Public Health Agency of Canada
Agence de la santé publique du Canada

Canada

INTERCHANGEABILITY OF AUTHORIZED COVID-19 VACCINES

PROTECTING AND EMPOWERING CANADIANS
TO IMPROVE THEIR HEALTH

MIXED COVID-19 VACCINE SCHEDULES

- The Public Health Agency of Canada released, on June 1st, 2021, updated recommendations from the National Advisory Committee on Immunization (NACI) on the interchangeability of authorized COVID-19 vaccines (also referred to as 'mixed vaccine schedules')**.** These recommendations are based on current scientific evidence and NACI's expert opinion.

- The interchangeability of vaccines means you could receive one vaccine product for your first dose and a different vaccine product for your second dose to complete your two-dose vaccine series.

- With first doses well underway, provinces and territories are now accelerating the offer of second doses of COVID-19 vaccines. NACI's advice on mixed vaccine schedules provides provinces and territories with options to manage their COVID-19 vaccine programs.

- ***NACI recommends that:***

    - ***Persons who received a first dose of the AstraZeneca/COVISHIELD vaccine may receive either AstraZeneca/COVISHIELD vaccine or an mRNA vaccine (Pfizer-BioNTech or Moderna) for their second dose, unless contraindicated.***

    - ***Persons who received a first dose of an mRNA vaccine (Pfizer-BioNTech or Moderna) should be offered the same mRNA vaccine for their second dose. If the same mRNA vaccine is not readily available or unknown, another mRNA vaccine can be considered interchangeable and should be offered to complete the vaccine series.***

- In making their recommendation to offer mRNA as the second dose following a first dose of AstraZeneca/COVIDSHIELD, NACI considered:

    - The risk of severe blood clots with low blood platelets associated with the AstraZeneca viral vector vaccine but not the mRNA (Pfizer-BioNTech or Moderna) vaccines;
    - The possibility of increased short-term side effects when using mixed COVID-19 vaccine schedules; and
    - Available data on the immune responses produced by a first dose of the AstraZeneca vaccine followed by a second dose of the Pfizer-BioNTech vaccine.

To see the Rapid Response, please visit [NACI rapid response: Interchangeability of COVID-19 vaccines].

WHAT YOU NEED TO KNOW

- This is not a new concept. Similar vaccines from different manufacturers are used when vaccine supply or public health programs change. Different vaccine products have been used to complete a vaccine series for influenza, hepatitis A, and others.

- mRNA and AstraZeneca/COVISHIELD vaccines are both available in Canada and there will be ***sufficient supply of both types of vaccine to provide second doses***. Getting the same vaccine for the first and second dose or a mixed schedule are both considered valid options, and both will count as a completed series. Individuals should consider talking to a healthcare professional for help with understanding information to support ***informed individual decision-making*** on vaccination.

- Severe blood clots with low blood platelets, a condition referred to as Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT), has been associated with the use of viral vector vaccines (AstraZeneca/COVISHIELD, Janssen). Because of this rare but serious adverse event, several European countries, including Denmark, Finland, France, Germany, Norway, Spain and Sweden, began offering a second dose of an mRNA vaccine (Pfizer-BioNTech or Moderna) to those who received a first dose of the AstraZeneca/COVISHIELD viral vector vaccine.

- Recent studies on the safety of and one study on the immune responses produced using mixed COVID-19 vaccine schedules provide the evidence for vaccine interchangeability – a study from Germany and a clinical trial from the United Kingdom report on the safety of mixed schedules, and a Spanish trial reports both the safety and immune responses produced from mixed COVID-19 vaccine schedules.

    - Current evidence suggests a first dose of the AstraZeneca vaccine followed by a second dose of mRNA vaccine (Pfizer-BioNTech was used in studies) has a ***good safety profile*** at shorter (4-week) and longer (8- to 12-week) intervals.

    - There is a possibility of increased ***short-term side effects*** when using mixed COVID-19 vaccine schedules, including headache, fatigue and feeling generally ill. This was particularly noted with a short interval of 4 weeks between the first and second dose. These side effects are temporary and resolve without complications.

    - The ***rate of VITT*** after the second dose of AstraZeneca/COVISHIELD vaccine appears to be lower than with the first dose but has increased over time, with current estimates of approximately 1 per 600,000 people vaccinated.

    - There is evidence that providing an mRNA vaccine after AstraZeneca vaccine will ***boost the immune response***, which is what we expect from a second dose.

- More results from ***ongoing studies***, including Canadian data, on using mixed COVID-19 vaccine schedules are expected in the coming months. NACI continues to closely monitor evolving evidence on mixed COVID-19 vaccine schedules and will update recommendations as needed.

QUOTES

"We know that the question of which vaccine will be used for second doses, in particular for individuals who had received the AstraZeneca/COVISHIELD vaccine as their first dose, has been a question for many people these last few months. NACI has seen additional data on the safety of using mixed COVID-19 vaccine schedules and NACI has also seen some data on the immune response following this mixed schedule. Based on that evidence, but also on the risk of the rare but serious adverse event called VITT that is associated with the viral vector vaccines, we are recommending that someone who received a first dose of the AstraZeneca/ COVISHIELD vaccine may receive an mRNA vaccine for their second dose."

"The Committee strongly recommends that if one mRNA vaccine was used for the first dose, the other mRNA vaccine can be used as the second dose if needed. Second doses are important for more robust and long-term protection. These NACI recommendations on mixed schedules will provide flexibility for provinces and territories in the move towards second doses."

- Dr. Caroline Quach-Thanh, NACI Chair

"The public health community values the advice of Canada's National Advisory Committee on Immunization in supporting the development of COVID-19 immunization policies based on the latest scientific evidence. NACI continues to be a key partner in efforts to optimize the use of vaccines as part of Canada's pandemic response. This rapid response on the interchangeability of authorized COVID-19 vaccines will guide decision-making by provinces and territories as we continue to roll-out Canada's COVID-19 vaccination campaign."

- Dr. Theresa Tam, Chief Public Health Officer of Canada

NACI FORWARD AGENDA

NACI continues to actively review emerging evidence on COVID-19 vaccines. Upcoming recommendation may include new advice on:

- Co-administration of COVID-19 vaccines with other vaccines (expected in summer 2021)
- Optimal number of doses for people who have been previously infected with SARS-CoV-2 (expected in summer 2021)