

Delivering Food Safely

Practical food safety instruction with regard to commonly used delivery systems such as packaging, storage and delivery

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www.gwaar.org

Foodservice Operation

- Community programs – Elderly Nutrition Program, MOW
- Considered ***Food Establishments (1-201.10)***
- FDA – writes Federal Food Code
 - States adopt, adapt or write own
- Older Americans Act – Administration on Aging writes federal guidelines – states write own state policies. AAAs and counties may have own local policies in addition

Foodborne illness

- The Centers for Disease Control and Prevention (CDC) estimates per year in the United States:
 - 48 Million Americans (1 in 6)
 - 128,000 hospitalized
 - Approximately 3,000 deaths
- Three main causes of foodborne illness:
 - Time / Temperature Abuse
 - Cross-contamination
 - Poor personal hygiene

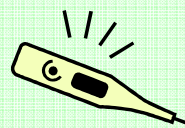


Older Americans Act

- Section 339 – Nutrition
 - (C) encourages providers to enter into contracts that limit the amount of time meals must spend in transit before they are consumed
 - (F) comply with applicable provisions of State or local laws regarding the safe and sanitary handling of food, equipment, and supplies used in the storage, preparation, service, and delivery of meals to an older individual



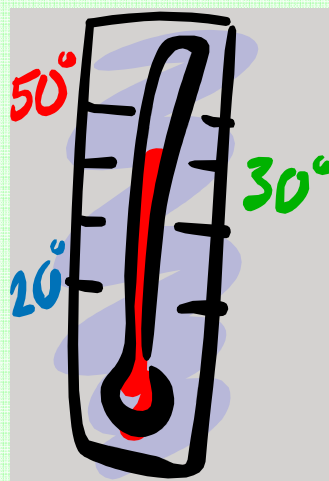
Keeping food safe



- Potentially hazardous food must be kept out of the temperature danger zone – or in TDZ for LEAST amount of time possible
- **3-501.16**: Potentially hazardous food shall be maintained at 135°F or above; or 41°F or less
- **3-501.19**: Ready-to-eat potentially hazardous food shall be discarded within 4 hours from the point of time when the food is removed from temperature control

Temperature Danger Zone

- **41° F - 135° F**
- This is where most bacteria grow!
- Protein foods are hard to get to hold temp, so put out small batches and be sure food is hot before packing.



Time versus Temperature controls

4-hour rule for safe food

- Food must be consumed within 4 hours or needs to be thrown out
- May be safe but quality will suffer greatly (who wants cold food?)
- If using 4-hour rule, what about the time the food sits with the participant?
 - Eat it immediately? (not necessarily)
 - Refrigerate or reheat immediately? (shouldn't have to)

Thermodynamics

- Second law of thermodynamics: The entropy of any closed system not in thermal equilibrium almost always increases. Closed systems spontaneously evolve towards thermal equilibrium -- the state of maximum entropy of the system in a process known as thermalization.

WHAT?!?

- Means this: if all components of a system are not the same temperature, ultimately the hottest part will lose heat energy until it all reaches the same (lower) temperature

Heat Transfer

- When an object is at a different temperature from another body or its surroundings, heat flows so that the body and the surroundings reach the same temperature, at which point they are in thermal equilibrium. (Wikipedia)
- Conduction – bodies touching (food touching a container)
- Convection – gas or liquid (air stealing the temp)

Who cares?!

Why heat transfer matters:

- Hot food into a cold container – lose heat
- Hot food into a cold trunk – lose heat
- Cold food into a hot trunk – heats up
- Cold food placed into a room-temp (or warm) container – heats up
- Temperature controlled food exposed to air and ambient temperatures

Packaging Meals

- Avoid time / temperature abuse
 - Package small amounts at a time - 1-10 trays at a time
 - Want assembly line
 - Keep foods safe until in packaging
 - Cover and seal immediately
 - Example of what **NOT** to do:
 - 40 meal trays spread out on the counter
 - Dish vegetables. Then starches. Then meat. Then cover and seal.

