Understanding Pulmonary Exacerbations

INTRODUCTION

Recognizing changes in signs and symptoms of your lung disease is an important part of managing your illness. People with chronic obstructive pulmonary disease due to Alpha-1 (Alpha-1 COPD) often have sudden "flare-ups" of symptoms, which doctors call exacerbations. These may follow periods when they're totally symptom-free.

We don't understand exacerbations very well, and we don't even have a clear, standard definition of what they are. But the definition we use below is one on which doctors normally agree.

IT'S A FACT: An exacerbation is a sustained worsening of a patient's condition beyond normal day-to-day variations that requires a change in regular treatment and medicine.

If you recognize worsening symptoms, you can seek treatment faster. It can also help you and your doctor decide how to treat your symptoms. Can you take care of them at home? Or do you need to see your doctor or go to the emergency room?

WHEN DOES A BAD DAY BECOME AN EXACERBATION?

All patients with Alpha-1 COPD have an increase in cough, sputum production, and breathlessness once in a while. What turns a "bad day" into something worse?

Some factors that may cause a bad day include:

- Weather
- Allergies
- Changes in air pressure
- Higher altitude
- Emotions
- Using an empty inhaler

How to recognize an exacerbation (flare-up)

Every person has different signs and symptoms before an exacerbation. You're usually the best person to know if you are having trouble breathing. But some changes are more likely to be noticed by other people. Share information about signs and symptoms with friends, families, and coworkers.

Common warning signs of an exacerbation include:

- More symptoms
- Trouble breathing, even at rest
- More wheezing and coughing
- More thick, sticky mucus
- Yellowish-green or bloody mucus
- Chest tightness
- Grumpiness or personality changes
- Swelling in the hands or feet
- Forgetfulness, confusion, slurring of speech, and sleepiness

Other possible signs of an exacerbation include:

- Fever
- Rapid breathing and heart rate
- Extreme tiredness and lack of energy
- Needing to use more pillows or sleeping in a chair instead of a bed to avoid shortness of breath
- Ashen or blue skin tone (cyanosis), especially in your fingertips or lips
- More headaches, dizzy spells, and restlessness when you wake up

Understanding your respiratory rate

Respiratory rate means how many breaths you take per minute. It's important to know your respiratory rate when you're feeling good. This is your baseline. It's hard to measure this for yourself, without unconsciously changing it. Ask someone else to help you count your breaths.

How to measure respiratory rate

1. Place one hand on your upper chest to feel it rise and fall. Each rise/fall cycle counts as one breath (respiration).
2. Count your breaths for 30 seconds.
3. Multiply the number of breaths by two.

How to measure heart rate (beats per minute)

Your heart rate may increase during an exacerbation, so it's good to know how to measure it.

1. Find your carotid pulse.

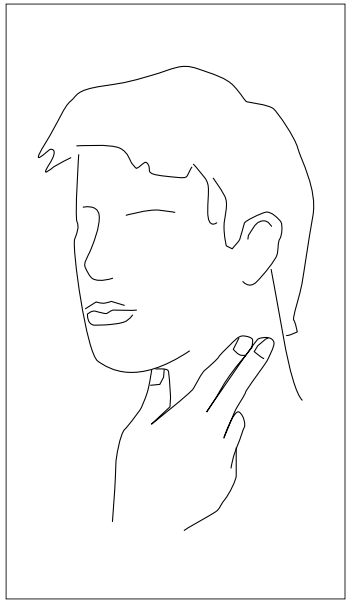
   Put your index and middle fingers to either side of your windpipe, underneath your chin.

   Press gently, without rubbing.

   You can also feel this pulse on the palm side of your wrist below your thumb.

2. Count your pulse for six seconds.
3. Add a zero to the end of the count (equals beats/minute).

   For example, if you counted 7, your heart rate is 70.



What causes exacerbations?

Exacerbations are often triggered by respiratory infections, from a virus (cold or flu) or bacteria.

Doctors don't prescribe antibiotics for most people with viral infections. However, people with Alpha-1 COPD often develop a secondary bacterial infection caused by damage to their lung tissue. So, whether your initial infection was caused by a virus or bacteria, your doctor may prescribe an antibiotic for you.

BURNING ISSUE: Bacteria and viruses can cause infections in various parts of the lung, leading to bronchitis, bronchiolitis, and pneumonitis or pneumonia

Other common causes of exacerbations include:

- Indoor and outdoor air pollution
- Heart failure (pulmonary edema)
- Blood clots to the lung (pulmonary thromboemboli)
- Other disorders

How to reduce and minimize exacerbations

You can't totally prevent exacerbations. But you can have less severe ones less often by following these guidelines:

- Wash your hands often and properly.
- Avoid close contact with people who have colds or the flu.
- Keep your flu and pneumonia vaccinations up to date.
- Keep your lungs working at their highest level by using more medicines to relax and open your airways (bronchodilators) and using them more frequently.
- Use antibiotics and other medicines promptly if you have upper respiratory infections or sinus problems with colored mucus or drainage.
- Monitor your lung function.
- Use oral corticosteroids (OCS) promptly if your doctor prescribes them.

