

Emphysema

Introduction

- Emphysema is a very serious disease and the third leading cause of death in the United States. Emphysema is also known as COPD. COPD is Chronic Obstructive Pulmonary Disease. Emphysema is caused mainly by smoking. People who have emphysema get shortness of breath and find it very hard to breath. Most people who are diagnosed with emphysema have to walk around with oxygen for the rest of their lives People who have emphysema lose the tissue around their lungs which destroys the physical shape and function of the lungs.

I chose to research this topic because my uncle passed away from emphysema 3 years ago. My uncle was a very heavy smoker which was one of the main reasons for as to why he was diagnosed with emphysema. I never knew my uncle without him attached to an oxygen tank and I never understood what he needed it for. I understood as I got older but I wanted to research emphysema in depth to find out everything about the disease.

Section 1: Background and Problem Statement

- **Web site #1 Name: National Emphysema Foundation**
- **Web address: <http://www.emphysemafoundation.org/>**
- **Background Information:**
 - Healthy People 2020 does not address Emphysema, but there are many other non-profit organizations that are found throughout the United States that are very interested in reaching out to the rest of the United States to share any information they may find so other people and families who are going through the same thing can find out more information about emphysema. The National Emphysema Foundation (NEF) is an organization that tries to increase the awareness of the disease to the world. It is run by the National Emphysema Foundation Board of Directors, which include physicians, doctors, businessmen, and community leaders. NEF has a goal to help decrease the costs of this deadly disease both economically and humanly because this disease is growing globally and it is a huge health problem. NEF is doing all they can to try and prevent any negative outcomes that come with this disease.
- **Web site #2 Name: COPD Learn More Breath Better Campaign**
- **Web address: <http://www.nhlbi.nih.gov/health/public/lung/copd/lmbb-campaign/index.htm>**
- **Background Information:**
 - The COPD Campaign is a campaign that is specifically designed for men and women over the age of 45, and especially for those who have smoked. The campaign is making it aware to everyone that emphysema is an extremely dangerous and deadly disease. COPD Campaign is trying to let people know that COPD can be treatable and preventable. The campaign also tries to reach out to those who have already been diagnosed with emphysema and also their health care providers. In doing so, it allows the doctors and the people diagnosed with emphysema to see what there is to do for the disease and also if there are any ways to decrease the development of emphysema. The COPD Campaign also wants everyone to be aware that emphysema is an extremely serious lung disease

and people should try to stay away from smoking and second-hand smoke to decrease their chance of getting emphysema.

- **Web site #3 Name: American Lung Association: Fighting for Air**
- **Web address: <http://www.lungusa.org/get-involved/>**
- **Background Information:**
 - The American Lung Association (ALA) has a strong passion to save lives by decreasing lung disease such as emphysema, by increasing the lung health, and by ensuring everyone is breathing in fresh and clean air to make sure everyone has healthy lungs. The ALA has found much research to support and backup their facts as to why emphysema is bad. The ALA wants people around the world to start voicing their opinions and facts about emphysema. The AFA wants the world to know how bad lung disease is and if people start making it known that emphysema is terribly deadly then it will increase the risk for many people to get diagnosed with emphysema.

Section 2: Research

Web site #1 Name: Medline Plus

- **Web address: <http://www.nlm.nih.gov/medlineplus/emphysema.html>**
- **Summary of the research:**
 - It is understood that emphysema is one of the deadliest lung diseases in the world. As a result and symptom of emphysema it does not give you the oxygen your body needs because the lungs are so destroyed. When people are diagnosed with emphysema they get a chronic cough which means its lifetime and it is very likely that they run out of breath quickly with any type of running around or exercising. As it has been said, smoking is the leading cause of emphysema. Once people start to smoke it can be hard to quit, but the quicker people stop smoking, then the there is a lesser chance of being diagnosed with emphysema when they get older. Once you are diagnosed with emphysema the treatment is determined whether the case of emphysema is mild, moderate, or severe. Treatments of emphysema are inhalers, specific prescribed medications, and oxygen tanks. There is also a surgery that can be preformed to decrease the complications of the chronic symptoms and also prevent any complications that may occur.
- **Web site #2 Name: Department of Surgery**
- **Web address:**
- **http://www.columbiasurgery.org/news/research/2008_emphysema.html**
- **Summary of the research:**
 - Research has shown that emphysema occurs when the smaller air sacks of the lungs get destroyed and break down. It then leads to the lungs collapsing and it overfills the chest with air. The symptoms that occur when that happens to the lungs are life changing and everlasting. Once someone is diagnosed with emphysema they will never be able to live life the way they used to. It will give them shortness of breath, fatigue, and little exercise capacity. Lung Volume Reduction Surgery (LVRS) is a treatment that prolongs survival. By removing the

damaged portions of lung tissue, the treatment enables what is left of lung tissue to be more effective. It treats advanced emphysema, but oxygen treatment is still needed in order to help someone breathe who is diagnosed with emphysema. Once emphysema is diagnosed, there is no way that it will go away, but there are ways to help make it through.

