

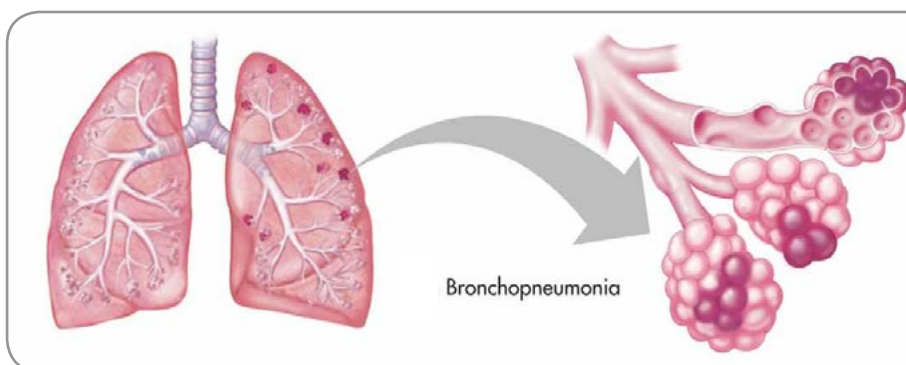


## Bronchopneumonia in Children

Bronchopneumonia is the most common clinical manifestation of pneumonia in the pediatric population, and the leading cause of death in children under the age of 5 years. Globally, pneumonia accounts for 16% of all deaths of children under the age of 5 years. A total of 920,136 children died in 2015 as a result of pneumonia. A total of 85% of all the diseases of the respiratory system in children under 2 years are due to bronchopneumonia. Between 2 -10 years, the condition becomes less common but has a longer course of illness.

### What is bronchopneumonia?

Bronchopneumonia is an infection that affects the air passages going into the lungs, also known as the bronchus. This condition is mainly caused by bacterial infections, but it can also be caused by viral and fungal infections. This illness is particularly life threatening in young children, older adults, and patients with other chronic immunity lowering health conditions.



### Who is at risk/what are the risk factors?

Risk factors for developing bronchopneumonia include:

- Children under the age of 2 years.
- People who work in a hospital, or often visits a hospital.
- Certain medical conditions can increase the risk for developing this type of pneumonia. These include:
  - Recent respiratory infections, such as cold and flu.
  - Conditions that weaken the immune system, such as Human Immunodeficiency Virus (HIV) infection and certain autoimmune disorders.
  - Chronic disease such as diabetes, heart disease, asthma, or
  - Cancer, or
  - Chronic lung diseases
- Malnutrition

### Signs and symptoms of bronchopneumonia

The symptoms of bronchopneumonia vary, depending on the severity of the condition.

- High grade fever
- Breathing difficulties e.g. shortness of breath/ breath-

lessness, rapid breathing

- Rapid heart beat
- Wheezing
- Chest pain that may get worse with coughing or breathing deeply
- Coughing up yellow or green mucus
- Chills or shivering
- Headaches
- Low energy and fatigue
- Loss of appetite
- Nausea and vomiting
- A Sick looking child that tires easily
- Dehydration
- Irritability
- Crackles

### How do you diagnose bronchopneumonia in children?

To diagnose bronchopneumonia, a doctor takes history from the caregiver and then carries out a physical examination on the child.

If the doctor suspects bronchopneumonia, one or more of the following tests may be ordered to confirm the diagnosis, and determine the type as well as severity of the condition:

- **Chest X-ray.** These imaging tests allow a doctor to check an image of the lungs for signs of infection.
- **Blood tests.** These can help detect signs of infection, such as an abnormal white blood cell count. This helps determine the severity of the infection and whether bacteria, virus or fungus is the likely cause.
- **Bronchoscopy.** This involves passing a thin tube with a light and camera through a person's mouth, down the windpipe, and into the lungs. This procedure allows a doctor to see inside the lungs. This test is sometimes used for further investigation.
- **Sputum culture.** This is a laboratory test that can detect infection from the mucus that a person has coughed up, it can also determine which organism / germ is causing the condition.
- **Pulse oximetry.** This is a test used to calculate the amount of oxygen flowing through the bloodstream.
- **Arterial blood gas (ABG).** This test is used to determine oxygen levels of oxygen in the blood.

