



## Vaccine Storage and Transport: Pack Out

Vaccines may need to be transported for three reasons: emergency, transfer, or for off-site clinics. This resource lists pack-out requirements for state-supplied vaccine transport.

### Pack-out materials:

- 2-inch thick (Styrofoam or hard-sided) vaccine shipping container. CDC vaccine shipping containers are acceptable if intact. Do not use if there are any tears or cracks in the cooler walls, routinely check for damage
- Include a vaccine inventory list in the container.
- Conditioned frozen water bottles or conditioned frozen re-useable gel packs. CDC gel packs used to ship vaccines are acceptable.

Reason for pack out	Conditioned gel packs	Conditioned water bottles
Emergency	Yes	Yes
Transfer	Yes	No
Off-site clinic	Yes	No

*For emergency pack out, you can use conditioned water bottles **or** conditioned gel packs. For vaccine transfer, or off-site clinic pack out, you can **only** use conditioned gel packs.*

**Note:** You will need water bottles for your refrigerator and/or freezer to maintain a constant temperature.

To condition:

1. Hold frozen water bottle under warm water until you see a water layer forming at the bottle surface. The bottle is conditioned when the ice block inside spins freely when rotated by hand.
2. Hold the frozen gel pack under warm water until you feel the iced surface of the pack turn to water. The gel pack is now conditioned.
  - Insulating material: Corrugated cardboard cut to fit snugly against sides of cooler
  - Insulating cushioning material: 1-inch thick bubble wrap or packing foam
  - Digital Data Logger (DDL) temperature monitoring device that is calibrated, has a digital display, has continuous temperature recording, and generates a detailed report.

**Note:** Practices are responsible for purchasing any additional data loggers if you are packing out for borrowing, lending, or an off-site clinic (one for each shipping container). For emergency pack out, practices can use their fridge/freezer's data logger for the shipping container, assuming they are transporting their entire vaccine inventory.

### **Packing vaccines:**

1. **Assemble supplies** (listed above)
2. **Conditioned frozen water bottles or conditioned gel coolants:** Line the bottom of the cooler with a single layer of water bottles or coolants.
3. **Insulating material:** Place one sheet of corrugated cardboard over the water bottles to cover them completely and to secure them in place.
4. **Insulating cushioning material:** Place a layer of bubble wrap, packing foam, or Styrofoam on top. The layer needs to be 1-inch thick and must cover the cardboard completely.
5. **Vaccines:** Stack vaccine boxes and refrigerated diluents on top of insulating materials.
  - a. **Temperature monitoring device:** Place DDL-buffered probe in the center of the vaccines, keeping DDL display outside of the cooler until finished loading.
  - b. **Vaccines:** Add remaining vaccines and refrigerated diluents to cooler, covering the DDL probe.
6. **Insulating cushioning material:** Cover vaccines with another 1-inch layer of bubble wrap, packing foam, or Styrofoam.
7. **Insulating material:** Place another sheet of corrugated cardboard over the bottles or coolants.
8. **Conditioned frozen water bottles or conditioned frozen coolants:** Fill the remaining space in the cooler with another layer of water bottles or coolants.
9. **Place the vaccine inventory list in the cooler.**
10. **Close lid:** Close the lid and attach the DDL display on the cooler cover.

When packing out frozen vaccines, follow all the above steps except – do **NOT** condition frozen water bottles or frozen gel pack coolants; rather, pack them in the frozen state.

### **Arrive at destination:**

- Document temperature.
- Move vaccines immediately to storage refrigerator or freezer.

If a temperature excursion occurs, contact your vaccine representative before using. Label “Do Not Use” and store at appropriate temperature until a determination can be made.