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"Popcorn lung" is the nickname for bronchiolitis obliterans. That's a condition that damages your lungs' smallest airways and makes you cough and feel short of breath. It's sometimes caused by breathing in a chemical used to flavor microwave popcorn. But other chemicals or lung illnesses can also cause popcorn lung.

Your lungs are where your blood picks up oxygen before carrying it to cells in the rest of your body. When you breathe in, air flows into your lungs through your windpipe or trachea. Your windpipe divides into two tubes called the bronchi, which lead to your left and right lungs.



Inside your lungs, those tubes split again and again, like the branches of a tree. The

smallest of those branches are called bronchioles, and they end in tiny air sacs called alveoli. The alveoli are where the oxygen is picked up by your blood.

When you have "popcorn lung," those tiny air passages get irritated and inflamed. That leads to scarring that makes them narrower. That makes it harder for you to get enough air.

What Causes Popcorn Lung?

The chemical that gave this condition its nickname is diacetyl. After workers at a factory that packaged microwave popcorn were found to have bronchiolitis obliterans more often than other people, some companies stopped using diacetyl as a flavoring. But it's still used in some electronic cigarette flavors in the US. Many e-cigarette makers state they aren't using this chemical in their products and its use in e-cigarettes is banned in Europe.

Another common cause is acetaldehyde, a chemical found in the smoke from marijuana and some electronic cigarettes. Acetaldehyde also can damage the lining of your mouth, throat, and stomach.

Other chemicals that can cause popcorn lung include:

- Metal oxide fumes, a common byproduct of welding
- Formaldehyde, a cancer-causing chemical used in some glues and building materials
- Sulfur dioxide, a pollutant released by burning fossil fuels
- Ammonia
- Chlorine
- Nitrogen oxides
- Hydrochloric acid
- Sulfur mustard, a chemical weapon known as "mustard gas"

Sometimes, bronchiolitis obliterans happens after you've had a serious illness that affects your lungs, for example some forms of pneumonia or bronchitis. And some people who have rheumatoid arthritis can get popcorn lung as a side effect of that condition.

If you've had a lung transplant or a stem cell transplant, you may get this condition if your body tries to reject the new organ. It's the primary cause of death in people who get lung transplants.

Symptoms

The main symptoms of popcorn lung are a dry cough and shortness of breath. These show up between 2 weeks and 2 months after you've been around a toxic gas or had an illness. You're especially likely to have them when you're exercising or doing heavy labor. If you've had a lung transplant, it might take several years for symptoms to show up.

If you feel tired without an obvious reason or wheeze when you don't have asthma or a cold, that also could be a symptom of bronchiolitis obliterans.

Diagnosis

If you have some of the symptoms of bronchiolitis obliterans, your doctor might recommend a computerized tomography (CT) scan of your chest. Several X-rays are taken from different angles and are put together to make a more complete picture. They'll probably also want to test how well your lungs are working.

A chest X-ray might tell your doctor if your lungs are holding in too much air, but the best way to confirm you have bronchiolitis obliterans is to have a biopsy. This is most often done with surgery.

Treatment

Popcorn lung causes lasting damage, so it's important to catch it early. If you do, you might be able to slow it down or keep it from getting worse:

- If it was caused by breathing in harmful chemicals, you'll want to stay away from them. You might need to wear protective gear at work or possibly change jobs.
- Your doctor may give you antibiotics or steroids to ease the inflammation that can scar your airways.
- Drugs that slow down your immune system may help protect your bronchioles from

more damage.

- Your doctor probably will give you medicine to help with your cough and open up your airways, and oxygen to help make it easier to breathe.



Damage from Bronchiolitis Obliterans

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