

Acute Bronchitis

Swollen airways, tons of cough, no antibiotics needed. The deep lungs stay clear.

THE ONE-LINE TRUTH

A virus swells the big breathing tubes (bronchi), making them pour out extra mucus and setting off a cough that can last up to three weeks. It is almost never bacteria, so antibiotics do not help.

The chain — how it unfolds

1. A virus that spreads through the air infects the lining of the bronchi. — why: More than 90 out of 100 cases of acute bronchitis are caused by a virus—the same ones that cause colds and flu.
2. Your body sends inflammation to fight the virus. — why: Inflammation is your immune system's normal way of attacking infected airway cells.
3. The airway lining swells and makes extra mucus. — why: Swelling and mucus are how your body traps and washes out the germ.
4. Some lining cells get damaged and fall off. — why: The virus hurts the cells and the tiny sweeping hairs (cilia), so mucus piles up.
5. Cough sensors get triggered over and over. — why: Mucus and swelling irritate the cough nerves, driving the main cough symptom.
6. Airways become jumpy (overly sensitive) for a while. — why: The damaged, swollen lining overreacts to any irritant, so the cough and mild wheeze can last one to three weeks.
7. The virus clears and the lining heals on its own. — why: Acute bronchitis fixes itself—your body clears it without needing antibiotics.

Spot it — what you see, and why

- Cough that lasts one to three weeks: The virus makes the lining of your breathing tubes (bronchi) swell and produce extra mucus. Even after the virus starts to leave, the swelling and mucus keep tickling the cough nerves, so the cough goes on for days or weeks.
- Cough may be dry or bring up mucus (clear, white, yellow, or green): Your airway lining makes extra mucus to trap and wash away the virus. The color comes from white blood cells that fought the infection—it does NOT mean bacteria are there.

- Cold symptoms came first (runny nose, sore throat, low-grade fever): The same virus that gave you a head cold traveled down into the larger breathing tubes in your chest. That is why you felt a cold first, then the cough started a few days later.
- Chest feels sore or tight from coughing: Coughing hard again and again strains the muscles between your ribs and across your chest wall, making them ache like sore muscles after exercise.
- Feeling tired or worn out: Your immune system is working around the clock to fight the virus, and constant coughing drains your energy, so you feel exhausted even if you are resting.
- Mild wheeze or whistling sound when breathing: The swollen, irritated airways get jumpy and narrow a little bit. When air squeezes through the narrowed tubes, it makes a whistling sound.

Red flags — act now

- High fever, fast heart rate, fast breathing, or low oxygen level—think pneumonia and get a chest X-ray
- Shortness of breath at rest, blue lips, or working hard to breathe—a deeper lung problem, not simple bronchitis
- Coughing up blood—needs a workup for pneumonia, tuberculosis, blood clot in the lung, or cancer
- Cough lasting more than three weeks—reconsider whooping cough (pertussis), asthma, acid reflux, or another cause
- Coughing fits that end in a whoop or vomiting, or contact with someone who has whooping cough—suspect pertussis

Treat it — in this order

1. Supportive care: rest, fluids, and time → Keeps the person comfortable and lets the body's immune system fight off the virus on its own, which is the real cure. Most people feel better in 7–10 days; the cough may linger 1–3 weeks.
2. Symptom relief: fever reducers and pain relievers (acetaminophen or ibuprofen), honey (1 teaspoon) for cough in children over one year old → Eases fever, body aches, sore throat, and cough so the person can sleep and do normal things. Honey has been shown in trials to calm cough better than placebo in children (and is safe and cheap).
3. NO antibiotics for otherwise healthy patients → Avoids side effects (diarrhea, rash, yeast infections, allergic reactions), prevents antibiotic resistance (a growing public health threat), and saves money. Antibiotics do NOT help a viral illness—multiple Cochrane reviews and CDC/American College of Physicians guidelines agree.

4. Inhaled bronchodilator (albuterol metered-dose inhaler, 2 puffs every 4-6 hours as needed) only if there is wheeze or a sense of chest tightness → Relaxes the smooth muscle wrapped around the airways, opening them up and easing wheeze and cough in patients who have airway twitchiness (like people with asthma or a history of wheezing with colds).
5. Avoid over-the-counter cough and cold medicines in children under 4 years old → Prevents rare but serious side effects (seizures, fast heart rate, drowsiness leading to dangerous breathing slowing) that can happen in young children. The American Academy of Pediatrics and FDA say these medicines do not work well in little kids and are not safe.

Your top priorities at the bedside

1. Check and document vital signs and oxygen level — why: Normal vitals and oxygen support bronchitis; abnormal values raise concern for pneumonia.
2. Teach that antibiotics are not needed and explain why — why: Setting expectations prevents antibiotic overuse and builds trust; the cause is a virus.
3. Give clear return-precautions (when to come back) — why: The patient must know the red flags — high fever, trouble breathing, or a cough lasting over 3 weeks.