

Vaccines for Respiratory Infections Prevent Cardiovascular Diseases

Las vacunas para infecciones respiratorias previenen las enfermedades cardiovasculares

The analysis of the literature reveals an association between respiratory infections -either from influenza (flu) or bacterial pneumonia- and acute myocardial infarction or cardiovascular death.

During influenza epidemics, death and cardiovascular complications occur in at risk populations.

This means that patients with chronic cardiovascular disease are at risk during the winter periods.

Similarly, during the course of pneumonia, the risk of cardiovascular events such as myocardial infarction, heart failure, or arrhythmias is higher, worsening the prognosis.

As a result of the above, the concept of vaccination emerges as a genuine strategy for cardiovascular prevention.

However, the National Survey of Risk Factors conducted in Argentina in 2013 showed a very low coverage for flu vaccine, since 51.6% of the population older than 18 years had received it, and only 16.2% had received the pneumococcal vaccine.

Several studies have shown a significant reduction of the risk of cardiovascular events (myocardial infarction or cardiovascular death) in patients with coronary artery disease and heart failure who received the flu vaccine.

On the other hand, pneumococcal vaccine administration reduced pneumonia and its more complex clinical manifestations.

FLU VACCINE

This vaccine contains three inactivated and purified strains of the most frequently circulating fragmented influenza virus (two strains from group A and one from group B).

The National Vaccination Schedule in Argentina recommends an annual shot to individuals with risk factors between 2 and 64 years of age and to those over 65 years, children between 6-24 months, women in any trimester of pregnancy, and postnatal women until they leave the maternity center.

Risk groups include subjects between 2 and 64 years of age, with one or more of the following entities:

RESPIRATORY CONDITIONS

- a) Chronic obstructive pulmonary disease (COPD), congenital emphysema, etc.
- b) Moderate to severe asthma.

HEART DISEASES

- a) Heart failure, coronary artery disease, valve replacement, valve disease.
- b) Congenital heart diseases.

OTHER CONDITIONS

- a) Obesity.
- b) Diabetes.
- c) Patients with chronic renal failure in dialysis.

Flu vaccine should be timely, ideally before the onset of winter (period of increased influenza virus circulation).

Adverse effects are rare: local (pain, induration, erythema) or general (fever, discomfort, muscle aches).

PNEUMOCOCCAL VACCINE

There are two pneumococcal vaccines for adults: one is the polysaccharide vaccine, against 23 strains (PPSV23), and the other is the conjugate vaccine, against 13 strains (PCV 13).

The doctor will choose the vaccination schedule according to the individual characteristics and the immunization history of each patient.

Updated recommendations of the Argentine Ministry of Health for preventing pneumococcal disease include adults ≥ 65 of age, and subjects between 18 and 64 years with medical conditions that imply higher risk of severe pneumococcal disease.

TARGET POPULATION

1. Older than 65 years of age.
2. Between 5 and 64 years of age with risk factors including:
 - Chronic heart disease: chronic heart failure and cardiomyopathies (excluding hypertension) or high cardiovascular risk conditions.
 - Chronic lung disease.
 - Diabetes mellitus.
 - Alcoholism.
 - Chronic liver disease.
 - Smoking.

These vaccines can be administered at any time of the year together with other vaccines (for example, flu vaccine). Adverse effects are rare (pain at the administration site, fever in the first 24-48 hours).



Author: Dr. María Inés Sosa Liprandi
Coordinator of the Heart Failure Unit
Sanatorio Güemes, Buenos Aires

Editor: Julio Manuel Lewkowicz, MD^{MTSAC}
Sanatorio Güemes, Buenos Aires

INFORMATION ON THE WEB

- Vacunación Antigripal Argentina 2017. http://www.msal.gov.ar/images/stories/bes/graficos/0000000950cnt-2017-04_lineamientos-gripe_2017.pdf. September 2017.
- Vacunación contra el neumococo. Estrategia Argentina 2017-2018. http://www.msal.gov.ar/images/stories/bes/graficos/0000000947cnt-Lineamientos_neumo_adultos_WEB.pdf. September 2017.

The information provided is intended to be informative and educational and is not a replacement for professional evaluation, advice, diagnosis or treatment by your health-care professional.

This page cannot be photocopied for commercial purposes, unless authorized by the Argentine Journal of Cardiology.