CAM JOB AIDS

Respiratory syncytial Virus (RSV) Immunization

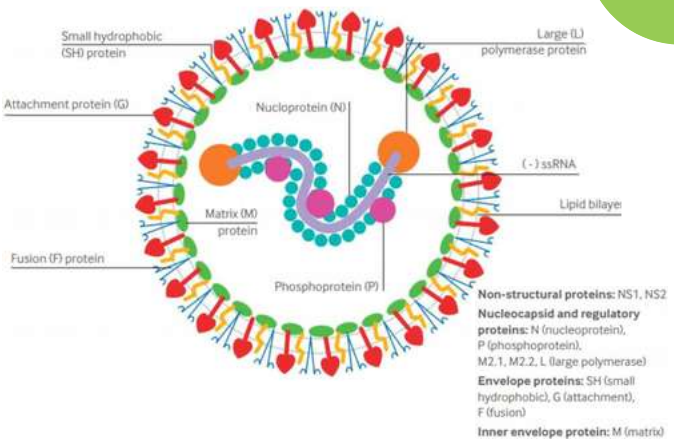
WHAT IS RSV?

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.

The RSV Virion



Alfano F, Bigoni T, Caggiano FP, Papi A. Respiratory Syncytial Virus Infection in Older Adults: An Update. Drugs Aging. 2024 Jun;41(6):487-505. doi:10.1007/s40266-024-01118-9

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.

Monoclonal Antibodies

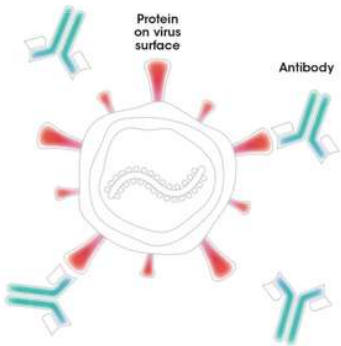


Image source: https://www.sanofi.com/en/magazine/our-science/vaccines-and-monoclonal-antibodies-in-immunization

For more information, visit canadianmidwives.org

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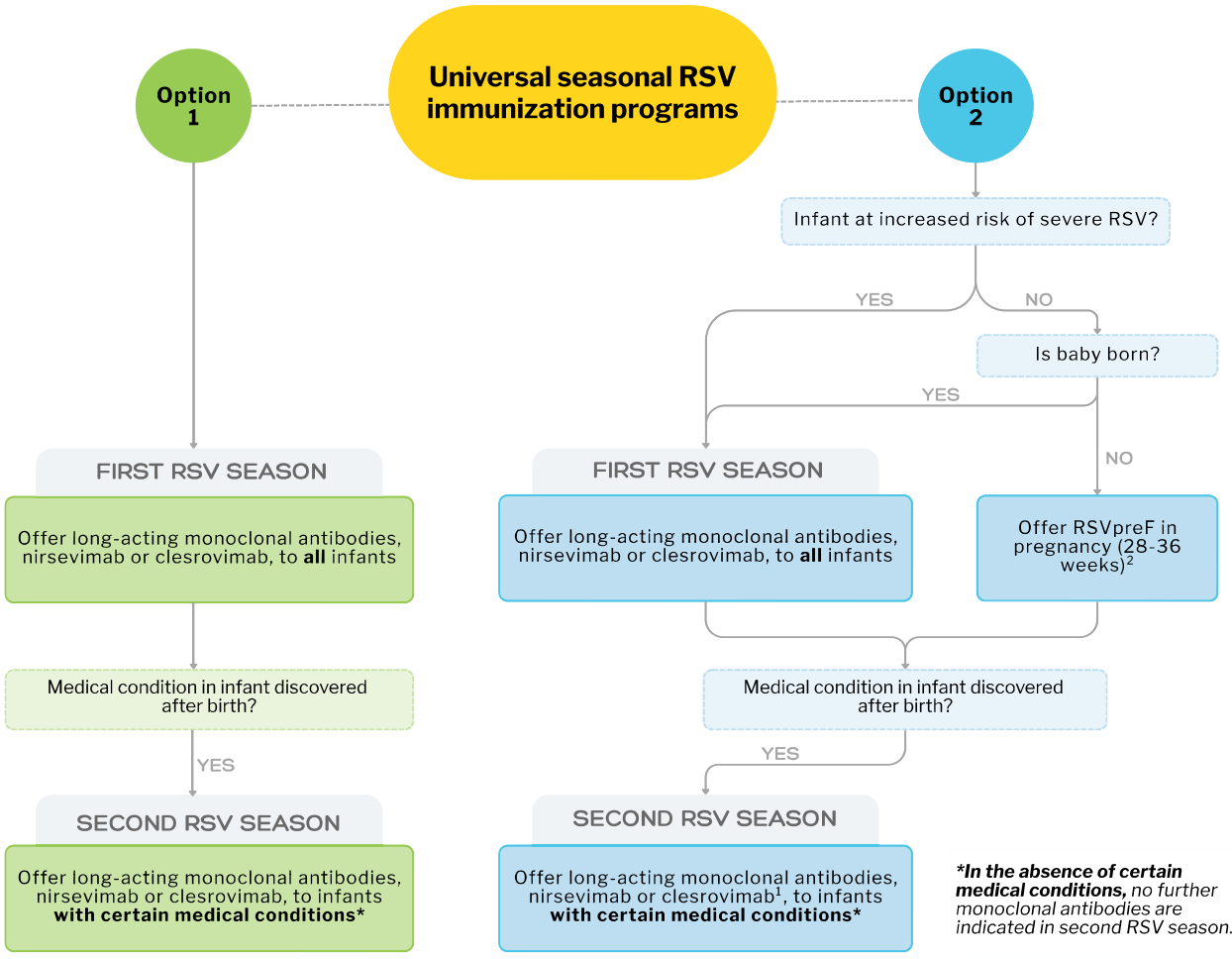
HEALTH CANADA APPROVAL

From 2002 to 2022, only one immunization option for the prevention of severe RSV had existed in Canada: **palivizumab** (SYNAGIS®), a **monoclonal antibody** used for very high-risk infants. In 2023 and 2026, **three 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.
- **Clesrovimab (Enflonsia®)**: **longer-acting monclonal antibody** for all infants entering their 1st RSV season.

NACI RSV PREVENTION RECOMMENDATIONS

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. In April 2026, NACI issued updated recommendations regarding RSV prevention in babies entering their first and second RSV season.



***In the absence of certain medical conditions,** no further monoclonal antibodies are indicated in second RSV season.*

[1] *Clesrovimab not authorized for infants and children at ongoing risk in second RSV season but could be considered off-label on evidence from clinical trials.*

[2] *Health Canada authorizes use from 32-36 weeks, making administration at 28-31 weeks off- label in Canada. In addition, even if RSVpreF is given in pregnancy, monoclonal antibodies should still be administered to infants born less than two weeks after administration of RSVpreF or those with certain medical conditions.*

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