

TerranearPMC Safety Share

Week of February 20, 2017 – COPD

It seems like whenever there is a commercial on TV (which happens all too frequently and all too annoying!), inevitably one of the several ads will be for a prescription drug (“ask your doctor to see if ‘such and such’ is right for you”). Advertisements for lawyers looking for victims of mesothelioma, or those who have suffered from harmful side effects from some drug they were prescribed or procedure they encountered dominate the screen. Of course one of the most prevalent type of commercials are those that talk about chronic obstructive pulmonary disease; better known as COPD.

COPD is not a specific ailment but rather an umbrella term used to describe progressive lung diseases that include such conditions as emphysema, chronic bronchitis, refractory (non-reversible) asthma, and some forms of bronchiectasis (inflamed bronchi walls). All this diseases are listed as COPD as they are characterized by increasing breathlessness. What categorizes these diseases together is the “O” in COPD.....that’s “obstructive,” and refers to an inability to allow air we inhale to travel into our lungs and into the micro-sized exchange sacs, known as alveoli, where oxygen gets transferred into the blood stream.

COPD affects an estimated 30 million individuals in the U.S., and over half of them have symptoms of COPD and do not know it. That’s because many people mistake their increased breathlessness and coughing as a normal part of aging. In the early stages of the disease, you may not notice the symptoms. COPD can develop for years without noticeable shortness of breath. You begin to see the symptoms in the more advanced stages of the disease. As with many diseases, early screening can identify COPD before major loss of lung function occurs.

Most cases of COPD are caused by inhaling pollutants; that includes smoking (cigarettes, pipes, cigars, etc.), and second-hand smoke. This means that fumes, chemicals and dust found in many work environments are contributing factors for many individuals who develop COPD. However, genetics can also play a role in an individual’s development of COPD; even if the person has never smoked or has never been exposed to strong lung irritants in the workplace.

Here is information on the top three risk factors for developing COPD:

Smoking: COPD most often occurs in people 40 years of age and older who have a history of smoking. These may be individuals who are current or former smokers. While not everybody who smokes gets COPD, most of the individuals who have COPD (about 90% of them) have smoked.

Environmental Factors: COPD can also occur in those who have had long-term contact with harmful pollutants in the workplace. Some of these harmful lung irritants include certain chemicals, dust, or fumes. Heavy or long-term contact with secondhand smoke or other lung irritants in the home, such as organic cooking fuel, may also cause COPD.

Genetic Factors: Even if an individual has never smoked or been exposed to pollutants for an extended period of time, they can still develop COPD. Alpha-1 Antitrypsin Deficiency (AATD) is the most commonly known genetic risk factor for emphysema. Alpha-1 Antitrypsin related COPD is due



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to a deficiency of the Alpha-1 Antitrypsin protein in the bloodstream. Without the Alpha-1 Antitrypsin protein, white blood cells begin to harm the lungs, causing deterioration. The World Health Organization and the American Thoracic Society recommends that every individual diagnosed with COPD be tested for Alpha-1.

While AATD has been identified as a primary genetic condition for causing COPD, this is not the only contributing factor and while other genetic factors have yet to be discovered, the fact that not all individuals with COPD have AATD, and because some individuals with COPD have never smoked, it is believed that there are other genetic predispositions related to developing COPD.

Emphysema: Emphysema gradually damages the air sacs (alveoli) in your lungs, making the individual progressively shorter of breath. Your lungs' alveoli are clustered like bunches of grapes. In emphysema, the inner walls of the air sacs weaken and eventually rupture — creating one larger air space instead of many small ones. This reduces the surface area of the lungs and, in turn, the amount of oxygen that reaches your bloodstream.

Asthma is not just a serious lung disease, but due to environmental factors, we are observing an increased incident rate of this disease in the US as well as around the world. Asthma is a condition where inflammation of your airways is a major factor. And, in turn, this type of inflammation can make your airways more sensitive and more narrow than usual, making it harder to breathe. In addition, excess mucus can be produced and accumulate in the airways which can significantly exacerbate the ability to breath.

Similar to many diseases within the category of COPD, bronchiectasis involves inflammation of the bronchi walls, thereby narrowing the airway to the lungs. However, differing from other COPD illnesses, the disease is characterized through long-term inflammation and scarring, which, in turn, causes mucus build-up, followed by infection. A cycle of inflammation and infection can develop, leading to loss of lung function over time.

COPD has no cure... yet. However, lifestyle changes and treatments can help by relieving symptoms and slowing the diseases' progression. As far as those ads we see on TV for the various medicines; they are referred to as Bronchodilators which relax the muscles around airways, allowing your airways to open and therefore, make breathing easier.

As is typically the case, the number one preventative measure is to not smoke and if you do smoke – QUIT! Taking control of your life by not smoking and eating well and exercising are all things we can do to reduce our risk to so many diseases while helping us enjoy the things we enjoy doing.

The best revenge is to live on and prove yourself

Eddie Vedder (Musician – Pearl Jam)

