

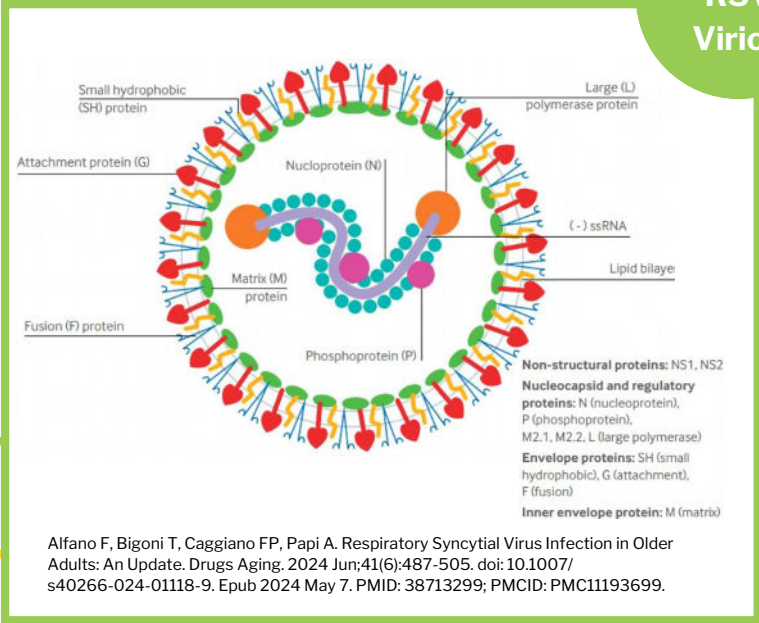
Respiratory syncytial Virus (RSV) Immunization



WHAT IS RSV?

Respiratory Syncytial Virus (RSV) is a **single-stranded RNA virus**. Of the eleven proteins it contains, the **adhesion (G) and fusion (F) proteins** are essential in RSV replication and infection.

The F protein is present in two forms: a prefusion state (**preF**) and one after the virus fuses with the cell (**post-F**). New immunization strategies target the F protein in its pre-fusion state.



WHAT IS PASSIVE IMMUNITY?

Passive immunity comes from antibodies created outside the infant's body. With **passive immunity** antibodies are transferred either:

- directly, by injecting infants with **monoclonal antibodies** or
- indirectly, by **vaccinating the pregnant person** who will then develop antibodies which will cross the placenta.

WHAT ARE MONOCLONAL ANTIBODIES?

Monoclonal antibodies (mAbs) are artificially created copies of antibodies. They are meant to bind to specific antigens. They are used for various purposes, ranging from cancer treatment to disease prevention and have been around for many years.

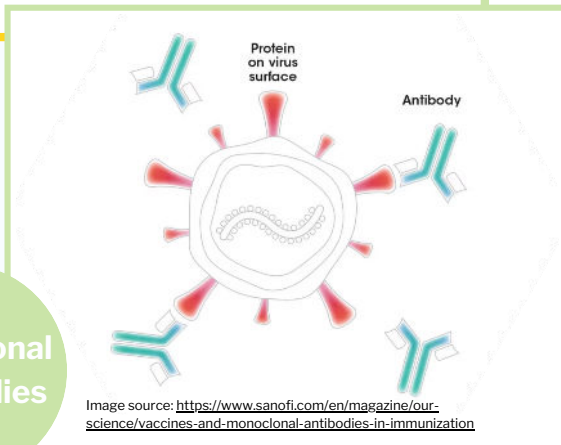


Image source: <https://www.sanofi.com/en/magazine/our-science/vaccines-and-mono-clonal-antibodies-in-immunization>

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HEALTH CANADA APPROVAL

For the past 20 years, only one immunization option for the prevention of severe RSV has existed in Canada: **palivizumab** (SYNAGIS®), a **monoclonal antibody** used for very high-risk infants.

In 2023, **two new immunization products** were approved by Health Canada for the prevention of severe RSV in infants:

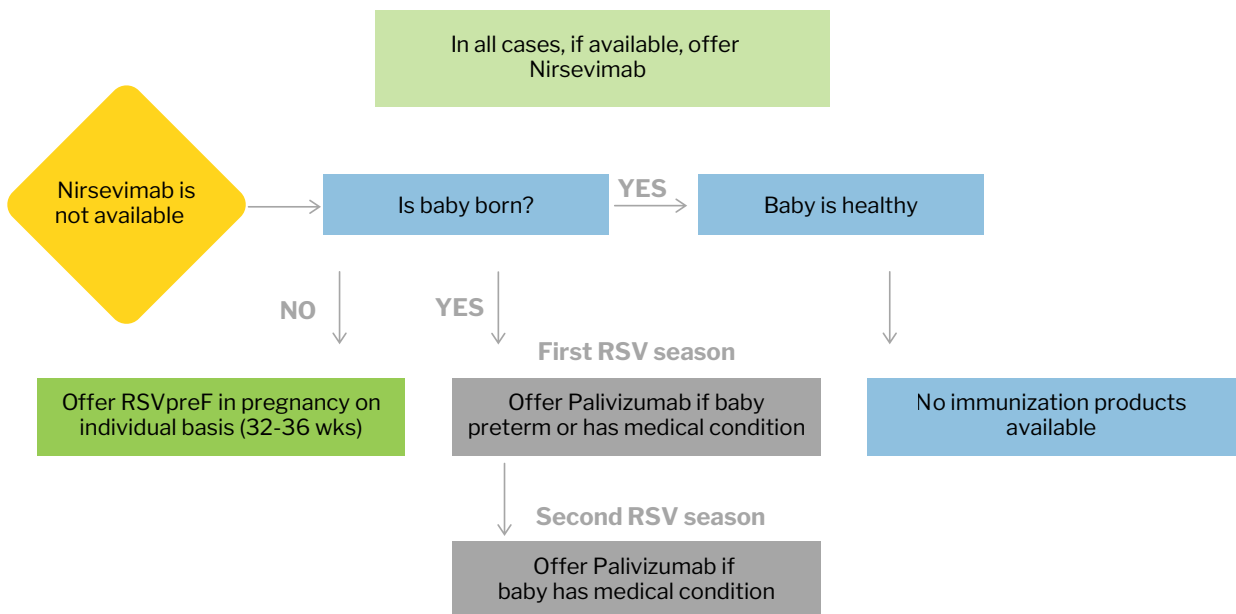
- **Nirsevimab (Beyfortus™): longer-acting monoclonal antibody** for all infants entering their 1st RSV season and higher-risk children in their 2nd RSV season.
- **RSVpreF (Abrysvo™): non-live recombinant protein subunit vaccine** given between 32 and 36 weeks of pregnancy to transfer protective antibodies from birth until 6 months of life.

WHAT IS NACI?

The National Advisory Committee on Immunization (NACI) is a national advisory committee of health experts. It provides guidance on the use of vaccines currently or newly approved for use in Canada.

NACI RSV PREVENTION RECOMMENDATIONS

In May 2024, NACI issued its recommendations regarding RSV prevention in babies entering their first and second RSV season.



If RSVpreF is given in pregnancy, Nirsevimab should still be administered, if available, to infants born less than two weeks after administration of RSVpreF or those considered high risk.

RSVpreF is available privately across all Canadian provinces and territories. In Ontario, it is provided free of charge.



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