parts of the **lungs to function better** despite being also damaged.



Lung transplantation can and may be performed in end-stage COPD when lungs are damaged. And the person is failing at other treatments. Donor lungs are given. However, **survival benefits** has **not been demonstrated** in emphysema.

Finally, there is **rehabilitation programs** aimed to **educate** people, essentially, about emphysema, as well as improve lung function through certain **breathing exercises**. Rehabilitation programs also provide **emotional support** amongst many other things. I hope you enjoyed this video on the treatments of emphysema. Thank you for watching.