- **Web site #3 Name: Spiriva**
- **Web address: http://www.spiriva.com/about-copd/what-is-copd.html?sc=SPRACQWEBPSGOGC1105032&utm_source=google&utm_medium=cpc&utm_term=emphysema&utm_campaign=research-condition_pg**
- **Summary of the research:**
 - Emphysema is lung disease that affects a person's breathing habits. As emphysema worsens over time so does a person's breathing. When a person has emphysema they are unable to push out and release all the bad air that is in their lungs. This results in the bad air being trapped leaving little to no room for good, fresh air to come through. Also, as a result, when people do not get enough oxygen and when they do not release carbon dioxide from their blood, it is hard for someone to exhale and also they get very tired and worn out very quickly.

Section 3: Statistics

- **Web site #1 Name: Breathe California**
- **Web address: <http://www.breathecalifornia.org/healthinfo/emphysema.html>**
- **Summary of the statistics**
 - According to the organization Breathe California, they state that smoking is the main cause of emphysema and accounts for more than 80% of all cases of emphysema. Breathe California also states that over 3 million Americans suffer from emphysema that is 2 out of every 1,000 residents. According to Breathe California, they state that more than 100,000 people in the U.S. die each year because of having emphysema. Also, many more people die from a disease brought on from emphysema; for example, congestive heart failure.
- **Web site #2 Name: Statistical Brief: Smoking Status of Adults in the U.S.**
- **Web address: http://www.meps.ahrq.gov/mepsweb/data_files/publications/st7/stat07.pdf**
- **Summary of the statistics:**
 - According to a study done in the early 2000s, a statistic was proven that 23.1% of adult U.S. civilian non-institutionalized population currently smoked, that means 46.4 million people in the U.S. smoked. Additionally, 23.6% of non-Hispanic blacks smoked, and 23.8% of non-Hispanic white and other persons currently smoked daily. Which, in comparison, was a lot more to Hispanics who smoked, because only 16.8% of Hispanics in the U.S. smoked. Overall, around 57% of smokers who had been to the doctors within the last 12 months were told to quit smoking otherwise they will face serious health consequences. About 37.9% or persons were diagnosed with emphysema. 24.8% of people were diagnosed with asthma, 20% were diagnosed with hypertension or cardiovascular problems, and

18.5% with diabetes claimed that they currently smoked. These statistics prove that emphysema is the number one disease you get when you are a smoker.

- **Web site #3: CDC: Centers for Disease Control and Prevention**
- **Web address:** <http://www.cdc.gov/nchs/fastats/copd.htm>
- **Summary of the statistics:**
 - According to CDC, the number of non-institutionalized adults who have been diagnosed with emphysema is 4.9 million people, which is 2.2%. These statistics just keep increasing as the years go on. According to CDC the number of residents who need home care assistance due to emphysema is 190,000 which is 13%. There are 100,000 deaths per year caused by COPD and out of the 100,000 people 12,790 of them are caused from emphysema. That's 4.2% each year.

Section 4: Consumer Information

- **Web site #1 Name: Medline Plus**
- **Web address:** <http://www.nlm.nih.gov/medlineplus/emphysema.html>
- **Summary of the information:**
 - In order to understand what emphysema is and its symptoms, people must first be able to understand exactly what it is. According to Medicine Plus, emphysema is the worst lung disease you can ever be diagnosed with. Emphysema is typically caused by smoking. Medicine Plus states that if you can quit smoking then you are less at risk of being diagnosed with emphysema. Also, if you have never smoked before do not try it. When you are diagnosed with emphysema it is something you will have to live with for the rest of your life. It causes damage to the air sacks (aveoli) in the lungs. In this case, your body does not get the oxygen that it needs in order to feel like you can exercise without feeling tired or worn out within minutes of starting. Emphysema basically “knocks the life out you,” and you will have to live on oxygen for the rest of your life.
- **Web site #2 Name: Lung USA**
- **Web address:** <http://www.lungusa.org/lung-disease/copd/?gclid=CPjv15H026sCFYeA5QodzRuS4A>
- **Summary of the information:**
 - According to Lung USA, emphysema is preventable and treatable if you take the right steps to wanting to treat it and become healthy. Considering that emphysema is the third leading cause of death in the United States, people should take the treatment seriously. The number one way to preventing emphysema is to quit smoking or never start to smoke. Also, just by taking your medicine that is prescribed to you by your doctor is another way at treating emphysema. If your emphysema is severe, then doing the proper oxygen treatment daily will help you with coping with emphysema. Also, there is pulmonary rehabilitation, which is a program designed specifically for people with emphysema to be able to exercise daily. Because emphysema gives people such a shortness of breath, it is hard for people to get any type of exercise at all.
- **Web site #3 Name: Hands on Health**
- **Web address:** <http://www.handsonhealth-sc.org/page.php?id=977>

- **Summary of the information:**
 - According to Hands on Health, symptoms of emphysema come along gradually. If you start to feel shortness of breath or trouble breathing, then that is the first and earliest sign to emphysema. Another symptom would be how most patients will get a chronic cough and in the early stages of getting this cough, they will cough up thick mucus. As time increases with emphysema, exercise becomes more severe and hard to do. Also, the coughing may not go away and bronchitis will become more prone. Also, according to Hands on Health, someone who is diagnosed with emphysema may become more barrel-chested due to their lungs trying to expand for air.

