

The [CDC Vaccine Storage and Handling Toolkit](#) suggests activities at regular intervals to maintain proper vaccine storage and handling.

Use the following list to maintain good vaccine storage and handling practices. Good storage and handling practices will keep your vaccines safe and potent and prevent financial losses due to vaccine spoilage. Your office should maintain a vaccine storage log book (electronic or paper), where data and/or notes can be recorded as described below.

The following should be done **DAILY**:

- Monitor refrigerator temperatures for 24 hours using a certified digital max/min data-logging thermometer with a **glycol-encased probe** or a similar temperature-buffered probe.
- Manually read and document temperatures twice daily (the temperature should be read on the data logger outside of the refrigerator, so the door remains closed).
- Check to make sure the refrigerator and freezer are in working condition and doors are closed.

The following should be done **WEEKLY**:

- Download and review stored temperature data to allow timely review and appropriate response to issues. Appropriate responses include:
 - If temperature monitoring equipment shows a near-excursion, determine the cause and correct it. This may include closing the refrigerator door completely, doing stock manipulation/re-stocking in multiple short sessions, adjusting the thermostat if using an older, manual unit, or calling for repair if the unit is not working properly.
 - If vaccines have been exposed to temperature excursions, immediately segregate all compromised vaccine in a container or bag and place at the proper temperature **2°C to 8°C** **36°F to 46°F** for refrigerated-vaccines, **≤ -15°C** **≤ +5°F** for frozen vaccine and mark “DO NOT USE”.
 - Do not discard vaccine exposed to warmth; most vaccine has a range of heat tolerance.
 - Call vaccine distributors and VFC state programs for guidance on whether vaccines can still be used.
- Always delete the data upon downloading it from the data logger. This should be done each time and is especially important if memory does not “loop”. This will prevent the unit’s memory from filling and resulting in loss of data. Always save downloaded data for 3 years.
- Review vaccine and diluent expiration dates; remove expired items.
- Rotate vaccine so that product with soonest expiration date are moved to the front and note vaccine stock in log book or electronic inventory system. Record how much of each product remains and when the expiration dates are. These notes will help with ordering. Weekly inventory may also help to check for appropriate billing.





AAP Immunization Resources Storage and Handling Series Checklist for Proper Storage and Handling Practices

The following should be performed MONTHLY:

- Clean refrigerator coils and motor. Consider contracting with a local refrigerator repair company for regular maintenance.
- For freezers, check for ice/frost buildup especially manually defrosted units.
 - If buildup is excessive or near door seal, immediately plan for defrost. To defrost, have an additional freezer nearby that is pre-chilled to $\leq -15^{\circ}\text{C}$ $\leq +5^{\circ}\text{F}$. Move frozen vaccine to a temporary storage unit with a data logger. Unplug the power to primary unit. De-ice with a hair dryer or similar. Dry thoroughly. Plug in the unit and measure temp. When the unit has reached the proper temperature, restock vaccine, and download the data logger that stayed with the vaccine. If any excursions occurred, contact appropriate agencies as above.
- Check door seals of refrigerator and freezer. Visually and tactically inspect the seals – they should not be torn or brittle and there should be no gaps between the seal and the body of the unit when the door is closed. The door should open and close properly and fit squarely against the body of the storage unit. You can also put a piece of paper at the door seam, close the door, and pull the paper. You should feel tension as you pull. Check along the entire seal.

The following should be performed ANNUALLY:

- Update written routine storage and handling plans and repost in a prominent and easily accessible location near the vaccine storage unit(s).
- Update written emergency storage and handling plans and repost. For help, see [AAP Disaster Planning Tip Sheet](#).
- Provide the vaccine champions of the office with continuing education on vaccine management.
- Verify thermometer certification date and replace or renew if required.
 - Generally it is less expensive to replace an expired certified thermometer, than to re-certify.
 - If re-certification is preferred, send device for verification or calibration to a laboratory with accreditation from an International Laboratory Accreditation Cooperation Mutual Recognition Arrangement signatory body.
 - The following are links for listings of accredited laboratories:
 - [The American Association for Laboratory Accreditation \(A2LA\)](#)
 - [International Accreditation Service \(IAS\)](#)
 - [Perry Johnson Laboratory Accreditation, Inc. \(PJLA\)](#)
 - Consider an [ice melting point test](#). For vaccines supplied through the Vaccines for Children program, check with your state VFC program coordinator to see if this is an acceptable option.