

# HOW CAN YOU PREVENT PNEUMOCOCCAL PNEUMONIA?<sup>8</sup>



Get vaccinated



Practice good hygiene



Don't smoke



Avoid alcohol misuse

## Recommended Vaccinations

The National Adult Immunisation Schedule (NAIS) by the Ministry of Health Singapore recommends two types of pneumococcal vaccinations for adults 65 and older.<sup>9</sup>



PCV13



PPSV23

PCV13=13-valent Pneumococcal Conjugate Vaccine,  
PPSV23=23-valent Pneumococcal Polysaccharide Vaccine

## Should I take the vaccine for pneumococcal pneumonia if I have already taken the COVID-19 vaccine?

- The COVID-19 vaccine does not protect you from pneumococcal pneumonia.<sup>12</sup>
- COVID-19 is caused by viruses, while pneumococcal pneumonia is caused by bacteria.<sup>13,14</sup>
- Both are not mutually exclusive and may happen at the same time.<sup>15,16</sup>

COVID-19=Coronavirus disease 2019

## Potential side effects<sup>11</sup>

- Redness, pain and swelling at the site of injection
- Mild fever (fever above 38°C is not common)
- Feeling tired, headache

Always seek medical attention if you feel unwell or are unsure on what to do.



## Severe allergic reactions are rare.<sup>11</sup>

Inform your doctor immediately if you experience any of these symptoms below:<sup>11</sup>

- Swollen face/eyes/lips/tongue
- Difficulty in breathing
- Itchy skin rashes over your whole body



**References:** 1. Ministry of Health, Singapore - Medisave500 scheme for outpatient treatments. <https://www.moh.gov.sg/cost-financing/healthcare-schemes-subsidies/medisave> (Accessed 24 Jan 2022) 2. British lung foundation-What is pneumonia. <https://www.blf.org.uk/support-for-you/pneumonia/what-is-pneumonia> (Accessed 8 Feb 2022) 3. Causes of Pneumonia. <https://www.cdc.gov/pneumonia/causes.html> (Accessed 24 Jan 2022) 4. Ministry of Health, Singapore - Principal Causes of Death. <https://www.moh.gov.sg/resources-statistics/singapore-health-facts/principal-causes-of-death> (Accessed 24 Jan 2022) 5. Ministry of Health, Singapore- Top 10 conditions of hospitalization. <https://www.moh.gov.sg/resources-statistics/singapore-health-facts/top-10-conditions-of-hospitalisation> (Accessed 24 Jan 2022) 6. Healthhub Pneumococcal Disease. [https://www.healthhub.sg/a-z/diseases-and-conditions/121/topic.pneumococcal\\_disease](https://www.healthhub.sg/a-z/diseases-and-conditions/121/topic.pneumococcal_disease) (Accessed 24 Jan 2022) 7. CDC Pneumococcal Disease: Risk Factors and Transmission. <https://www.cdc.gov/pneumococcal/about/risk-transmission.html#:~:text=Adults%2065%20years%20or%20older,Diabetes> (Accessed 24 Jan 2022) 8. The British Lung Foundation- Preventing Pneumonia. <https://www.blf.org.uk/support-for-you/pneumonia/prevention> (Accessed 24 Jan 2022) 9. National Adult Immunization schedule. 10. Enhanced subsidies for nationally recommended vaccinations and childhood developmental screening. <https://www.moh.gov.sg/news-highlights/details/enhanced-subsidies-for-nationally-recommended-vaccinations-and-childhood-developmental-screening> (Accessed 24 Jan 2022) 11. Healthhub medical information leaflet on pneumococcal vaccine. <https://www.healthhub.sg/a-z/medications/375/Pneumococcal-Vaccine> (Accessed 24 Jan 2022) 12. Benefits of Getting a COVID-19 Vaccine. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/vaccine-benefits.html> (Accessed 8 Feb 2022) 13. Coronavirus disease (COVID-19). [https://www.who.int/health-topics/coronavirus#tab=tab\\_1](https://www.who.int/health-topics/coronavirus#tab=tab_1) (Accessed 24 Jan 2022) 14. Pneumococcal Disease (Streptococcus pneumoniae). <https://wwwnc.cdc.gov/travel/diseases/pneumococcal-disease-streptococcus-pneumoniae> (Accessed 24 Jan 2022) 15. Coronavirus and Pneumonia. <https://www.webmd.com/lung/covid-and-pneumonia#1> (Accessed 24 Jan 2022) 16. Zhu, Xiaojuan et al. "Co-Infection With Respiratory Pathogens Among COVID-2019 Cases". *Virus Research*, vol 285, 2020, p. 198005. Elsevier BV. <https://doi.org/10.1016/j.virusres.2020.198005> (Accessed 24 Jan 2022) 17. Shrestha, Sourya et al. Time And Dose-Dependent Risk Of Pneumococcal Pneumo following Influenza: A Model For Within-Host Interaction Between Influenza And Streptococcus. <https://www.moh.gov.sg/resources-statistics/nationally-recommended-vaccines> (Accessed 24 Jan 2022) 18. Admad S. Ashraf, Paul J. Drinka, Philip D. Sloane, Robin L.P. Jump. Pneumococcal Vaccination Guidance for Post-Acute and Long-Term Care Settings: Recommendations From AMDA's Infection Advisory Committee. *Journal of the American Medical Directors Association*, Volume 18, Issue 2, 2017, Pages 99-104 (Accessed 5 Apr 2022) 19. Healthhub program, [healthhub.sg/vaccinate](https://www.healthhub.sg/vaccinate) (accessed 5 Apr 2022). 20. Smith, E., Wheeler, I., Adler, H., Ferreira, D., Sá-Leão, R., Abdullahi, O., Adetifa, I., Becker-Dreps, S., Esposito, S., Farida, H., Kandasamy, R., Mackenzie, G., Nuorti, J., Nzenze, S., Madhi, S., Ortega, O., Roca, A., Safari, D., Schaumburg, F., Usuf, E., Sanders, E., Grant, L., Hammit, L., O'Brien, K., Gounder, P., Bruden, D., Stanton, M. and Rylance, J., 2020. Upper airways colonisation of Streptococcus pneumoniae in adults aged 60 years and older: A systematic review of prevalence and individual participant data meta-analysis of risk factors. *Journal of Infection*, (online) 81(4), pp.540-548. Available at: <<https://www.sciencedirect.com/eu1.proxy.openathens.net/science/article/pii/S0163445320304126>> (Accessed 13 April 2022).



