Nova Scotia COVID-19 Vaccine Program

Information for Health Care Professionals

February 26, 2021

Electronic copy can be found here: https://novascotia.ca/dhw/cdpc/info-for-professionals.asp; Immunization Tab; COVID-19 Immunization
This evergreen document will be updated as evidence on COVID-19 and COVID-19 vaccines evolves.

The Public Health Agency of Canada (PHAC) has developed the COVID-19 Vaccination Tool Kit for Health Care Providers. Within the tool kit, there are links to general information about COVID-19, an overview of authorized vaccines, guidance for managing COVID-19 vaccination clinics, an overview of vaccine safety, as well as a number of additional resources such as digital tools and communication materials.

The Nova Scotia Health Authority (NSHA) has developed a Pandemic Immunizer Education site as an educational resource designed for health care providers who will be supporting community immunization clinics. COVID-19 vaccine information and resources may also be found on the NSHA COVID-19 Hub.

COVID-19 Vaccines in Canada

1. Which COVID-19 vaccines are currently authorized for use in Canada?

At this time, there are two COVID-19 mRNA vaccines approved for use in Canada:

- Pfizer-BioNTech COVID-19 vaccine was authorized on December 9, 2020. Pfizer information including the product monograph is available from: https://www.cvdvaccine.ca/.
- Moderna COVID-19 vaccine was authorized on December 23, 2020. Moderna information including product monograph is available from: https://www.modernacovid19global.com/ca/.

Additional information specific to the mRNA vaccines currently authorized for use in Canada can be found in the NACI Statement Recommendations on the use of COVID-19 Vaccines.

2. Who is eligible and how are key populations chosen to receive initial doses COVID-19 vaccine?

Nova Scotia's COVID-19 immunization plan includes 3 phases. Each phase identifies when different groups can receive the vaccine. The plan is flexible to allow for increases or decreases in vaccine supply. Every person in Nova Scotia who wants the COVID-19 vaccine and for whom vaccine is indicated will receive it for free. An overview of Nova Scotia's COVID-19 immunization plan is available here: https://novascotia.ca/coronavirus/docs/COVID-19-immunization-plan-overview-poster-en.pdf.

3. What is the efficacy of the COVID-19 vaccines?

Both mRNA vaccines have been shown to be >90% efficacious in the clinical trials. Efficacy data continues to evolve. For the most current information regarding efficacy of the COVID-19 vaccines, please consult the NACI's Recommendations on the Use of COVID-19 Vaccines statement.

4. How long does it take for immunity to develop following vaccination?

For both mRNA vaccines, an immune response was demonstrated approximately 2 weeks after the first dose and boosted by the second dose of the vaccine. Maximal immune response was seen 7 days after the second dose for each vaccine. The duration of protection after a two-dose series is currently unknown.

COVID-19 Vaccine Safety and Adverse Events Following Immunization (AEFI)

5. How do we reassure the public that COVID-19 vaccines are safe and effective?

Like all vaccines authorized for use in Canada, COVID-19 vaccines will be held to the same high safety, effectiveness, and quality standards. Only COVID-19 vaccines that meet those standards will be approved. Once a COVID-19 vaccine has been authorized for use in Canada, Health Canada (the regulator) monitors its safety and effectiveness in individuals. Manufacturers are legally required to report specific adverse events to Health Canada. In addition, there is surveillance of vaccine safety within each province and continuous monitoring of safety reports received across the country as part of Canada's post-marketing surveillance program.

Patients consistently rank healthcare providers as their most trusted source for vaccine information. A healthcare provider's recommendation to get the COVID-19 vaccine has a positive impact on individuals' intentions to be immunized. Be transparent about the latest vaccine information, reassure that there is a robust vaccine safety surveillance system in Canada, and emphasize vaccines' roles to protect recipients and the people around them.

Providers can use the PHAC's COVID-19 Vaccination Tool Kit for Health Care Providers as a resource to help clients and colleagues make informed decisions about COVID-19 vaccination by sharing credible information and resources with them.

6. What are the side effects and adverse events related to COVID-19 vaccines?

Please see NACI Statement Recommendations on the use of COVID-19 Vaccines for a summary of adverse events identified in clinical trials of authorized COVID-19 vaccines. The COVID-19 Vaccine Information and Aftercare Sheet, developed by the NSHA, provides information for vaccine recipients regarding side effects.

Very common and common adverse events

Common adverse events are defined as those that occur in 1% to less than 10% of vaccine recipients; very common adverse events occur in 10% or more of vaccine recipients.

