



Communiqué

Refrigerator and Freezer MAINTENANCE

GENERAL PRINCIPLES

Regular maintenance is required to ensure proper operation, to maintain required temperatures, and to extend the useful life of the appliance.

The most important action to take if the vaccine storage unit is not working properly is to protect the vaccine supply. Move the vaccine to a properly functioning storage unit with appropriate temperatures. After this is accomplished, attempt to find the cause of the problem and correct it.

DAILY MAINTENANCE TASKS

Check the internal temperature

The minimum and maximum temperature inside each compartment of the vaccine storage unit must be checked with a calibrated thermometer and recorded numerically on a temperature log twice daily: once in the morning when the door is first opened and once at the end of the clinic day just before the door is closed for the last time. More frequent temperature monitoring is required following thermostat adjustments. If the temperature is outside the recommended range, the designated vaccine coordinator should be notified immediately. Immediate action must be taken.

Check the doors are closed

To maintain internal temperatures within the recommended ranges, the vaccine storage unit doors must fit securely and tightly against the unit. The rubber-like seals that run along the inner edges of the doors contain magnets that hold the doors closed and create tight seals, keeping cold air inside. Check the doors are

properly sealed by giving a gentle tug on the door handles. The doors should be checked at the end of each clinic day to make sure that they are properly closed and sealed. Installing a Velcro latch from a hardware store can help ensure that the door is not accidentally left ajar.

WEEKLY MAINTENANCE

Check ice build-up in the freezer (manual and cyclic defrost units only)

If you have a manual defrost freezer, it is quite normal for ice and frost to accumulate inside the compartment. A thin layer of frost does not affect the cooling performance but a thick layer of frost negatively affects the efficiency of the system.

Check the inside walls of the freezer compartment weekly. When frost has accumulated to a thickness of 1 cm or so, the unit requires defrosting. Follow the manufacturer's guidelines for specific recommendations for defrosting the freezer.

QUARTERLY MAINTENANCE

Clean the coils and motor

The vaccine storage unit coils should be examined and cleaned quarterly. Dust and dirt build up affects the transfer of heat from the coils and, therefore, the efficiency of the unit. Unplug the unit and use a soft brush, cloth, or vacuum cleaner with an attachment hose to remove any dirt or dust from the surface of the coils. After cleaning, plug in the unit and document that the power is restored and that the temperature has been maintained. Avoid cleaning the coils and motor at the end of a Friday. Accidentally damaging the

coils will cause a problem that may not be detected until the following Monday.

This process should only take a few minutes: therefore, it is not necessary to transfer the vaccine to another storage unit as long as the doors remain tightly closed for the duration of the procedure.

Clean the refrigerator and freezer compartments

Clean the refrigerator and freezer compartments quarterly or as needed. Remove the vaccines from the compartments and store them in a functioning unit. Unplug the unit or turn off the power and wash all the inside surfaces and shelves with warm, slightly soapy water. Dry thoroughly then plug in the unit or turn the thermostat back to an appropriately cold setting. Wait for the unit to reach and stabilize at the temperature range monitoring and recording the temperature every half-hour for the next few hours. Restock each compartment with vaccine, continuing to monitor and record the temperature every half-hour for the next few hours.

Check the door seals

Quarterly, check the integrity of the rubber-like door seals. They should not be torn or brittle and there should be no gaps between the seals and the body of the unit when the doors are closed. The doors should open and close properly and fit squarely against the body of the refrigerator. For this to happen, the hinges must be correctly adjusted. If there are any problems with the door seals, consult a technician as necessary and monitor temperatures carefully.

PUBLICLY FUNDED IMMUNIZATION SCHEDULE FOR ONTARIO January 2009

- The new Publicly Funded Immunization Schedule for Ontario became available in March 2009. Please familiarize yourself with the changes in the schedule which include HPV vaccine, Tetanus-diphtheria-acellular pertussis (Tdap) vaccine, Pneumococcal conjugate (Pneu C-7) vaccine, Pneumococcal polysaccharide (Pneu P-23) vaccine, Meningococcal conjugate (Men-C) vaccine, Meningococcal conjugate ACYW-135 (Men-C-ACWY) vaccine, Influenza, Varicella and measles immunity. The schedule also includes the recommended and minimum ages and intervals between vaccine doses of publicly funded childhood vaccines. Please find this schedule enclosed for your reference.

Recommended and minimum ages and intervals between vaccine doses of publicly funded routine childhood vaccines*

Vaccine and dose no.	Recommended age for this dose	Minimum age for this dose	Recommended interval to next dose	Minimum interval to next dose
Diphtheria-tetanus-acellular pertussis (DTaP)†,^				
DTaP-1	2 months	6 weeks	2 months	4 weeks
DTaP-2	4 months	10 weeks	2 months	4 weeks
DTaP-3	6 months	14 weeks	12 months	6 months
DTaP-4	18 months	12 months	2.5 years	6 months
DTaP-5	4-6 years	4 years	-----	-----
Haemophilus influenzae type b (Hib)†				
Hib-1	2 months	6 weeks	2 months	4 weeks
Hib-2	4 months	10 weeks	2 months	4 weeks
Hib-3	6 months	14 weeks	12 months	6 months
Hib-4	18 months	12 months	-----	-----
Inactivated poliovirus (IPV)†				
IPV-1	2 months	6 weeks	2 months	4 weeks
IPV-2	4 months	10 weeks	2 months	4 weeks
IPV-3§	6 months	14 weeks	12 months	4 weeks
IPV-4	18 months	12 months	3 years	6 months
IPV-5	4-6 years	4 years	-----	-----
Pneumococcal conjugate (Pneu-C-7)				
Pneu-C-7-1	2 months	6 weeks	2 months	4 weeks
Pneu-C-7-2	4 months	10 weeks	2 months	4 weeks
Pneu-C-7-3	6 months	14 weeks	6-9 months	2 months
Pneu-C-7-4	15 months	12 months	-----	-----

