



Pneumonia in elderly

Statistics show that 1 out of 20 adults who get pneumonia dies, according to the Centers for Disease Control in the US. This makes preventing pneumonia in the elderly a serious matter. A Place for Mom reports.

What is pneumonia?

"Pneumonia is an inflammation of the lungs usually caused by bacteria, viruses, fungi or other organisms," says Dr Norman Edelman, the chief medical officer for the American Lung Association. This inflammation causes an outpouring of fluid in the infected part of the lungs, affecting either one or both lungs. The blood flow to the infected portion of the lung (or lungs) decreases, meaning oxygen levels in the bloodstream can decline.

"This decline is more likely to happen in an elderly, sick, and/or debilitated 85-year-old. The body attempts to preserve blood flow to vital organs and decrease blood flow to other parts of the body such as the gastro-intestinal tract," says Dr Joseph Mylotte, a professor of medicine at the School of Medicine and Biomedical Sciences at the University of Buffalo. "The effects [of pneumonia] are widespread even though the infection is localised to the lung." The complications of pneumonia in the elderly can be life-threatening, from low blood pressure and kidney failure to bacteremia, an infection that spreads to the bloodstream.

Pneumonia symptoms

Elderly people are more susceptible to pneumonia for several reasons. Often, they already suffer from co-morbid conditions such as heart disease, which means they don't tolerate infection as well as younger people, says Mylotte. Age also causes a decrease in an older person's immune system response, so the defences are weaker. "Some virulent organisms can cause infection in younger people, but the infections can be worse in older people," says Mylotte.

Pneumonia is caused by more than 30 types of organisms; these different strains mean that symptoms can vary from case to case. However, the following symptoms can signal a bout of pneumonia:

- ☞ Malaise or feeling weak
- ☞ Cough
- ☞ Green or yellow sputum
- ☞ Pain in the chest
- ☞ Confusion
- ☞ Fever
- ☞ Chills
- ☞ Shortness of Breath

Often, a person may think she is simply suffering from the cold or flu. Also, it is widely believed that the signs of pneumonia in the elderly can differ from the general population. An older patient might not have a fever. "The symptoms and signs are sometimes not as specific. They may be more sleepy and lethargic, or lose their appetites, or they may suffer from dizziness and fall. If there is underlying dementia, they might not be able to tell you how they feel. But it's all related to something going on in the lung," says Mylotte.

People are often exposed to the organisms that cause this disease, but the lungs' defense mechanisms usually protect people from infection. Sometimes these organisms break through a person's immune system, infecting the lungs' air sacs. Each lung has a major airway (bronchus) that divides into 22 tubes; these tubes further divide into more than 100 000 tiny tubes (bronchioles) that end in clusters of tiny air sacs (alveoli), where the transfer of oxygen to the body's bloodstream takes place. When a patient has pneumonia, the affected air sacs become inflamed and filled with fluid. This leads to breathing problems, a lack of blood flow to the infected sections of the lungs, and a decrease in the bloodstream's oxygen level.

Pneumonia causes and diagnosis

Simple diagnostic tests can confirm a case of pneumonia in the elderly. A doctor who listens to a patient's lungs may hear bubbling sounds called rales and rattling sounds called rhonchus, which signal infection and inflammation in the lungs. A pulse oximetry test computes the blood's oxygen levels. A chest x-ray or CT scan is often the definitive diagnosis, telling the physician where the infection is and the degree of the illness. Sometimes a doctor will have the patient's phlegm or blood analysed to decipher which organism is responsible for the infection.

Although pneumonia can be caused by more than 24 organisms, pneumonia in the elderly is usually caused by bacteria or viruses. The streptococcus (or pneumococcal) pneumonia bacteria is responsible for an estimated 40 000 deaths every year, according to the Centers for Disease Control. The elderly are more likely to catch this strain of pneumonia. Streptococcus pneumonia can come on slowly or suddenly. It can damage the lungs, cause bacteremia in the bloodstream, and meningitis in the brain.

Viruses also trigger this disease and are thought to cause about 50% of pneumonia infections in the general population. Usually viral pneumonia is less severe, but complications can include bacterial pneumonia.

Atypical pneumonia-causing organisms-such as mycoplasma and chlamydia-rarely cause pneumonia in the elderly. In the nursing home population, a small percentage of people suffer from severe pneumonia strains caused by organisms such as Gram-negative bacteria and Staphylococcus aureus, which can quickly end in death or with the patient on a respirator, says Mylotte.