Local

Pain at the injection site is very common after administration of the currently authorized COVID-19 vaccines. Redness and swelling are common or very common after administration. Localized axillary lymph node swelling and tenderness was a solicited adverse event in the Moderna COVID-19 clinical trial and was very common after administration with that vaccine. Local adverse events are usually mild or moderate and resolve within a few days of vaccination. Vaccine recipients who have experienced these local reactions can receive the second dose. For the authorized mRNA COVID-19 vaccines, pain at the injection site was slightly more frequent in younger adults compared to older adults.

Delayed reactions with pain, redness, swelling, and occasionally pruritus, at the injection site have been noted in those individuals who have received Moderna vaccine. Such reactions were observed in the Moderna clinical trials with onset on or after day 8 following vaccination and were more likely to occur following the first dose than the second dose. Vaccine recipients who have experienced these delayed local reactions can safely receive the second dose.

Systemic

Fatigue, headache, muscle pain, chills, and joint pain are all either common or very common after the administration of the currently authorized COVID-19 vaccines. Fever was very common after administration of the second dose of the currently authorized mRNA COVID-19 vaccines. Oral analgesics or antipyretics may be considered for the management of adverse events (e.g., pain or fever, respectively), if they occur after vaccination. Systemic adverse events are usually mild or moderate intensity and resolve within a few days of vaccination. Vaccine recipients who have experienced these systemic reactions can receive the second dose. For the mRNA COVID-19 vaccines, systemic reactions are more frequent after the second vaccine dose and in younger adults.

Rare and Very Rare Adverse Events

Rare and very rare adverse events occur in 0.01% to less than 0.1% and less than 0.01% of vaccine recipients, respectively. No rare or very rare solicited adverse events were reported among vaccinated participants in either of the mRNA clinical trials to date.

The probability of detection of very rare adverse events in clinical trials is low given clinical trial population sizes; therefore, ongoing post-marketing vaccine safety surveillance is essential.

7. When should I report an adverse event following immunization (AEFI)?

An AEFI is any untoward medical occurrence which follows immunization, and which does not necessarily have a causal relationship with the usage of a vaccine. All adverse events not normally expected (i.e. listed in the product monograph) that are temporally related to the administration of the vaccine need to be reported to local public health in accordance with It's the Law: Reporting of Adverse Events Following Immunization. These reports are reviewed as they are received and are summarized at the provincial and national level as part of Canada's post-marketing surveillance program.

8. How do I report an adverse event following immunization (AEFI)?

Providers reporting an AEFI to public health can obtain the AEFI form and the User Guide from the Public Health Agency of Canada. Serious adverse events must be reported within **one** working day. Other adverse events must be reported within **five** working days. Information regarding serious and other adverse events may be found here: https://novascotia.ca/dhw/cdpc/documents/13087_AdverseEventsPoster_En.pdf

9. What is an Adverse Event of Special Interest (AESI)?

An AESI is a specific adverse event that has been identified by international health authorities to be monitored as part of COVID-19 vaccine safety surveillance. The conditions have been included because they have been associated with COVID-19 disease or there is a theoretical/proven association with vaccines in general or a vaccine platform. Further information regarding AESIs is available via the Brighton Collaboration. The Brighton Collaboration AESI list may be found here: https://brightoncollaboration.us/covid-19/. These events should also be reported to public health by providers.

Storage, Dosing, Scheduling and Administration

10. What are the differences in the storage requirements, schedules, doses and administration between the COVID-19 vaccines approved for use in Canada?

Table 1 Schedules, doses and administration of COVID-19 vaccines

Product	**Pfizer BioNTech COVID-19 vaccine**	**Moderna COVID-19 vaccine**
Type of vaccine	COVID-19 mRNA	COVID-19 mRNA
Authorized ages for use	16 years of age and older	18 years of age and older
Dose	0.3 mL (30 mcg of mRNA) [a]	0.5 mL (100 mcg of mRNA)
Route of administration	IM	IM
Schedule[b]	2 Doses, 3 weeks apart	2 Doses, 4 weeks apart
Adjuvant (if present)	None	None
Diluent	Yes	No
Primary storage requirements pre-puncture	-80°C to -60°C [c]	-25°C to -15°C [c, d]
Storage requirements pre-puncture [c]	120 hours (5 days) at +2°C to +8°C **and/or** 2 hours up to +25°C	30 days at +2°C to +8°C **and/or** 12 hours at +8°C to +25°C
Usage limit post-puncture	6 hours at +2°C to +25°C [e]	6 hours at +2°C to +25°C
Formats available	Multi-dose vial (6 doses) [a], preservative-free	Multi-dose vial (10 doses), preservative-free

