

Pneumococcal disease 'at risk' groups

Babies & Young Children

Vaccination against pneumococcal disease is recommended for all babies from two months of age as part of the routine childhood immunisation schedule.

Young children with pre-existing medical conditions are recommended to be vaccinated against pneumococcal disease.

- Babies and young children are more likely to suffer from pneumococcal disease and its associated conditions (ear infections, otitis media, pneumonia, meningitis and septicaemia), as their immune systems are not yet fully developed.
- Young children are at increased risk of infectious diseases through their level of contact with other children, for example being at nursery or siblings in school.

Ear infections (Otitis media)

- Babies and young children are more likely to suffer from otitis media than adults.
- Ear infections are more common during the winter months.¹
- Children who are exposed to cigarette smoke have a higher risk of ear infection.^{1,2}

Pneumonia

- Children with asthma are at greater risk of developing pneumonia.³
- Children exposed to 'second hand' smoke are at increased risk of pneumonia.²

Meningitis and septicaemia

- Those without a spleen, an important part of the immune system, may be at increased risk of developing meningitis and septicaemia.⁴

Teenagers

All teenagers including those previously vaccinated as part of the routine immunisations programme with a developed 'at risk' concomitant disease or immunosuppressed should be vaccinated against pneumococcal disease.

Ear infections (Otitis media)

- Otitis media often follows colds, other respiratory infections or an allergy.⁵

Pneumonia

- Teenagers with asthma, particularly those taking corticosteroids as a treatment are at greater risk of developing pneumococcal disease.^{3,6}
- Teenagers exposed to 'second hand' smoke are at increased risk of pneumonia.²

Meningitis and septicaemia

- Those without a spleen, an important part of the immune system, may be at increased risk of developing meningitis and septicaemia.

Adults

All adults within an 'at risk' concomitant disease should be vaccinated against pneumococcal diseases.

Pneumonia

- Chronic illness such as asthma, COPD (chronic obstructive pulmonary disease) kidney disease and liver disease are all risk factors for pneumonia.⁷
- Those with weakened immune systems are very susceptible to pneumonia. This is common in people with HIV. Use of immunosuppressant drugs for chemotherapy are also risk factors for pneumonia.⁷
- Alcohol and drug abuse are known risk factors for pneumonia.⁸

Meningitis and septicaemia

- Alcoholism,⁹ illnesses such as diabetes, heart and liver disease are all risk factors for meningitis.¹⁰
- Those with an impaired immune system as a result of chemotherapy or use of immunosuppressant drugs are also at greater risk, as are those without a spleen, an important part of the immune system.¹⁰

Over 65s

Everyone 65 and over are recommended to have a pneumococcal vaccine.

- Immune function decreases with advancing age leading to an increased susceptibility to infectious diseases.¹¹

Pneumonia

- Chronic illness such as asthma, COPD (chronic obstructive pulmonary disease) kidney disease and liver disease are all risk factors for pneumonia.⁷
- Those whose immune system is not effective as a result of chemotherapy or use of immunosuppressant drugs are also at greater risk of getting pneumonia.⁷
- Pneumonia is a common complication of flu in older people.

Meningitis and septicaemia

- Alcoholism,^{9,10} illnesses such as diabetes, heart and liver disease are all risk factors for meningitis.⁴
- Those with an impaired immune system as a result of chemotherapy or use of immunosuppressant drugs are also at greater risk, as are those without a spleen, an important part of the immune system.¹⁰

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References:

1. Home Health UK – Ear Infection Information. <http://www.homehealth-uk.com/medical/earinfections.htm> Accessed 15 April 2013.
2. NHS Choices – Is passive smoking harmful? <http://www.nhs.uk/chaq/Pages/2289.aspx> Accessed 15 April 2013.
3. Teepe J, et al *Eur Respir J*. 2010; 35: 1113-1117. Determinants of community-acquired pneumonia in children and young adults in primary care.
4. Schutze GE, et al. *Pediatr Infect Dis J*. Invasive pneumococcal infections in children with asplenia. 2002 Apr; 21(4): 278-82.
5. NHS Choices – Otitis Media – Causes. <http://www.nhs.uk/Conditions/Otitis-media/Pages/Causes.aspx> Accessed 15 April 2013.
6. Department of Health, Immunisation against infectious disease. Green Book Chapter 25 October 2012. http://media.dh.gov.uk/network/211/files/2012/07/Green-Book-Chapter-25-v4_0.pdf
7. NHS Choices – Pneumonia – Causes. <http://www.nhs.uk/Conditions/Pneumonia/Pages/Causes.aspx> Accessed 15 April 2013.
8. NHS Choices – Pneumonia – Prevention. <http://www.nhs.uk/Conditions/Pneumonia/Pages/Prevention.aspx> Accessed 15 April 2013.
9. Weisfelt M et al., 2010. Community-Acquired Bacterial Meningitis in Alcoholic Patients. *PLoS ONE* 5(2): e9102. doi:10.1371/journal.pone.0009102.
10. Van Hoek AJ, et al., The effect of underlying clinical conditions on the risk of developing invasive pneumococcal disease among hospitalised patients in England, *J Infect* (2012), doi:10.1016/j.jinf.2012.02.017 2013.
11. Caruso C et al. *Immun Ageing*. 2009;6:10. doi:10.1186/1742-4933-6-10

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