Section 5: Solutions to the Problem (or Issue)

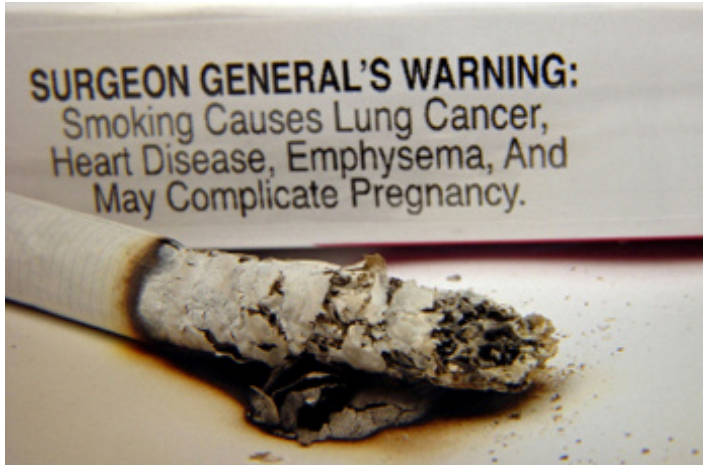
- **Web site #1 Name: Emphysema Treatment**
- **Web address:** <http://www.famousdoctor.org/emphysema.html?gclid=CMSy4dj326sCFYne4Aodhn7zOQ>
- **Summary of the information:**
 - According to “Emphysema Treatment,” one solution to emphysema is getting the proper treatment. As time goes on, and technology keeps growing, treatment for all sorts of diseases keep getting better. The treatment for emphysema is increases a lot. According to this article, healthcare professionals have found that emphysema-related symptoms can be treated and respiratory system can be reversed. With the new innovative treatment approaching, the severe emphysema patients can get improvement with their shortness of breath within 2 weeks. The reduction of using the oxygen tank is within one month, and reversal of lung degeneration is within 3 months.
- **Web site #2 Name: Lung USA**
- **Web address:** http://www.lungusa.org/lung-disease/copd/?gclid=CNb44N_526sCFYpn5QodFFiLFQ
- **Summary of the information:**
 - According to Lung USA, which is an organization trying to keep people from being diagnosed with emphysema is trying to let people know as much as possible that smoking is the worst thing that you can do to your body and as it was stated in many other facts the number one solution to preventing emphysema is to not smoke. Smoking has become extremely easy for basically anyone to get a hold of. Smoking is the quickest way for someone to be diagnosed with emphysema. If people have not started to smoke, then they most definitely should not start. Also, staying away from second-hand smoke is another solution to the problem of getting emphysema. Second-hand smoke is definitely triggered towards younger children because they have no way of getting away from it.
- **Web site #3 Name: About Emphysema**
- **Web address:** <http://www.famousdoctor.org/emphysema2.html>
- **Summary of the information:**

- According to this article, some solutions to emphysema would be taking antibiotics. Also exercise, if you exercise, then it will keep your heart rate up and also keep your lungs used to your daily activity. Another solution to the problem would be lung transplant. The only “known cure” for emphysema is a lung transplant. But by the time people are given that option it is too late and the patient isn’t strong enough to go forth with such a serious operation. To determine if a lung transplant is an option, doctors must check the patients age and combine it with oxygen deprivation and the side effects of the medications they are on that are used to treating their emphysema. The downfall with surgical transplantation is the patient is required to take an anti-rejection drug which will suppress the immune system and can lead to microbial infection of the patient. Which means it will lessen their immune defense.

Conclusions

After researching emphysema I definitely learned a lot. I knew that emphysema was caused by smoking, but I did not know that smoking was the main way to bring on emphysema. I also learned that second-hand smoke is another way people can be diagnosed with emphysema, even if you are not physically smoking, just by breathing it in can cause emphysema if you are around smokers. I also did not know that emphysema was the third leading cause of death in the United States. I find that so hard to believe, because I feel like emphysema can be so easy to prevent but so many people find it extremely hard to quit smoking, or just cannot say no when it comes to peer pressure and they start smoking later in age. I find it so sad seeing so many young teenagers walking down the street with cigarettes in their hands. Getting access to cigarettes for teens has become so easy, whether they have someone buy them a pack or if they steal them from their parents, no matter how they get them, it has become so easy to get them, and they have no idea the harm they are doing to their body. Nor do they have any idea about what it will do to them in their later years. I was happy to find out that with technology increasing, so is ways of treating and preventing emphysema. With the goodness of technology, it is increasing the lifespan of many people who are severely diagnosed with emphysema.

Back to Betty C. Jung’s Web site	http://www.bettycjung.net
Back to Fact Sheet Directory	http://www.bettycjung.net/Pch202fs.htm



Gross pathology of the lung showing centrilobular emphysema characteristic of smoking. Closeup of fixed, cut surface shows multiple cavities lined by heavy black carbon deposits.