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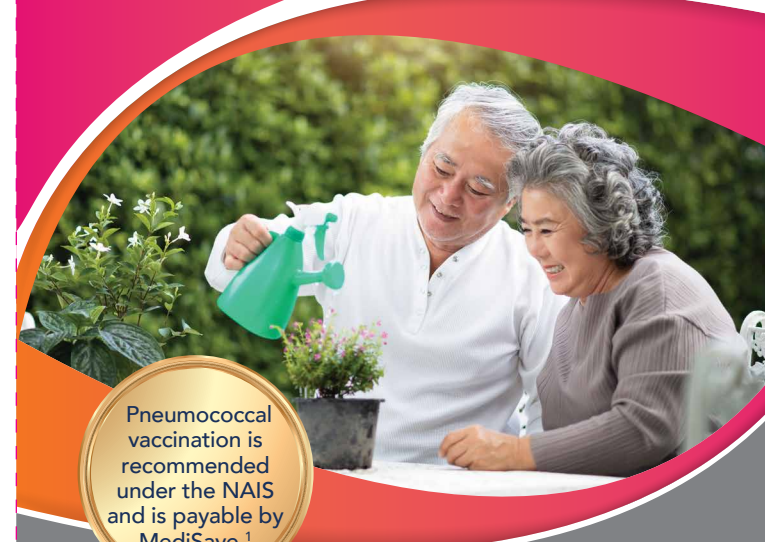
SCAN to learn more at  
[www.knownpneumonia.sg](http://www.knownpneumonia.sg)



In support of

**PREVENT WHAT'S PREVENTABLE WITH VACCINATION**

by Health Promotion Board



Pneumococcal vaccination is recommended under the NAIS and is payable by MediSave.<sup>1</sup>

