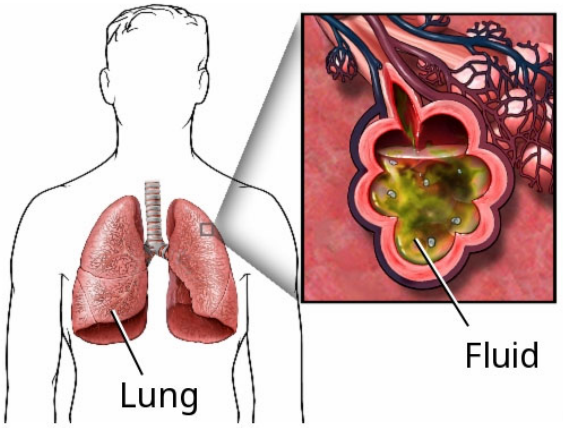
Acute Respiratory Distress Syndrome, Adult

Acute respiratory distress syndrome is a life-threatening condition in which fluid collects in the lungs. This prevents the lungs from filling with air and passing oxygen into the blood. This can cause the lungs and other vital organs to fail. The condition usually develops following an infection, illness, surgery, or injury.



What are the causes?

This condition may be caused by:

- An infection, such as sepsis or pneumonia.
- A serious injury to the head or chest.
- Severe bleeding from an injury.
- A major surgery.
- Breathing in harmful chemicals or smoke.
- Blood transfusions.
- A blood clot in the lungs.
- Breathing in vomit (*aspiration).*
- Near-drowning.
- Inflammation of the pancreas (*pancreatitis*).
- A drug overdose.

What are the signs or symptoms?

Sudden shortness of breath and rapid breathing are the main symptoms of this condition. Other symptoms may include:

- A fast or irregular heartbeat.
- Skin, lips, or fingernails that look blue (*cyanosis*).
- Confusion.
- Tiredness or loss of energy.
- Chest pain, particularly while taking a breath.
- Coughing.
- Restlessness or anxiety.
- Fever. This is usually present if there is an underlying infection, such as pneumonia.

How is this diagnosed?

This condition is diagnosed based on:

- Your symptoms.
- Medical history.
- A physical exam. During the exam, your health care provider will listen to your heart and check for crackling or wheezing sounds in your lungs.

You may also have other tests to confirm the diagnosis and measure how well your lungs are working. These may include:

- Measuring the amount of oxygen in your blood. Your health care provider will use two methods to do this procedure:
  - A small device (*pulse oximeter*) that is placed on your finger, earlobe, or toe.
  - An arterial blood gas test. A sample of blood is taken from an artery and tested for oxygen levels.
- Blood tests.
- Chest X-rays or CT scans to look for fluid in the lungs.
- Taking a sample of your sputum to test for infection.
- Heart test, such as an echocardiogram or electrocardiogram. This is done to rule out any heart problems (such as heart failure) that may be causing your symptoms.
- Bronchoscopy. During this test, a thin, flexible tube with a light is passed into the mouth or nose, down the windpipe, and into the lungs.

How is this treated?

Treatment depends on the cause of your condition. The goal is to support you while your lungs heal and the underlying cause is treated. Treatment may include:

- Oxygen therapy. This may be done through:
  - A tube in your nose or a face mask.
  - A ventilator. This device helps move air into and out of your lungs through a breathing tube that is inserted into your mouth or nose.
- Continuous positive airway pressure (CPAP). This treatment uses mild air pressure to keep the airways open. A mask or other device will be placed over your nose or mouth.
- Tracheostomy. During this procedure, a small cut is made in your neck to create an opening to your windpipe. A breathing tube is placed directly into your windpipe. The breathing tube is connected to a ventilator. This is done if you have problems with your airway or if you need a ventilator for a long period of time.
- Positioning you to lie on your stomach (*prone position*).
- Medicines, such as:
  - Sedatives to help you relax.
  - Blood pressure medicines.
  - Antibiotics to treat infection.
  - Blood thinners to prevent blood clots.
  - Diuretics to help prevent excess fluid.
- Fluids and nutrients given through an IV tube.
- Wearing compression stockings on your legs to prevent blood clots.
- Extra corporeal membrane oxygenation (ECMO). This treatment takes blood outside your body, adds oxygen, and removes carbon dioxide. The blood is then returned to your body. This treatment is only used in severe cases.

Follow these instructions at home:

- Take over-the-counter and prescription medicines only as told by your health care provider.
- **Do not** use any products that contain nicotine or tobacco, such as cigarettes and e-cigarettes. If you need help quitting, ask your health care provider.
- Limit alcohol intake to no more than 1 drink per day for nonpregnant women and 2 drinks per day for men. One drink equals 12 oz of beer, 5 oz of wine, or 1½ oz of hard liquor.
- Ask friends and family to help you if daily activities make you tired.

- Attend any pulmonary rehabilitation as told by your health care provider. This may include:
  - Education about your condition.
  - Exercises.
  - Breathing training.
  - Counseling.
  - Learning techniques to conserve energy.
  - Nutrition counseling.
- Keep all follow-up visits as told by your health care provider. This is important.

Contact a health care provider if:

- You become short of breath during activity or while resting.
- You develop a cough that does not go away.
- You have a fever.
- Your symptoms do not get better or they get worse.
- You become anxious or depressed.

Get help right away if:

- You have sudden shortness of breath.
- You develop sudden chest pain that does not go away.
- You develop a rapid heart rate.
- You develop swelling or pain in one of your legs.
- You cough up blood.
- You have trouble breathing.
- Your skin, lips, or fingernails turn blue.

These symptoms may represent a serious problem that is an emergency. Do not wait to see if the symptoms will go away. Get medical help right away. Call your local emergency services (911 in the U.S.). Do not drive yourself to the hospital.

Summary

- Acute respiratory distress syndrome is a life-threatening condition in which fluid collects in the lungs, which leads the lungs and other vital organs to fail.
- This condition usually develops following an infection, illness, surgery, or injury.
- Sudden shortness of breath and rapid breathing are the main symptoms of acute respiratory distress syndrome.
- Treatment may include oxygen therapy, continuous positive airway pressure (CPAP), tracheostomy, lying on your stomach (*prone position*), medicines, fluids and nutrients given through an IV tube, compression stockings, and extra corporeal membrane oxygenation (ECMO).

This information is not intended to replace advice given to you by your health care provider. Make sure you discuss any questions you have with your health care provider.

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