Vaccine and dose no.	Recommended age for this dose	Minimum age for this dose	Recommended interval to next dose	Minimum interval to next dose
Measles-mumps-rubella (MMR) MMR-1 MMR-2	12 months 18 months	12 months 13 months	6 months -----	4 weeks -----
Varicella (Var) Var		15 months		12 months
Tetanus-diphtheria acellular pertussis (Tdap) Tdap¶		14-16 years		11 years
Meningococcal C conjugate (Men-C) Men-C	12 months OR Grade 7	12 months OR Grade 7	-----	-----
Influenza inactivated** Inf		6 months and older		6 months
Human Papillomavirus (HPV)†† HPV-1 HPV-2 HPV-3	Grade 8 females	Grade 8 females	2 months 4 months -----	1 months 3 months -----

* Adapted from the MMWR Recommendations and Reports, 12.01.2006., vol. 55/No. RR-15.

† DTaP is given in combination with IPV and Hib as Pediacel® or in combination with IPV as Quadracel®.

^ The minimum recommended interval between DTaP-3 and DTaP-4 is 6 months. The fifth dose is not required if the fourth dose is given after the 4th birthday.

§ The third (6 month) dose of IPV in the infant series is not required, but is usually given as Pediacel® (DTaP-IPV-Hib).

¶ Tdap vaccine is due 10 years after the 4-6-year-old booster of DTaP-IPV.

** Children under 9 years of age require two doses of influenza vaccine given 4 weeks apart if they have received one or no doses in the previous influenza season. National Advisory Committee on Immunization (NACI). Statement on Influenza Vaccination for the 2008-2009 Season. Vol. 34, ACS-3, 1 July 2008. Available at: <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/08pdf/lacs-3.pdf>.

†† HPV is approved only for females aged 9-26 years. This schedule is for Gardasil® vaccine.

References

1. National Advisory Committee on Immunization. Canadian Immunization Guide, 7th edition. Public Health Agency of Canada; 2006.
2. National eligible, due, and overdue guidelines for immunization registries: Draft recommendations from the Canadian Immunization Registry Network, Data Standards Task Group. CCDR 15 March 2004, Volume 30, Number 06. Available at: <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/04vol30/dr3006e.html>.

Submitted by: Rose Huyge

References

- Public Health Agency of Canada National Vaccine Storage and Handling Guidelines for Immunization Providers 2007.
- Immunization Education Initiative Spring Newsletter Volume 4, Issue 1. March 1st 2009.
- Ministry of Ontario Publicly Funded Immunization Schedules for Ontario- January 2009
- Canadian Immunization Guide Seventh Edition, Public Health Agency of Canada 2006.

Vaccine TRUTHS

- Vaccines containing thimerosal are considered safe to use, even by pregnant women.
- Most vaccine preventable diseases are still common in other parts of the world, especially in developing countries (e.g., diphtheria, pertussis, tetanus, measles, polio). That is why even though Canada does not have high rates of these diseases, there is still the possibility that small outbreaks can lead to large epidemics if people are not immunized.
- Receiving several immunizations will not cause your immune system to overload. Considering your body can be in contact with millions of germs every day, your immune system can easily handle the antigens in vaccines.



IMMUNIZATION By Numbers

In Canada, the last major outbreak of measles affected about 200 people, most of who were not immunized against the disease.

- Between 1999 and 2003, the world saw a 40% decrease in death due to measles because of immunization.
- 39% of Canadians 65 years and older have received the polysaccharide pneumococcal vaccine.

REMINDER of Vaccine Expiry Dates

Please remember to check expiry dates of your vaccine. Vaccines should not be used beyond their expiry date. For expiry dates specified as month/year, products are deemed to expire on the last day of the specified month. The error of administration of expired vaccine should be reported to the local public health authority.

Multidose vials should be dated once entered and used only for the period of time specified in the manufacturer's product leaflet. If no directions are given, the vaccine should not be used beyond thirty days after initial entry into the vial.

Communiqué is a newsletter distributed by the Haldimand-Norfolk Health Unit for those who work in the area of Vaccines and Vaccine Preventable Diseases. If you have ideas or suggestions of topics for future Communiqués, please contact the Health Unit.



Maria Mendes Wood, RN, BScN, Clinical Services Team, Vaccine Preventable Diseases, Haldimand-Norfolk Health Unit-Simcoe Office, 519-426-6170 Ext. 3222 or 905-318-6623



Rose Huyge, RN, BScN, Clinical Services Team, Vaccine Preventable Diseases, Haldimand-Norfolk Health Unit-Simcoe Office, 519-426-6170 Ext. 3222 or 905-318-6623