

MassMedLink to Health

Information on COPD

COPD, or chronic obstructive pulmonary disease, is the fourth leading cause of death in America, and affects nearly 14 million people in the United States. COPD refers to two lung diseases, chronic bronchitis and emphysema. Most patients have both. The condition is characterized by an obstruction of airflow that interferes with your normal breathing. Smoking is the primary cause of COPD. COPD gradually worsens overtime and is irreversible.

The first of the two diseases, chronic bronchitis, is associated with a productive and chronic cough that lasts at least three months, in two consecutive years, and the cause of the cough is unknown. With this condition, smoke or other irritants may be causing your body to produce excess mucus in your airways, making them narrow and inflamed leading to a disruption of your airflow.

The second disease, emphysema, occurs when the air sacs in your lungs become damaged leading to increasingly large holes in your lungs. These air sacs, known as alveoli, normally open up and close like a balloon letting air in and out. With emphysema, these alveoli remain in an open state causing your lungs to lose their elasticity. These changes mostly occur if you are a smoker, have been exposed to certain air pollutants, or born without an enzyme known as alpha-1 antitripsin.

There are three stages of COPD, mild, moderate, and severe. With mild COPD you experience being out of breath only during high-energy activities like exercise. With moderate COPD, breathing becomes more difficult during daily activities such as climbing stairs, and you may cough more often as the disease worsens. With severe COPD, you may experience breathing difficulty when performing simple activities or even at rest. In severe COPD, you may cough even more frequently, often with phlegm or mucus. Your physician can check the severity of your COPD with a simple lung function test called spirometry, which measures the rate and the volume of air exhaled out of your lungs.

Smokers are 10 times more likely to be diagnosed with COPD versus non-smokers. The best way to slow COPD is to quit smoking. Smoking cessation programs are available for those who wish to stop smoking. Often insurance companies offer programs to help stop smoking. If you are a non-smoker, it is still important to avoid second-hand smoke and other irritants, such as indoor or outdoor air pollution and dust.

Exercise is another important step in controlling your COPD. Choose an exercise you can do easily such as walking, jogging, riding a bike, or hiking. Even if you have to stop many times don't give up. The next time you may not need to stop as

often. Exercise helps strengthen your body. When your body is in better shape, you may be more active with less shortness of breath.

Being overweight can put an unnecessary strain on your heart and lungs, making it difficult to breathe. Eating healthy foods, such as fresh fruits, vegetables, lean meats, and whole grain breads may help in controlling weight and COPD.

Weather conditions may also make your breathing difficult. For some people, hot, humid air makes it harder to breathe, while others have a difficult time with cold air.

There is currently no cure for COPD but generally, the goal of treatment is to provide relief of your symptoms and to prevent complications or worsening of your disease. Bronchodilators, which are medications that help relax and open up your airways, are commonly used to treat COPD.

Ipratropium, also known as Atrovent®, a short-acting bronchodilator, is recommended as a first-line medication for treatment of COPD exacerbations. The main side effects of this drug include drying of the mouth, increased wheezing, and blurred vision.

Albuterol, also known as Ventolin, Proventil or AccuNeb, is another type of bronchodilator that may be used separately or in combination with ipratropium to treat acute COPD attacks. The most common side effects of albuterol are rapid heart beat, headache, and tremor.

Short-acting combination medications include Combivent and DuoNeb. These products are combinations of albuterol and iprotropium, two bronchodilators.

Long-term control medications are designed to suppress swelling and inflammation in your airways and reduce mucus. Long-term control inhaled medications are taken daily to prevent exacerbations of COPD and should not be used as rescue medications when you are having acute symptoms of COPD.

Some long-term control medications are based on steroids. The commonly used inhaled steroids include Flovent brand name for fluticasone, Aerobid brand name for flunisolide, QVAR brand name for beclomethasone, and Pulmicort brand name for budesonide. The main side effects of steroid medications include cough, hoarseness and increased risk of mouth or throat infections called thrush. Thrush can be avoided by rinsing your mouth and spitting after using steroid inhalers.

Other maintenance medications include long-acting bronchodilators such as salmeterol generic name for Serevent Diskus, and tiotropium generic name for Spiriva. The main side effects of Serevent Diskus include rapid heart beat, muscle tremor, and headache. Common side effects of Spiriva include dry mouth, constipation, increased heart rate, blurred vision, and urinary retention,

Advair is a long-acting medication, which is a combination of fluticasone, a steroid, and salmeterol, a long acting bronchodilator.

Theophylline is a last line maintenance medication that is sometimes used when you do not respond or have difficulty using inhalers as discussed above. Theophylline's side effects include rapid heart beat, tremor, nausea, upset stomach, and insomnia.

When COPD symptoms are severe oral corticosteroids, for example prednisone tablets, may be needed to control the symptoms. This medication is often given in a taper dose where a large dose is started with and over a period of time the dose is decreased until it is not needed any longer. This medication should be taken with food and can cause mood changes.

Remember the key to controlling your COPD includes quitting smoking, exercising, maintaining a healthy diet, and avoiding triggers. Taking your medications correctly is an important part of preventing COPD complications. When treating COPD it is important to know which medications prescribed are long acting and used consistently over a period of time, for example inhaled corticosteroids, and those medications used for rescue or short acting medications, such as albuterol.

Rescue medication such as albuterol is the most effective medication for an acute attack. When 2 puffs are necessary, take the first puff then wait 2 minutes before taking the second puff. This allows the first puff to start working so the second puff can penetrate a little deeper allowing for a better therapeutic result. Long acting medications should be used daily as directed in order to keep COPD in control with the hope of using your rescue inhaler less. If you find that you need to use your rescue inhaler more often call your physician, you may need a change in medication therapy.

Also correct inhaler technique is important in order to have the most effect of your medication. Consult with your pharmacist, physician, nurse, or respiratory therapist for correct inhaler technique. Also review the instructions that are provided with your inhaler.

Make sure to keep your appointments and notify your physician if you experience worsening breathing difficulty or side effects.

Lastly, it is recommended to have a pneumonia vaccination once and a flu vaccination yearly to help prevent exacerbation and worsening of COPD.

We encourage you to speak with one of our MassMedLine pharmacists to review questions you may have about the information provided, or questions regarding your specific medications. Also if you have difficulty affording your medications, MassMedLine case managers are available to assist you.

References available upon request

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