CROSS REFERENCE: For more information on handwashing see the brochure ***Staying Healthy***

As you can see, there are many ways for you and your doctor to work together to reduce exacerbations.

YOUR ACTION PLAN FOR EXACERBATIONS (FLARE-UPS)

You and your healthcare practitioner should develop a written action plan for flare-ups. This plan may include:

- Using more medicines to relax and open your airways (bronchodilators) and using them more frequently.
- Adding an inhaled corticosteroid (ICS) to your care plan. Or, increasing the dose if you already take one.
- Adding a new bronchodilator.
- Using antibiotics.
- Using oral corticosteroids (OCS) for 3–14 days to reduce inflammation.
- Eating properly and drinking plenty of fluids.

KEY LEARNING: Symptoms do not go away when they are ignored. Knowing when to call your healthcare practitioner is very important in managing an exacerbation.

Action plan: Should you go to the hospital?

Most people can follow their action plans and deal with exacerbations at home. However, some people may need to go to the hospital when their symptoms get worse. These include people who:

- Are severely ill
- Are on chronic oxygen therapy
- Have had respiratory failure in the past

To assess the severity of an exacerbation, patients with Alpha-1 COPD exacerbations may need:

- A chest examination
- An X-ray (to rule out pneumonia)
- Arterial blood gas tests to check oxygen and carbon dioxide levels

Action plan: When to call your healthcare practitioner

Call your healthcare practitioner within 24 hours if you:

- Need to use your rescue inhaler or nebulizer more often, and using them doesn't help you breathe better.
- Have more mucus, and it's thicker, has a different color, and smells.
- Have swollen ankles, even after a night of sleeping with your feet up.
- Wake up feeling short of breath more than once a night.
- Feel tired for longer than just a day.
- Have a fever for more than a day.

Action plan: Symptoms that say go to the Emergency Department

If you have these symptoms, call 911 or go right to the emergency room:

- Disorientation, confusion, slurring of speech, or sleepiness during an acute respiratory infection
- Loss of alertness, or two or more of the following:
  - A sudden increase in shortness of breath even when you're at rest
  - Having to use your upper chest and neck muscles (accessory muscles) to breathe
  - Big increase or decrease in respiratory rate
  - Big increase in heart rate
- Any severe shortness of breath, chest pain, or other symptoms that make you fear for your ability to survive.

What not to do when you have an exacerbation

There are many things you can do at home to treat signs and symptoms. But don't:

- Smoke.
- Take codeine or any other cough medicine.
- Wait more than 24 hours to contact your healthcare practitioner if symptoms continue.

REMEMBER: Your symptoms won't go away if you ignore them. Watch your symptoms and follow your action plan to make sure exacerbations don't turn into something worse.

TREATING EXACERBATIONS

Alphas often have exacerbations. You have a number of options for treating exacerbations that may ease your symptoms. It's very important to know all your options. This helps you and your doctor create a treatment plan that suits you best.

Staying on top of your treatment plan every day is vital to your comfort and health. So read on about the following treatment options and be sure to talk to your doctor about them.

Medicines for treating exacerbations may include:

WHAT THEY ARE	WHAT THEY DO
Short-acting beta-agonists (SABA) and short-acting muscarinic antagonists (SAMA)	Increased doses of SABA and SAMA medicines in an inhaler or nebulizer will help open up narrow airways. The most common SABA is albuterol.
Inhaled corticosteroids (ICS)	Prevent exacerbations or help make them less severe. (However, starting these medicines won't improve current symptoms.)
Antibiotics	Stop infection and reduce further lung damage or secondary infections, if taken at the first sign of symptoms, particularly if sputum is yellow or green.
Expectorants	Help loosen and push mucus out of your airways. They can help you breathe more easily. These are not usually used continuously.
Oral corticosteroids (OCS)	Early use of high-dose oral steroids can stop an exacerbation or make it less severe.

BURNING ISSUE: Never stop taking long-term oral steroids abruptly: the adrenal glands may not be able to immediately resume adequate steroid production.

If you go to the emergency room during an exacerbation, you may receive oxygen therapy.

You may need oxygen therapy during an exacerbation if your oxygen levels are less than 88% saturated. Your arterial blood gases should be checked 30 minutes after you start the oxygen therapy. This ensures that you're getting enough oxygen without retaining carbon dioxide. (Note: Venturi masks are more accurate sources of controlled oxygen than are nasal prongs.)

You may not be able to prevent exacerbations when you have Alpha-1 COPD, but you can treat them. Work with your doctor to create a care plan. This may include:

- Taking medicine
- Learning to breathe better
- Quitting smoking
- Controlling stress

Following your care plan will make all the difference in how you feel and how much you can do.

NOTES

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