

COPD: Alpha-1 Antitrypsin Deficiency

Alpha-1 antitrypsin (AAT) is a protein normally found in your lungs and blood. It helps protect the lungs from damage that leads to chronic obstructive pulmonary disease (COPD). COPD is a group of lung diseases that includes emphysema.

Some people do not make enough AAT in their bodies. This is called an AAT deficiency. If you have the deficiency, you may get emphysema at a much younger age than normal. People with an AAT deficiency may get emphysema when they are 30 or 40 years old. It is also called inherited emphysema.

Do not smoke if you have an AAT deficiency. If you smoke, you could get very sick while you are young.

What causes an AAT deficiency?

AAT deficiency is rare. It is passed down by genes that you inherit from your family.

Why would your doctor think you might have an AAT deficiency?

Your doctor may suspect an AAT deficiency if:

- You get emphysema when you are 45 or younger.
- You have emphysema, but you do not smoke, have not inhaled dust from your workplace, or have not inhaled chemical fumes over a long time.
- You have liver disease with no known cause.
- You have someone in your family with emphysema, liver disease, or inflammation of fat under the skin (necrotizing panniculitis).



- You have a condition that damages and widens some airways of the lungs (bronchiectasis). This makes it easier for the lungs to get infected.

You will need a blood test to find out whether your body is producing enough AAT.

Finding out you have AAT deficiency can have a big impact on your life. Before deciding whether to get tested, you may want to consider genetic counseling. A genetic counselor can help you understand the changes AAT deficiency may bring to your life. You can learn more about what causes it, how it is diagnosed, and what treatments are available.

What is the treatment?

Treatment may include medicines to help you breathe easier. It may also include a pulmonary rehab program to learn exercise, eating, and breathing tips and other ways to help yourself stay as healthy and strong as you

can.

You also may be given man-made alpha-1 antitrypsin protein injections. To get this treatment, you will need to show that you do not smoke or have quit smoking.

You may have side effects from this medicine. An allergic reaction is possible. Other side effects may be fever, chills, headache, and

feeling dizzy. Redness, pain, or swelling where you have the shot is also possible. Call your doctor if you think you are having a problem with your medicine.

Do you have any questions or concerns after reading this information? It's a good idea to write them down and take them to your next doctor visit.



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