### How to prevent bronchopneumonia?

Vaccination can prevent some forms of bronchopneumonia. There are two types of vaccines given to prevent pneumococcal disease in children:

- **Pneumococcal Conjugate vaccine (PCV13)**

This vaccination is recommended for all children under the age of 2 years. It is included as part of an infant's routine immunizations.

- **Pneumococcal polysaccharide (PPSV23) vaccine**

This vaccine is recommended for children over the age of 2 years who are at risk of developing serious pneumococcal disease.

In addition to vaccination against pneumonia, the following measures are also recommended:

- Getting vaccinated against diseases that can lead to pneumonia, such as flu, measles, chicken pox, Haemophilus influenza type B vaccine (Hib), or pertussis.
- Speak to your doctor about ways of preventing pneumonia and other infections when you or someone you know has cancer or human immunodeficiency virus (HIV).
- Regularly washing hands to avoid germs.
- Understanding and recognising symptoms of pneumonia.
- Keeping the immune system strong by getting enough sleep, exercising and eating healthy.

### Treatment and management of bronchopneumonia

- Treatment decisions are based on the cause of the infection, the age and clinical status of the patient.
- Antibiotics are usually used to treat bacterial pneumonia. It is important to finish the course of antibiotics at the right dose to clear the infection completely and to prevent it from returning.
- Cough medicine may be used to reduce coughing.
- Medication to reduce fever and pain may be prescribed to reduce the fever and relieve the discomfort and pain.
- It is possible to treat mild forms of bronchopneumonia at home using a combination of rest and medication. However, more severe cases of bronchopneumonia will require in-hospital treatment.
- It is important to follow dietary recommendations; the food should be nutritious and enriched with vitamins. Babies under 6 months should be given breast milk or formula.
- Antibiotics are not effective for viral infections. For viral bronchopneumonia, a doctor may prescribe an antiviral medication. Therapy may be directed at treating symptoms. Bronchopneumonia due to a virus typically clears up in 1 to 3 weeks.
- For patients with fungal bronchopneumonia, a doctor may prescribe antifungal medication.
- It is essential to carefully follow the doctor's instructions and complete the full course of medication.

When recovering from bronchopneumonia, it is important for a patient to:

- Get plenty of rest
- Drink lots of fluids to help thin mucus in the chest and reduce discomfort when coughing, this will also prevent dehydration in children.
- Take all medications, as prescribed by the doctor.
- Limit social contact with other people such as at school or work.

### What is covered under PMB level of care?

Bronchopneumonia is a prescribed minimum benefit (PMB) condition under the Diagnosis and Treatment Pair (DTP) code 903D. This DTP refers to "Bacterial, viral, fungal pneumonia". The treatment component for this condition is specified as "Medical management, ventilation".

Although the prevention of bronchopneumonia by vaccination is not a PMB entitlement, medical schemes are required to pay for the diagnosis, treatment and care of this condition. All medical schemes are required by law to pay for the diagnosis, treatment and care costs for this condition in full irrespective of your plan type or option.

Medical schemes are not allowed to fund PMB conditions from a member's Medical Savings Account, as this is not in line with the PMB Regulations.

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## WHAT ARE PRESCRIBED MINIMUM BENEFITS?

Prescribed Minimum Benefits (PMBs) are defined by law. They are the minimum level of diagnosis, treatment, and care that your medical scheme must cover – and it must pay for your PMB condition/s from its risk pool and in full. There are medical interventions available over and above those prescribed for PMB conditions but your scheme may choose not to pay for them. A designated service provider (DSP) is a healthcare provider (e.g. doctor, pharmacist, hospital) that is your medical scheme's first choice when you need treatment or care for a PMB condition. You can use a non-DSP voluntarily or involuntarily but be aware that when you choose to use a non-DSP, you may have to pay a portion of the bill as a co-payment. PMBs include 270 serious health conditions, any emergency condition, and 25 chronic diseases; they can be found on our [website](#)

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