

# POSITION STATEMENT

Title	Date
Influenza and Pneumococcal vaccination	October 2014

## Key points

- Influenza is highly infectious
- Pneumococcal pneumonia is a severe illness
- People with diabetes are more at risk of complications arising from infections including influenza and pneumonia. The greatest risk is severe loss of diabetes control resulting in coma from either diabetic ketoacidosis (DKA) or hyperosmolar hyperglycaemic state (HSS), both of which can be fatal if left untreated.
- It is therefore recommended that all people with diabetes, over the age of six months, including those who are pregnant, should be offered vaccination against influenza each year regardless of age or type of diabetes management.
- Pneumococcal polysaccharide vaccination (PPV) is recommended for people with diabetes treated with medication, aged over two year.

## Introduction

Influenza, or 'flu', is a highly contagious, acute viral infection that affects people of all ages. There are three types of influenza virus: A, B and C. Influenza A and influenza B are responsible for most clinical illness (1).

The illness starts suddenly with fever, chills, headache, aching muscles, and a cough or other respiratory symptoms (1).

While most people recover without complications in 2-7 days, flu can cause serious illness and death, especially in the very young, the elderly or those at high risk because of a medical condition such as diabetes (1).

Antibiotics are not effective as a treatment because antibiotics do not work against viruses. The illness may be complicated by (and may present as) bronchitis, secondary

bacterial pneumonia or, in children, otitis media.(1)

The flu virus changes or mutates regularly, which is why every year a vaccine is produced based on the strains of the virus expected to be circulating.

All people with diabetes, including those who are pregnant, should be vaccinated against influenza regardless of age or type of diabetes management. (1)

Vaccination should be offered from the age of six months and be repeated each year. Children up to the age of 9 years should have the dose repeated 4 to 6 weeks later if receiving influenza vaccine for the first time (1).

Vaccination should be postponed in patients with a feverish illness (2). Minor illness, without fever or systemic upset is not a valid reason to postpone immunisation. If an individual is acutely unwell, immunisation may be postponed until they are fully recovered (1).

**There are very few people** who cannot receive any influenza vaccine (1)When there is doubt, appropriate advice should be sought from an immunisation coordinator, consultant in communicable disease control or consultant paediatrician. The period the person is left without vaccination cover should be minimised (1).

The vaccines should not be given to those who have had:

- a confirmed anaphylactic reaction to a previous dose of the vaccine,
- or a confirmed anaphylactic reaction to a component of the vaccine,
- 'Confirmed anaphylaxis is rare.' (1)

People with an egg allergy should be offered an egg free/low egg content vaccine or referred to a specialist service or have the vaccine in hospital (2)

The flu vaccine is not 'live' and therefore cannot give a person flu(2), but because immunity can take up to two weeks to become effective, some people may develop the illness after being vaccinated if they are already incubating the virus in their system.

Pneumonia is an inflammation of the lung tissue affecting one or both lungs that occurs as a result of an infection.

Most cases of pneumonia are caused by a bacteria called streptococcus pneumoniae, known as pneumococcus (3). Transmission is by aerosol, droplets or direct contact with respiratory secretions of someone carrying the organism (4).

Symptoms of bacterial pneumonia include shivering fits, fever, pains in the chest and coughing. the cough may be dry or may produce thick mucus which can be yellow, bloodstained or rust-coloured. Breathing becomes fast and shallow with difficulty or pain on breathing deeply or coughing (3).

There are two types of pneumococcal vaccine, polysaccharide and conjugate. The vaccines are inactivated, do not contain live organisms and cannot cause the diseases against which they protect.

Pneumococcal polysaccharide vaccination (PPV) is recommended for people with diabetes treated with medication, aged two years or older (3). Generally this will protect for life, but people with a long term kidney or spleen problem may need a five yearly booster (3)

Pregnant or breastfeeding mothers may receive the vaccine if it is considered that protection is needed without delay (4)

All babies are offered a pneumococcal conjugate vaccination (PCV) as part of their routine childhood vaccinations. The vaccine is given as three doses, at two, four and 13 months of age. This is because the vaccines do not give long-term protection in the very young.

### **Current situation**

None of the flu vaccines is licensed for use in children before the age of six months.

Children aged 2-18 will usually have the flu vaccine via a nasal spray (2).

Carers may be eligible for the flu vaccine. Carers should speak to their GP and tell them that they are in receipt of Carers Allowance/are a main carer and are concerned for the welfare of the person they look after should they fall ill. The GP will then decide whether a flu vaccine is appropriate, and take into account whether the carer falls in to any of the clinical risk groups (2)

### **Diabetes UK calls to action or Recommendations**

- All people with diabetes over the age of six months should be offered the flu vaccine
- All people with diabetes over the age of two years should be offered the

pneumococcal vaccine

## Conclusion

Vaccination is one of the safest, most reliable means of health protection available.

Vaccination against infectious disease is an important part of the general maintenance of good health in a person with diabetes.

The Government provides these vaccinations free of charge to the groups described here. Healthcare professionals should make every effort to ensure that their patients in the high risk groups are invited for vaccination, defaulters are encouraged to access the protection and where necessary education and reassurance is offered about the programme and its benefits.

People with diabetes should make it their responsibility to respond to an invitation for flu vaccination and actively request the pneumococcal vaccination if they have not been offered it.

## Further information

Low grade fever, and muscle pain are among the commonly reported symptoms of vaccination. These reactions usually disappear within one to two days without treatment. (3)

Diabetes control may be affected during this time. Glucose levels may be higher than normal. This resolves as the body returns to normal.

If symptoms persist or an adverse reaction is suspected the healthcare team should be notified and a 'Yellowcard' completed (4)

## References

1. Public Health England <https://www.gov.uk/government/publications/influenza-the-green-book-chapter-19>
2. NHS choices\_ <http://www.nhs.uk/Conditions/Flu/Pages/Introduction.aspx>

3. NHS choices <http://www.nhs.uk/Conditions/Pneumococcal-infections/Pages/Introduction.aspx>

4. Public Health England <https://www.gov.uk/government/publications/pneumococcal-the-green-book-chapter-25>