THE DISEASE - INFLUENZA FACTS 2017

Influenza the disease

Influenza can be a serious illness with severe effects including hospitalisation, complications and even death. Influenza is not just a 'bad cold'. Although some of the symptoms are the same, influenza is usually much more severe. Influenza illness can include any or all of these symptoms: fever, muscle aches, headache, lack of energy, dry cough, sore throat, and possibly runny nose and generally feeling miserable.

The fever and body aches can last 3-5 days and the cough and lack of energy may last for 2 or more weeks. Influenza can be difficult to diagnose based on clinical symptoms alone because the initial symptoms of influenza can be similar to those caused by other infectious agents including, but not limited to, *Mycoplasma pneumoniae*, adenovirus, respiratory syncytial virus, rhinovirus, parainfluenza viruses and *Legionella*.

Influenza can lead to serious complications, particularly in people with existing medical conditions such as heart or lung conditions. Complications include pneumonia, heart failure and worsening asthma.

Influenza Vaccine Composition and Strains For 2017

Recommendations from the World Health Organization (WHO) are that trivalent vaccines for use in the 2017 influenza season (southern hemisphere winter) contain the following:

- an A/Michigan/45/2017 (H1N1)pdmo9-like virus;
- an A/Hong Kong/4801/2014 (H3N2)-like virus;
- a B/Brisbane/60/2008-like virus.

This recommendation is based on the outcome of:

- The meeting of the Australian Influenza Vaccine Committee, with a New Zealand representative, to consult on the influenza vaccine composition for 2017.
- Information on international surveillance by the WHO Global Influenza Surveillance and Response System
- Analysis of recent data on epidemiology and strain characterisation
- The recommendations of the WHO annual consultation on the composition of 2017 influenza vaccine for the Southern Hemisphere.

Annual vaccination is still recommended because immunity lessens over time and those most at risk need maximum protection.

FAQ'S ABOUT MAXWELL HEALTH'S WORKPLACE FLU VACCINATION SERVICE

I know I qualify for free flu vaccinations, will you do mine free of charge?

Unfortunately Maxwell Health are not currently able to claim the subsidy from the Ministry of Health to cover the cost of flu vaccinations for those who qualify. If you want to take advantage of the free flu vaccinations, we recommend you contact your family GP, medical centre or doctor's surgery to make an appointment.

Will you vaccinate children at my workplace?

Maxwell Health do not carry out workplace vaccinations for children or those under the age of 16 years. We recommend children or young adults under 16 years of age are vaccinated at their family GP, medical centre or doctor's surgery.

Where is the injection site?

The flu vaccine is an intramuscular (IM) injection. Our nurse will usually put the injection in to the deltoid muscle at the top of the arm.

Do I have to wait after the injection?

Our nurse will advise each person to be monitored for 20 mins following the vaccination before returning to work.

Why do I have to wait, why can't I go straight back to work after the injection?

On rare occasions some recipients may encounter an anaphylactic reaction after receiving the injection. It is important that a trained medical professional is on hand to assist if this does take place. If it is going to happen, an anaphylactic reaction usually occurs within 20 minutes of the vaccine being administered.

I've got a cold, can I still have the flu vaccination done?

Minor illness with or without fever should not contraindicate the use of influenza vaccine*. However, our nurse will assess this on the day and will decide if she thinks you are not able to receive the vaccine at that time. Usually you will be issued with a flu voucher to have your vaccination done at another time.

*sourced from http://www.medsafe.govt.nz/profs/datasheet/f/Fluvaxinj.pdf

Reference:

- Fightflu.co.nz
- National Immunisation Strategy Group[NISG]

Flu vouchers – What are they?

Our vouchers are designed for people that are not able to attend our nurse visit, companies with less than 12 people to vaccinate or companies with remote workers or shift workers (whereby it is more convenient for the individual to attend a nominated Medical Centre). The voucher is pre-paid and is given to the medical centre in lieu of payment. The medical centre then sends the bill to Maxwell Health to pay.

I lost My Flu Voucher – What Can I Do?

Unfortunately once the Flu Vaccination voucher is issued it is not replaceable. This is simply a security issue as they have a significant monetary value. However, another voucher can be purchased and distributed to you.

FREQUENTLY ASKED QUESTIONS ABOUT THE FLU VACCINE

Does FLUVAX® contain blood products?

No blood products are used in the manufacturing process of FLUVAX®.

Does FLUVAX® contain thiomersal?

No FLUVAX® is preservative free. The vaccine does not contain thiomersal.

Does FLUVAX® contain neomycin, polymyxin or gentamicin?

FLUVAX® vaccine does contain traces of neomycin and polymyxin due to the use of these substances during production process.
FLUVAX® vaccine does not contain any trace of gentamicin sulphate.
FLUVAX® should be used with caution for people with a hypersensitivity to traces of these. However, this vaccine should not be used in people who have had an **anaphylactic reaction** to neomycin or polymyxin. Vaccine data sheets may vary in their recommendations or contraindications.

