



Safe Handling of Dry Ice During a Power Outage

Prepared by MSU Extension Food Safety Area of Expertise Team; edited by Joyce McGarry, MSU Extension

Dry ice can be used if your refrigerator or freezer breaks down or there is a power outage that lasts longer than the freezer and refrigerator will stay cold:

- A full freezer stays frozen about 2 days.
- A half full freezer stays frozen about 1 day.
- A refrigerator keeps food cold 4 to 6 hours.

DRY ICE MUST BE HANDLED CAREFULLY.

DO NOT EAT DRY ICE.

**DO NOT LEAVE DRY ICE UNATTENDED
AROUND CHILDREN.**

Dry ice is frozen carbon dioxide. It is especially useful for freezing and keeping things frozen. It must be handled carefully. Always wear protective gloves to avoid severe frostbite or burns on skin. It can be purchased at most convenient stores.

Use dry ice for saving freezer foods. Perishables such as dairy products are likely to freeze completely in a very short time with dry ice. Use an ice chest with block ice to store refrigerate perishables during a power outage.

Carry dry ice in a well-insulated container. If transporting it inside a car for more than 15 minutes, make sure there is fresh air coming into the vehicle. The better insulated the container, the longer it will take to change from a solid to a vapor. Do not store dry ice in an airtight container. Changing of dry ice to carbon dioxide gas will cause any airtight container to expand or possibly explode. Provide for proper ventilation wherever dry ice is stored. After opening the freezer, step back and let vapors escape. Breathing the vapors can cause suffocation or extreme breathing problems.

Keep dry ice wrapped in paper. This extends the life and protects exposure to skin. About 2 1/2 to 3 pounds of dry ice are needed per cubic foot of freezer space. Do not leave

dry ice on a tiled or solid surface countertop as the extreme cold could crack the counter. In the freezer, place cardboard or several layers of newspaper over the food and the dry ice on top of cardboard. Dry ice will freeze any food that it touches.

After dry ice is in place, cover the freezer and refrigerator with blankets. Be sure not to cover air vent openings and fill the empty spaces around food with newspapers. Do not open refrigerator or freezer doors unless necessary.

Burn treatment

Treat dry ice burns the same as heat burns. See a doctor if skin blisters.

Disposal

Unwrap dry ice and leave it at room temperature in a well-ventilated area.

For more information about safe food handling and preparation:

FDA's Food Information Hotline
1-888-SAFEFOOD (1-888-723-3366)

USDA's Meat and Poultry Hotline
1-800-535-4555

FDA's Food Information and Seafood Hotline
1-800-332-4010

United States Food Safety Web Site
www.foodsafety.gov

The Food Domain. Michigan State University
www.fooddomain.msu.edu

Extension Disaster Education Network
www.eden.lsu.edu

Federal Emergency Management Agency
www.fema.gov



MSU is an affirmative-action equal-opportunity institution. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, marital status, or family status. ■ Issued in furtherance of Extension work in agriculture and home economics, acts of May 8 and June 20, 1914, in cooperation with the U.S. Department of Agriculture. Thomas Coon, Extension director, Michigan State University, E. Lansing, MI 48824. ■ This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned. This bulletin becomes public property upon publication and may be printed verbatim with credit to MSU.