Pneumonia treatment and management

Patients are treated for pneumonia depending upon which organism triggered the disease. Your loved one's medical provider can ascertain this through analysing a phlegm or blood sample.

For a case of viral pneumonia, some patients may receive antiviral medications, but these are not commonly prescribed. And antibiotics are not used because they aren't effective against viruses. Bouts of viral pneumonia usually heal without medication, provided the patient rests, eats healthy food, and takes in plenty of fluids. If new symptoms arise, it is important to contact your loved one's doctor, as bacterial pneumonia is a possible complication.

Bacterial pneumonia

Bacterial pneumonia is always treated with antibiotics. If a patient is in the hospital, it is typical for the hospital to follow strict treatment guidelines prescribed by the doctor. Whether at home or in the hospital, patients are usually administered a once-a-day therapy. Effective antibiotic treatments include respiratory fluoroquinolones such as moxifloxacin, says Mylotte, although there are several antibiotic therapies that work as well as these.

Treating bacterial pneumonia has become more complicated due to antibiotic resistance. The organisms that cause this disease mutate and can become resistant to drug treatment. This is one reason that it is important for a patient to finish her entire course of antibiotics; stopping treatment early actually encourages antibiotic resistance. Up until a few years ago, antibiotic resistance associated with bacterial pneumonia had been increasing, but it has recently decreased, according to Mylotte.

Healing at home

Both mycoplasma and chlamydia pneumonias are also treated with antibiotics. Mycoplasma pneumonia is also known as walking pneumonia. If your loved one has this strain, he or she usually will have milder symptoms, but it can take four to six weeks to heal completely.

Most pneumonia patients heal at home. About 15 to 20% of people with community-acquired pneumonia are treated in the hospital, while about 20 to 30% of people with nursing-home acquired pneumonia are also admitted to a hospital, according to Mylotte.

Whether a patient stays at home or in a hospital, the patient may take medications to ease fever, aches, and coughing bouts. Because coughing actually helps rid lung infection, this action shouldn't be entirely reduced. However, if the patient isn't getting any sleep, a low-dose cough suppressant can be prescribed. Patients with severe strains may need oxygen therapy to increase blood-oxygen levels. Caregivers should make sure a loved one is receiving proper hydration, eating at least a small amount of healthy food, and reporting worsening or new complications.

Complications that can arise from pneumonia include:

Bacteremia: The possibly deadly infection invades the bloodstream and can infect the body's organs.

Pleurisy and Empyema: With pleurisy, the membrane that covers the lungs (pleura) becomes inflamed. Empyema occurs when fluids causing inflammation become infected.

Lung Abscess: A pus-filled cavity can develop in the infected lung area.

Acute Respiratory Distress Syndrome (ARDS): When the lungs become severely injured due to pneumonia, respiratory failure can occur. Treatment includes the use of a mechanical ventilator (vent) and supplemental oxygen.

Pneumonia Prevention: Pneumonia in the elderly as well as younger people occurs when a person's immune system is weakened. Although it can be transmitted via the air or hand-to-hand contact, if a person's immune system is strong, he can fight off this infection. Preventing this disease with the following steps can keep it at bay:

Pneumococcal Vaccine: This vaccine helps prevent 23 different strains of bacterial pneumonia (although there are many more strains of bacterial pneumonia out there). "It doesn't always engender a good immune response in adults, so it doesn't always work well," says Mylotte. He also points out the vaccine is effective for a shorter amount of time in older people. Experts recommend getting your first dose when you are in your 50s and your second dose at age 65, and then a new dose should be administered every five years.

Influenza Vaccine: This vaccine is just as important as the pneumococcal vaccine. It doesn't work as well in elderly people, says Mylotte, but if an older vaccinated person gets the flu, it is usually a milder case. Pneumonia is often a secondary infection after an initial bout of influenza. People who receive this vaccine have less risk of developing pneumonia as a flu complication. Older adults should get a flu shot every year.

Hand Washing: "I always tell people to wash their hands as much as they can. If your hands aren't raw in the wintertime, you are not doing a good job," says Mylotte.

Dental Hygiene: Pneumonia infections can occur around infected teeth, says Edelman, so dental work should be kept in good repair.

Good Health Habits: Exercise, rest and healthy eating can all increase resistance to pneumonia.

Edelman also recommends that frail elderly people who are already susceptible to infection should stay away from anyone who has the flu or a bad cold. Of course, preventing pneumonia in the elderly is always preferable to treating it. But if you suspect your loved one is suffering from pneumonia, quick intervention can be a life-saving occurrence.

This was a presentation from A Place for Mom