Regarding hypersensity and contraindications, current best evidence for influenza vaccines and recommendations by IMAC and Australian Society of Clinical Immunology and Allergy (ASCIA) are that individuals with anaphylaxis to any ingredient in the vaccine are contraindicated except egg allergy and should not receive a vaccine that includes them as residual.

Will influenza protect me against the common cold?

No. The vaccine will only provide protection against the strains of influenza virus present in the vaccine.

Will an anti-viral prevent me developing influenza?

No. Anti-virals only help relieve symptoms once you have the flu. Your best prevention method is to get vaccinated.

When should people be vaccinated?

The optimal time to be vaccinated is **in advance** of the peak period of influenza activity. Influenza vaccines can be given even when influenza virus activity has been identified, as protective antibody levels have been observed to develop from four days to two weeks after immunisation.

Why influenza immunisation is needed every year?

Annual immunisation is required for two key reasons: first, because protection lessens over time; second, because, influenza can be caused by different strains of influenza viruses that are not always represented in the previous year's vaccine.

Seasonal influenza vaccinations are recognised as being the single most effective way of reducing the impact of seasonal influenza - especially for those most at risk of complications. This can be particularly true for the elderly.

Can you get influenza from the vaccine?

No. The vaccines have been made from influenza virus that has been concentrated, inactivated, then broken apart. It cannot cause influenza as the vaccine does not contain any live viruses.

When vaccinated, the body responds to the vaccine by producing an immune response. This can include systemic symptoms such as fever, malaise and muscle aches. Other respiratory viruses circulate during the winter months and influenza vaccines do not protect against these. Most of these viruses cause milder infections (e.g. the common cold) and do not pose the same threat, particularly to those at higher risk. They should not be confused with influenza. Certain other infections may, on occasion, produce influenza-like symptoms and quite severe illness, which can lead to the suggestion that the vaccine is ineffective.

Reference:
- Fightflu.co.nz
- National Immunisation Strategy Group[NISG]

Who should be immunised?

Everyone, even the fit and healthy. Influenza continues to be a major threat to public health worldwide because of its ability to spread rapidly through populations.

FLUVAX® is approved for use in individuals **aged 5 years and over** but should be used with caution in children aged 5-8 years. The Ministry of Health recommends that FLUVAX® should only be given to individuals aged 9 years and over and should not be given to any child with a history of febrile convulsions.

Who should not receive the vaccine?

The general contraindication to receiving any vaccine is a history of anaphylaxis to a previous dose or any constituent of the vaccine.

Immunisation should be deferred for anyone who is acutely unwell with a fever or other systemic illness.

Influenza vaccine is produced in hens eggs and may contain residual egg protein. Patients who have had a confirmed anaphylactic reaction to egg protein can still receive the vaccine under specialist supervision.

Neomycin and polymyxin are also residual in some influenza vaccines and patients with known anaphylaxis to these should not receive a vaccine that includes them as residual.

The seasonal influenza vaccine contains fragments of disrupted (inactivated) virus. It stimulates the immune system to produce antibodies that naturally protect against circulating influenza viruses. Many other viruses are also present throughout the year, so people may catch a different respiratory infection with 'flu-like' symptoms around the time the vaccine is given and mistakenly blame the influenza vaccine or influenza virus. The vaccine itself can cause mild aches and pains for up to a day or two after vaccination. Sometimes this is mistaken as early symptoms of the flu.

If Guillain-Barré syndrome has occurred within 6 weeks of previous influenza vaccination, the decision to give Fluvax® vaccine should be based on careful consideration of the potential benefits and risks.

Is influenza immunisation recommended for pregnant women?

Yes. New Zealand and international experience from previous seasonal influenza outbreaks and the 2009/2010 pandemic showed that pregnant women had significantly more complications associated with influenza illness than other groups. Maternal influenza infection has been associated with an increased risk of maternal hospitalisation, fetal malformation and other illnesses.

There are a range of changes that occur during pregnancy which may put pregnant women at higher risk of complications from influenza. These include changes to the lung function including decreased lung capacity and tidal volume; increased cardiac output and oxygen consumption, and changes to the immune response particularly cell-mediated immunity. Because of the above changes, pregnant women with coexisting medical conditions are at even greater risk of severe influenza-related illness. When pregnancy is superimposed on high-risk conditions such as asthma or diabetes mellitus, influenza infection associated illness is 3-4 times greater than for non-pregnant women.

The seasonal influenza vaccine is strongly recommended for women who will be pregnant during the influenza season. Where possible, vaccines are usually given in the second and third trimesters but because vaccination with the influenza vaccine has been shown to be highly beneficial for pregnant women and their unborn babies, it is recommended that influenza vaccination should be offered to all women who will be pregnant when influenza is circulating. New Zealand is not alone in this recommendation, influenza vaccination for all pregnant women is currently recommended by health authorities in the USA, Australia and many European countries.

