# What is my relative/friend feeling? Is there any pain?

Because ARDS results from many different causes, the symptoms vary. Some of the most commonly expressed are shortness of breath, cough with white/ pink expectoration, and fatigue. Also important are the symptoms associated with the possible triggering cause of the disease. Examples of these include: abdominal pain in pancreatitis; fever, productive cough, and breathlessness in pneumonia; chills and light-headedness in severe infections.

Healthy Lung

# ARDS Lung



## About The ARDS Foundation

The ARDS Foundation is a leading humanitarian organization fighting global ARDS.

We place special focus on working with medical staff because, equipped with the proper knowledge, medical staff have the power to help people afflicted with ARDS survive and thrive.

# **ARDS Facts**

### What is ARDS?

Acute respiratory distress syndrome (ARDS) is defined as an acute process, characterized by widespread inflammation in the lungs, resulting in a moderate to severe loss of lung function. **IS ARDS COMMON?** 

There are an estimated 190,000 cases per year in the US.

#### WHAT CAUSES ARDS?

New causes of ARDS are continually being reported with more than 60 different causes identified already. This means that there is still a lot of information that we don't know and there is a continuing need for further research.



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### HOW TO SUPPORT

Family and friends are critical in order to maintain the well-being of the person suffering from ARDS. It is important for the family to act on behalf of the patient to work with the healthcare team in making decisions regarding treatment. To facilitate decision-making, the family members or friends need to interact with the healthcare team, ask questions, and read about the disease.

Most importantly, the family and friends should be present for the patient and attempt to impose a positive feeling. Try to assure the patient that you are there for them and are acting to provide the best possible care for them. Even patients who are sedated or paralyzed can often understand what is being said to them and these assurances by loved ones can help decrease their anxiety.

#### What do we mean by lung function?

The cells in the body need to have oxygen to perform all their normal functions. When we breathe, oxygen from the atmosphere enters the lung and makes its way from the trachea, through the bronchi, to the alveoli. The alveoli are then responsible for supplying oxygen to the blood, which will deliver it to the cells of the body. The oxygenation of the blood is accomplished by a transport of oxygen from the inhaled air in the alveoli to the surrounding blood vessels. During this exchange of gases in the alveoli, carbon dioxide is also brought to the lung from the blood to be exhaled as body waste.

#### What happens in ARDS?

In ARDS there is intense inflammation of the lung tissue. This inflammation in the lung results in a loss of function. The alveoli lose their ability to exchange oxygen and carbon dioxide with the blood. This loss of function of the alveoli is due to collapse of the air sacs and leakage of fluid (which is called edema) into the air sacs. This sequence of events can happen rapidly. It can start in one lung and advance to the other. If the inflammation persists over time, the lungs will eventually attempt to heal the damage, which results in the formation of scar tissue. The formation of scar tissue can continue to create a problem with gas



#### What are the complications?

A number of different complications can occur with ARDS. Secondary bacterial infections are a common complication and contribute to continued lung injury. It is often difficult to diagnose a secondary bacterial infection in the lungs since the underlying chest x-ray is already abnormal due to ARDS. Often secretions from the lung are sent to the laboratory for bacterial analysis. These secretions can be obtained either by the nurse or respiratory therapist suctioning the patient or by a special procedure called a bronchoscopy. Infections may also occur in other parts of the body such as the bloodstream, urinary tract, sinuses, skin, or gastrointestinal tract. These infections are usually discovered due to symptoms such as pain or increased temperature, which would then lead the physician to perform additional testing.

**Trauma** to the lungs due to mechanical ventilation can also occur since the lungs are already weakened due to their diseased state.these organs may suffer damage due to the lack of adequate oxygen. The organs most frequently affected include the kidney (acute renal insufficiency), the heart, the liver (liver failure or shock liver), the brain, and the blood. Damage to these organs may complicate the care of the patient and require additional treatments.

### What can we expect?

This is difficult to predict - most of the patients need **ventilatory assistance** for a minimum of several days, and often weeks. The severity and progression of the injury determine the degree of support. Other factors that may influence the course of the syndrome include a patient's age or the presence of underlying health problems. Young, previously healthy patients often recover well and the lung injury heals rapidly. However, patients with older age or underlying health problems may have a more severe course of illness. Further deterioration of their vital organ function and an inability to tolerate the organ damage may result in death.

Some patients are able to survive from the serious complications, but continue to have slow healing of the lungs requiring prolonged mechanical ventilation. This is called a tracheostomy and requires a surgical hole to be placed in the patient's neck. This tube is more comfortable and allows for a more stable airway as the healthcare team works to free the patient from the ventilator. The recovery of these patients is much slower and requires careful, vigilant care to prevent any further complications during the recovery phase.

# What is the lung function of somebody who recovered from ARDS?

Recovery can be complete in ARDS survivors. The majority of patients have full recovery of lung function within the first year after ARDS. The rate of recovery often depends on the individual patient. For some patients, there continues to be feeling of shortness of breath, fatigue, continued cough, or a continued need for oxygen therapy, which usually abates within the first year. Further followup after discharge is required so the physician can perform specialized tests to monitor for improvement or worsening of lung function.

Even if their lung function returns to normal, many patients who survive ARDS develop other long-term complications related to their long hospitalizations. These complications can include muscle weakness and problems with memory. It is common for patients to require physical therapy for months after surviving ARDS

#### What is the Survival Rate from ARDS?

Recent data show that about 30 to 40% of patients who develop ARDS will die. These statistics have vastly improved from a 70% mortality reported in the past.