a After dilution, one vial contains 6 doses of 0.3 mL each. However, vial labels and cartons may state that after dilution, a vial contains 5 doses of 0.3 mL. Information in the product monograph supersedes the number of doses stated on vial labels and cartons. Low dead-volume syringes and/or needles can be used to extract 6 doses from a single vial. If standard syringes and needles are used, there may not be sufficient volume to extract a 6th dose from a single vial. Refer to the product monograph for choice of diluent, dilution instructions and type of syringes which can be used to extract 6 doses from a single vial.
b Authorized schedule. For NACI recommendations on intervals between doses refer to NACI's Recommendations on the use of COVID-19 Vaccines
c Protected from light during storage
d Do not store on dry ice or below -40°C
e After dilution, vaccine must be used within 6 hours

Information on the specific vaccine storage and handling requirements for the mRNA vaccines is available from:

- Pfizer BioNTech: https://www.cvdvaccine.ca/
- Moderna: https://www.modernacovid19global.com/ca/

11. Why is it a provider's responsibility to ensure vaccine storage conditions are maintained?

Vaccines are sensitive biological products that may be less effective, or even destroyed, when exposed to temperatures outside the recommended range. There is a need to ensure that an effective product is being used. Vaccine failures caused by administration of compromised vaccine may result in the re-emergence or occurrence of vaccine-preventable disease. Careful management of resources is always important; however this is critical for COVID-19 vaccines given vaccine supply issues. Vaccines are expensive and can be in short supply. Loss of vaccine may result in the cancellation of immunization clinics, resulting in lost opportunities to immunize. Revaccination of clients who received an ineffective vaccine may also cause loss of public confidence in vaccines and/or the health-care system.

12. What should I do if the storage conditions of vaccines have been compromised?

All cold chain breaks must be reported to the local Public Health office. Vaccine that is exposed to a cold chain break must be bagged, dated, labelled "Do not use" and refrigerated while waiting to receive direction from Public Health on the use of affected vaccines.

13. What if a client presents later than the recommended interval for the COVID-19 vaccines?

Currently, no data on a maximum interval between doses or on medium- or long-term efficacy of COVID-19 vaccines are available. If administration of the second dose of a COVID-19 vaccine is delayed, the second dose should be provided as soon as possible, and the series does not need to be restarted. In general, regardless of the time between doses, interruption of a vaccine series does not require restarting the series as delays between doses do not result in a reduction in final antibody concentrations for most other vaccines requiring more than one dose for a series. Maximum protection may not be attained until the complete vaccine series has been administered.

14. What is the minimum interval for the second dose for each of the COVID-19 vaccines?

For optimal response, immunizers should observe recommended intervals as much as possible, however, doses given earlier than recommended may still be considered valid and need not be repeated if minimum intervals are observed. The recommended minimum intervals between doses for the COVID-19 vaccines are as follows:

- Pfizer-BioNTech: 19 days
- Moderna: 21 days

15. What if a client receives a COVID-19 vaccine less than 14 days following another live or inactivated vaccine?

In the absence of evidence regarding simultaneous administration of COVID-19 vaccine with other vaccines, the National Advisory Committee on Immunization (NACI) recommends the following with regard to other (non-COVID-19) vaccines and other medications.

Except in the case where another vaccine is required for post-exposure prophylaxis, it is prudent not to administer:

- Any other (non-COVID-19) vaccines at the same time as the COVID-19 vaccine;
- A COVID-19 vaccine if the client has received another vaccine in the preceding 14 days[1]
- Another (non-COVID-19) vaccine until 28 days after each dose of a COVID-19 vaccine (except in the case where another vaccine is required for post-exposure prophylaxis);
- COVID-19 vaccines simultaneously with monoclonal antibodies or convalescent plasma. The interval between receipt of these products and COVID-19 vaccine is under review.

If a COVID-19 vaccine is inadvertently administered at the same time as another vaccine, neither dose should be repeated.

16. Can a client receive COVID-19 vaccine following tuberculin skin testing (TST) or Interferon Gamma Release Assay (IGRA)?