The influenza vaccine has been shown to be safe and effective in pregnant women in all trimesters, no unusual patterns in pregnancy or fetal outcomes have been observed in vaccine adverse events reports.

Maternal Protection for the newborn infant

Influenza infection in young infants often prompts hospitalisation and can predispose infants to bacterial pneumonia or otitis media. Another compelling reason to give influenza vaccine to the pregnant woman is the passive protection the mother will pass on to their young infant. Vaccination of pregnant women against influenza has been shown to decrease the incidence of influenza in their new-born babies. Infants of immunised mothers are nearly 50% less likely to be admitted to hospital with influenza than those of unvaccinated mothers.

Can influenza vaccine be given to a woman who is breast-feeding?

Yes. The vaccine may be safely given to a lactating women.

Will having a vaccination effect my ability to give blood either before or after?

Not a problem at all, whether it be before or after.

Reference:

- Fightflu.co.nz
- National Immunisation Strategy Group[NISG]

VACCINE EFFECTIVENESS

How effective is the vaccine for healthy adults?

Influenza vaccination is approximately 80% effective in preventing infection with influenza A and B viruses in healthy adults under 65 years of age, when there is a good match between the vaccine and circulating influenza strains.

How effective is the vaccine for older adults?

Although older people may have a reduced immune response to influenza vaccine compared with younger adults, they still benefit from influenza vaccination. Older people are more likely to have an associated condition and are more likely to develop complications from influenza.

How long after vaccination does it take for antibodies to be produced?

It takes up to two weeks for the vaccine to give full protection.

How effective is immunisation against influenza strains not included in the vaccine?

Effectiveness is reduced by the degree of difference between circulating virus and vaccine strains. The influenza virus does keep changing and new vaccines are formulated for each northern and southern hemisphere season. There may be some cross protection against an influenza virus not in the vaccine.

How long does immunisation last?

Protection should last throughout the influenza season and re-immunisation within 12 months is not usually necessary, unless travelling to the northern hemisphere during its peak influenza season. Immunisation is ideally provided in Early autumn (February, March or April), one or two months before the influenza season starts, to ensure that peak protection occurs during the season itself.

What are the commonly reported adverse events?

Commonly reported adverse events in children (6 months to 5 years of age) fever, appetite loss, irritability and drowsiness; (6 months to 18 years of age) redness and swelling at the injection site. Other common adverse events include headache, myalgia, pain at injection site and fatigue.

Systemic reactions such as fever or aches and pains occur in an about 1 in 10 adult vaccinees and are generally mild and of short duration. Children are more likely to experience a fever following influenza vaccine than adults. This is, however normally less than 1 in 10 of vaccinees.

Are there circumstances where people may consider re-immunising within a year, e.g. prior to travel?

Yes. When the available vaccine gives protection against influenza viruses circulating in the northern hemisphere, travellers - particularly those in 'high-risk' groups - who will be exposed to a northern hemisphere
influenza season should consider immunisation or re-immunisation prior to travel. Protective antibodies peak one to two months after vaccination and then begin to wane.

At six to eight months after vaccination, protective levels are lower and may not be sufficient to provide good protection. Re-immunisation should be considered where the benefits to the patient outweigh the risks.

What should we advise international travellers about influenza vaccination?

All travellers are at risk of contracting influenza during travel. Studies have indicated that influenza is the most commonly caught vaccine-preventable disease amongst international travellers. Influenza outbreaks have been linked to travellers. Certain types of travel, including ship voyages and mass gatherings are particularly high risk. For these reasons, all people travelling outside New Zealand should consider influenza vaccination pre-travel. Those who are in 'high-risk' groups and eligible for the subsidised influenza vaccine and who not yet received the annual influenza vaccine should definitely take the opportunity to have the vaccine. In tropical countries influenza activity can occur throughout the year. In temperate climates in the northern hemisphere activity is more common between the months of December and March.

The United States Advisory Committee on Immunization Practices (ACIP) recommendations are similar and recommend that people at high risk of influenza complications should consider receiving influenza vaccine before travel if they plan to:

a) travel to the tropics;
b) travel with large organised tourist groups at any time of the year (e.g. cruise ships); or
c) travel to temperate climates within the northern hemisphere (e.g. UK) between November and March.

Reference:
- Fightflu.co.nz
- National Immunisation Strategy Group[NISG]

IMMUNE-COMPROMISED

When is the best time to vaccinate the severely immune-compromised?

The optimum time is prior to the initiation of chemotherapy or radiation treatment. Following cessation of chemotherapy, normal immune responses return after about 30 days. A medical specialist's advice should be sought when considering the repeat influenza vaccination of a patient following bone marrow transplantation.

The protective effectiveness of influenza vaccination is likely to be low in this group of patients, thus additional preventative strategies are needed. Hospital-acquired influenza is the most likely route of infection so 'ringfencing' of such patients by immunising family members and hospital staff should be considered.

Reference:

- Fightflu.co.nz
- National Immunisation Strategy Group[NISG]