**LIVE IT UP FROM 65**

Life should not stop because of pneumonia

If you are at least 65 years old, you are more at risk of pneumococcal pneumonia.<sup>2</sup> This disease can be life-threatening but preventable.<sup>2,6</sup>



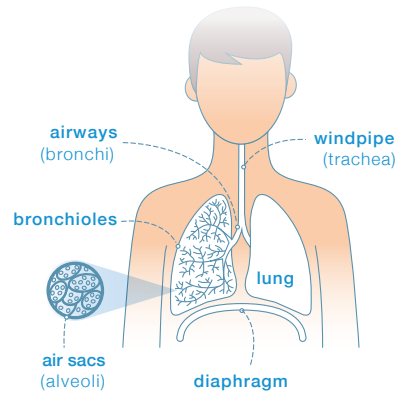
Pneumococcal vaccination is subsidised at CHAS GP clinics and polyclinics.<sup>10,19</sup> Speak to your doctor to find out if you are eligible.

This brochure provides basic information to help you understand pneumonia. It is not meant to replace the advice of medical professionals. All images used are for illustrative purposes.

NAIS=National Adult Immunisation Schedule, CHAS=Community Health Assist Scheme, GP=General practitioners

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## WHAT IS PNEUMONIA?



Adapted from the British Lung Foundation  
(Accessed 8 Feb 2022)



Pneumonia is an infection of the lungs. It affects the tiny air sacs in your lungs, which are called alveoli. When you have pneumonia, these air sacs get inflamed and filled with fluid, making it harder for you to breathe.<sup>2</sup>

Many different bacteria, viruses, and even fungi can cause pneumonia. Pneumococcus is the common cause of pneumonia.<sup>3</sup>



In Singapore, pneumonia is the 2<sup>nd</sup> principal cause of death and 3<sup>rd</sup> condition for hospitalisation.<sup>4,5</sup>

## WHAT IS PNEUMOCOCCAL PNEUMONIA?<sup>6</sup>

Pneumococcal disease (PD) is caused by a bacterium called *Streptococcus pneumonia*, which is also known as pneumococcus.

Pneumococcus can attack different parts of the body and cause serious infection of the following systems:

- Lungs (pneumonia)
- Blood (bacteraemia)
- Coverings of the brain and spinal cord (meningitis)
- Middle ear (acute otitis media)



**Pneumonia**



**Bacteremia**  
(Blood stream infection)



**Meningitis**  
(Infection of the tissue covering the brain and spinal cord)

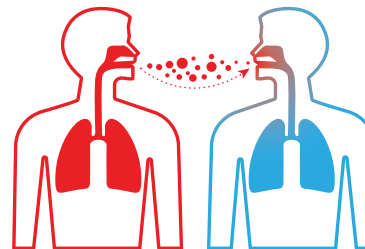


**Middle ear infections**

## HOW CAN PNEUMOCOCCUS SPREAD?

Pneumococcal bacteria spread from person to person through coughing, sneezing, and direct contact.<sup>6</sup>

People can carry the bacteria in their nose and throat without being sick and spread the bacteria to others.<sup>6</sup>



## SYMPTOMS OF PNEUMOCOCCAL PNEUMONIA<sup>6</sup>

Within one to three days of infection, the following signs and symptoms may appear, and vary based on the systems affected.



Headache



Stiff neck



Fever or chills



Nausea



Rapid breathing



Sensitivity to lights



Chest pain



Runny nose



Ear pain



Cough

## WHO IS MOST AT RISK?<sup>2,7,17,18</sup>



Adults ≥65 years<sup>2</sup>



Babies and young children<sup>2</sup>

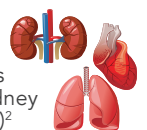


People with flu<sup>17</sup>

People with weak immune system (e.g. patients undergoing cancer treatment, patients with HIV)<sup>7</sup>



People with long-term health problems (such as heart, lung, or kidney disease, diabetes)<sup>2</sup>



People who smoke or drink excessive alcohol<sup>2</sup>



People on medications that suppress the immune system<sup>2</sup>

People living in long term care facility e.g nursing homes<sup>18,20</sup>



HIV=Human Immunodeficiency Virus