There is a theoretical risk that mRNA vaccines may temporarily affect cell-mediated immunity, resulting in false-negative TST or IGRA test results. If a TST or an IGRA test is required, it should be administered and read before immunization or delayed for at least 4 weeks after vaccination. Vaccination with COVID-19 vaccines may take place at any time after all steps of tuberculin skin testing have been completed. In cases where an opportunity to perform the TST or IGRA test might be missed, the testing should not be delayed. However, re-testing (at least 4 weeks post immunization) of individuals with negative results for whom there is high suspicion of TB infection may be prudent to avoid missing cases due to potentially false negative results.

[1] If there are logistical challenges with supply/scheduling vaccine appointments **and** there has been no adverse reaction from the other vaccine, the second dose of COVID-19 vaccine may be given.

17. Are the COVID-19 vaccines interchangeable?

As there are currently no data on the interchangeability of COVID-19 vaccines, NACI recommends that the **vaccine series be completed with the same COVID-19 vaccine product**.

If the vaccine product used for a previous dose is not known, attempts should be made to identify which vaccine was given for the first dose in order to give the same product for the second dose. If the same product is not available, complete the vaccine series with a similar type of COVID-19 vaccine (e.g., mRNA vaccine). Such a series should be considered as valid, without need to restart a two-dose series with a new product. **Accurate recording of vaccines received is critical.**

18. Is there a recommendation on the size of needle to be used to dilute the Pfizer-BioNTech vaccine?

Yes. A 21-gauge needle or narrower is recommended to prevent a larger opening in the vial stopper that may allow vaccine to leak.

19. Is there a recommendation on the size of the syringe to be used to withdraw and administer the Pfizer BioNTech vaccine?

Yes. A 1ml low dead-volume syringe is recommended to maximize doses. Information regarding low-dead volume syringes may be found here: https://www.cvdvaccine.ca/files/PfizerCovid_6doseWithdrawalGuide-EN.pdf.

20. What if there is remaining vaccine in the vaccine vial after 6 doses from the Pfizer-BioNTech vaccine vial, or 10 doses from the Moderna vaccine vial, have been removed?

If there is enough vaccine left in the vial for a complete 0.3 mL dose after 6 doses have been removed from a Pfizer-BioNTech vaccine vial, or a complete 0.5 mL dose after 10 doses have been removed from a Moderna vaccine vial, additional doses can be drawn and administered.

21. When diluting the Pfizer-BioNTech COVID-19 vaccine, is there a need to expel air from the vial to equalize the pressure?

Yes. After adding the diluent into the vaccine vial, withdraw 1.8 mL of air from the vaccine vial into the empty diluent syringe prior to removing the needle and attached syringe from the vial. This will prevent loss of vaccine from the vial through forceful expulsion under pressure.

Special Considerations

22. Are there groups in which the approved vaccines have not been specifically studied?

NACI has provided recommendations for COVID-19 immunization in some specific populations who were either excluded from, or were represented by small numbers of participants in the clinical trials as there was no or limited evidence of safety or efficacy in these populations. Vaccine may be offered to individuals in these populations in some circumstances on a case-by-case basis with a risk-benefit analysis (where the risk of exposure and/or severe COVID-19 disease outweighs the risk of vaccination), and with transparency about the insufficiency of evidence. These recommendations may change as more evidence becomes available.

Information to assist in informed decision-making about whether to receive a COVID-19 vaccine for those who are pregnant, planning a pregnancy or breastfeeding has been developed by the members of the Nova Scotia Vaccine Expert Panel (VEP) and the Reproductive Care Program of Nova Scotia and is available as a Decision Aid Tool.

Guidance for health care providers to provide informed consent for COVID-19 vaccination to immunocompromised persons and persons with underlying autoimmune diseases has been developed by the members of the Nova Scotia VEP and may be found in Appendix 1.

Recommendations for the use of COVID-19 vaccine in immunosuppressed persons, persons with an autoimmune condition, pregnant or breastfeeding individuals and individuals 12 – 15 years of age (Pfizer BioNTech specifically) are also available in NACI's Recommendations on the use of COVID-19 vaccines statement.

23. Can an individual who has previous lab-confirmed SARS-CoV-2 infection receive the COVID-19 vaccine?

Yes. NACI currently recommends that a complete series with a COVID-19 vaccine should be offered to individuals with prior PCR-confirmed SARS-CoV-2 infection. This recommendation may be modified as further evidence emerges.

Contraindications

24. What are the contraindications to the COVID-19 mRNA vaccines?

The authorized COVID-19 mRNA vaccines are contraindicated in individuals with a history of anaphylactic reaction to a previous dose of the vaccine or to any component of the vaccine. For a list of components in the vaccine and packaging consult the respective COVID-19 vaccine product monographs found at:

- Pfizer BioNTech: https://www.cvdvaccine.ca/
- Moderna: https://www.modernacovid19global.com/ca/

25. What are the potential allergens in the COVID-19 vaccines that are known to cause type 1 hypersensitivity reactions?

The authorized COVID-19 mRNA vaccines in Canada contain polyethylene glycol (PEG) which can be found in various products such as: over the counter (e.g., cough syrup, laxatives), and prescription medications, medical bowel preparation products for colonoscopy, skin care products, dermal fillers, cosmetics, contact lens care solutions, products such as ultrasound gel.

The Moderna COVID-19 vaccine contains tromethamine (trometamol or Tris) which is a component in contrast media, and oral and parenteral medications. In the literature, one case report of anaphylaxis to tromethamine has been described.

In situations of suspected hypersensitivity or non-anaphylactic allergy to COVID-19 vaccine components, consultation with an allergist is advised. Most instances of anaphylaxis to a vaccine begin within 30 minutes after administration of vaccine. Therefore, if there is a specific concern about a possible allergy to a component of the COVID-19 vaccine being administered, or if an individual has a history of anaphylaxis to another vaccine or to an injectable medication or product, an extended period of observation post-vaccination of 30 minutes may be warranted.

For current information regarding anaphylaxis management please refer to the Canadian Immunization Guide: https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-2-vaccine-safety/page-4-early-vaccine-reactions-including-anaphylaxis.html#a16

Appendix 1 – Guidance for Health Care Providers - to provide informed consent for COVID-19 vaccination to immunocompromised persons and persons with underlying autoimmune diseases

The following guidance has been developed by members of Nova Scotia's Vaccine Expert Panel.

The safety and efficacy of COVID-19 vaccine in immunocompromised persons and those with underlying autoimmune conditions have not yet been established because the vaccine has not been studied in these groups. Persons who are immunocompromised may not mount an adequate immune response. In some immunocompromised clients, a less than optimal response to a vaccine may provide some benefit as they may be at higher risk of morbidity and mortality from COVID-19. For clients with severe immunodeficiency, administration of inactivated vaccines is often not harmful, but may not provide full protection.

Currently, there are very limited data on COVID-19 vaccination in individuals who have an autoimmune condition. Persons with autoimmune diseases represented a very small proportion of trial participants and represent a very narrow range of autoimmune conditions. The relative degree of autoimmunity in individuals with autoimmune conditions is variable depending on the underlying condition, the severity and progression of the disease and use of medications that impact immune function. Therefore, the balance of risks and benefits must be made on a case-by-case basis. Other applications of mRNA technologies have been used for the treatment of cancer, which required an immune response directed against an individual's cancer cells. This raised the theoretical concern that mRNA vaccines for infectious

diseases would behave similarly, eliciting inflammation and possibly exacerbating existing autoimmune diseases. Current applications of mRNA technology for COVID-19 vaccines have been optimized to reduce this risk.

Guidance for the approach to consent for Nova Scotians with underlying immunocompromise or autoimmune conditions

The approach to consent for COVID-19 vaccines requires an assessment of an individual's underlying medical conditions in order to identify situations where more detailed information and consent process may be required. For each person, a Category is assigned, and the following Management Pathway may be followed to document consent.

Category 1	Category 2	Category 3	Category 4	Category 5
• Breastfeeding individuals • Pregnant individuals beyond the 1st trimester • Splenic disorders • HIV • Chronic kidney disease • Chronic liver disease • Type 1 or 2 Diabetes mellitus • Non-hematologic malignancy in absence of neutropenia and check point inhibitors • Stable anticoagulation • Radiation therapy alone	• On immune suppressing doses of prednisone (> 20 mg/day > 2 weeks) • On monoclonal antibodies, plasma therapy, or plasmapheresis (delay 3 months)	• Primary immune deficiency requiring IVIG or SCIG • Chronic granulomatous disease • Hyper IgE syndrome • Complement deficiency • Solid organ transplant after 1 month & no acute rejection • HSCT after 3-6 months & no GVHD • Stable autoimmune condition • Stable immunomodulator therapy • History of Guillain Barre syndrome • History of Bell's palsy	• Active autoimmune condition • Anaphylaxis to injectable medication • Solid organ transplant with acute rejection • Pregnant individuals in the first trimester (consider delaying until at least the second trimester) • Cytotoxic chemotherapy with neutropenia • Leukemia • Within 3 months of stem cell transplant • On check point inhibitor • On CAR T-cell therapy • Interferono-pathy	• Anaphylaxis or severe reaction to prior dose of COVID-19 vaccine • Anaphylaxis to any component of the COVID-19 vaccine

Guidance for Consent Management pathways

	Pathway 1	Pathway 2	Pathway 3	Pathway 4
Category	1	2 & 3	4	5
Education/Consent discussion	Self +/- 811	Primary care provider or, nurse practitioner, pharmacist or specialist	Specialist or vaccine consultant (infectious diseases specialist)	Allergist
Consent documentation	Usual	Usual + confirmation	Usual + confirmation	Usual + confirmation

In general, if a patient is 3 months post-chemotherapy and the cancer is in remission, or if immunosuppression has been discontinued for at least 3 months (6 months or more for anti-B cell antibodies), the person is no longer considered immunocompromised.

People living with HIV may be vaccinated with the COVID-19 vaccine. Persons with stable hepatitis B or C may also be vaccinated.

Clients on blood thinners can also be vaccinated using a small gauge needle and applying pressure post-vaccination. There is no specific need to measure a blood thinning level (INR test) prior to vaccination.

Autoimmune Conditions

- Acquired aplastic anemia
- Acute disseminated encephalomyelitis, including non-infectious encephalitis, encephalomyelitis, myelitis, myeloradiculomyelitis
- Addison's diseases
- Alopecia areata
- Ankylosing spondylitis
- Antineutrophil cytoplasmic antibody (ANCA) positive vasculitis
- Antiphospholipid syndrome
- Antisynthetase syndrome
- Autoimmune
  - cholangitis
  - hemolytic anemia
  - hepatitis
  - myocarditis/cardiomyopathy
  - thrombocytopenia
- Behcet's syndrome
- Buerger's disease/thromboangiitis obliterans
- Celiac disease
- Chronic hives/urticaria

- Chronic inflammatory demyelinating polyneuropathy
- Churg Strauss/allergic granulomatous angiitis/eosinophilic granulomatous polyangiitis (EGPA)
- Cranial nerve disorders
- CREST syndrome
- Dermatomyositis
- Dermatitis herpetiformis
- Diabetes mellitus (Type 1)
- Erythema nodosum
- Giant cell arteritis/Takayasu's arteritis/temporal arteritis
- Glomerulonephritis (membranous, membranoproliferative, mesangioproliferative, rapidly progressive)
- Goodpasture syndrome
- Granulomatosis with polyangiitis (Wegener's granulomatosis)
- Grave's or Basedow's disease
- Guillain Barre syndrome and variants, including Miller Fisher syndrome
- Hashimoto's thyroiditis
- Henoch Schonlein purpura (HSP)
- Idiopathic pulmonary fibrosis
- Idiopathic thrombocytopenic purpura (ITP)
- IgA nephropathy
- Immune-mediated peripheral neuropathies and plexopathies, including chronic inflammatory demyelinating polyneuropathy, multifocal motor neuropathy, monoconal gammopathy-associated polyneuropathies
- Inflammatory bowel disease (ulcerative colitis, ulcerative proctitis, and Crohn's disease)
- Juvenile dermatomyositis
- Juvenile idiopathic arthritis
- Kawasaki Disease
- Leukocytoclastic vasculitis
- Lichen planus
- Lupus erythematosus, cutaneous and systemic
- Microscopic polyangiitis
- Mixed connective tissue disease/disorder
- Morphoea
- Multiple sclerosis
- Myasthenia gravis, including Lambert-Eaton myasthenic syndrome
- Narcolepsy
- Necrotizing vasculitis
- Optic neuritis
- Pemphigoid/pemphigus
- Pernicious anemia
- Polyarteritis nodosa

- Polymyalgia rheumatica
- Polymyositis
- Primary biliary cirrhosis
- Primary sclerosing cholangitis
- Psoriasis/psoriatic arthritis
- Pyoderma gangrenosum
- Raynaud's phenomenon
- Reactive arthritis/Reiter's syndrome
- Relapsing polychondritis
- Rheumatoid arthritis
- Sarcoidosis
- Scleroderma
- Sjogren's syndrome
- Small fibre sensory neuropathy
- Stevens-Johnson syndrome
- Sweet's syndrome
- Systemic sclerosis
- Transverse myelitis
- Undifferentiated spondyloarthritis
- Uveitis
- Vitiligo

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