Cold Food Packaging

- All cold food and beverages should be packed in coolers that maintain the food **below 41 °F**
- Use ice or gel packs, or coolers that plug in to outlets or jacks to maintain the temperature. Foods **must** be kept at a safe temperature during delivery
- Frozen foods must be maintained frozen solid

Hot Food Packaging

- Transported separately from cold foods
- Transported in a carrier that maintains the temperature **above 135° F**
- All should have lids and a heating device such as a heat stone, heated gel pack, plug-in heater or transport bag; for example Cambro, Nutrisystem bags or other thermal transport containers

Monitoring for food safety

- A test tray should be sent regularly to check the temperature of the food at the end of the meal delivery route – see your local or state regulations regarding this
- Evaluate the data **(don't ignore the data!)**
 - Trends
 - Temps
 - Quality
 - Customer satisfaction scores



Quality

- It is important that transport carriers protect meal packages from contamination, crushing or spillage to assure a high quality, appetizing meal is served
- Volunteers are asked to refrain from smoking while making deliveries, to keep the food smoke-free, and out of respect for our clients' well-being

Personal Hygiene



- Don't smoke while delivering meals.
- Cover all cuts, open sores or wounds with a waterproof bandage.
- Wear gloves during any and all food preparation
- Wear clean clothes, clean hats

Delivery drivers are still foodservice workers and must follow the rules of the food code

THE LAW: Federal Food Code:

2-403.11: Food employees may not care for or handle animals that may be present such as patrol dogs, service animals, or pets

Unless they are your service animal, in which case you need to wash hands as outlined in the food code prior to returning to work



What about drivers' hands?

- Avoid petting animals. If you do touch an animal wash your hands!
- If assistance is required (i.e. opening milk carton) WASH HANDS THOROUGHLY prior to touching any food-contact surface
- Hand Sanitizers - be sure to have some in your vehicle and use it often! Any time you have touched something in someone's home – don't take that to the next person



Leaving food

- **Never** leave food on doorstep, in garage, in parked car, etc.
 - Time / temperature abuse
 - Contamination
 - Tampering
 - Liability
 - Loss / theft



Sorry We Missed You!



Meals cannot be left when no one is home.

Chippewa County Nutrition Program

Please call us when you need to cancel your meals!

Home Delivered Meals
738-2590 or 726-7777



03/16/10

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03/16/10

During the delivery...

- Open and close the delivery bags as quickly as possible to avoid temperature loss
- If walking a distance with the meal, carry it in the insulated bag
- In hot weather keep the cold food in the air conditioned interior of your car when possible
- Same goes for cold weather – keep hot food in the heated part of the vehicle

Ambient Temperatures

- Front seat or trunk?
- SUV or car with actual trunk?
- What's the outside temp?
- What's the temp inside the vehicle?
- How long is the route?

TCB Bags – Senior Meal

- 14 – 44 Standard meal trays
- Side-opening models
- Milk transport coolers



Nutri-Systems Thermal Bags

- High efficiency bags (8,10,16,20 standard trays)
 - include bag, liner, thermal pad and bottom tray
- Small - \$95
- Medium - \$115
- Large - \$130
- Jumbo - \$140



Nutri-Sytems Thermal Bags

- Electric plug-in (car)
- Large (16 meals)
 - \$280
- Jumbo (20 meals)
 - \$295
- Can have issues with cord



Nutri-Sytems Meal Transporters

- Single compartment
 - 8 standard trays
 - 7 reusable trays
- \$180
- Electric plug-in
 - \$370



Nutri-Systems Meal Transporters

- Double compartment
 - 16 standard trays
 - 14 reusable trays
- \$220
- Electric plug-in
 - \$550



Bags by Ingrid

- Holds 18 foil trays
- \$44 each
- Foldable Rack (\$30), Liner (\$13.75) and Thermal Pads (\$15) sold separately
Or kit without liner - \$99
 - Save \$5
- Jumbo bags (28 foil trays)
 - \$135



Sample care instruction sheet

ROUTE 2

- Bag must be kept INSIDE vehicle when delivering meals
- Unplug bag after delivery of last meal and tuck cord in bag
- Disconnect the bag from the vehicle outlet when the vehicle engine is off for extended periods of time (greater than 30 min.)
- Never crush or fold bag
- Do not submerge bag in water
- If any bag cords become loose, cracked or frayed, stop using immediately

Igloo Coolers

- **Igloo Marine Breeze 28 Quart Roller Cooler – White (Target - \$34.99)**



Keepyourcooler.com

- Large insulated freezer Tote. Best seller. \$36.99



- Backpack coolers
- Coolers on wheels
- Coolers with speakers
- Collapsible coolers

Cooler testing, Good Housekeeping

- **Rubbermaid** 50 Quart DuraChill Wheeled 5-day Cooler with Microban, **\$33**
- **Pros:** This top performer **stays cold for more than 12 hours** when packed with 25 pounds of ice — up the ice to 50 pounds and it'll maintain safe temperatures for five whole days

Cooler testing, Good Housekeeping

- **Igloo Earth 24, \$25**
- **Pros:** Because it can maintain **safe temperatures for a full 12 hours**, this is a good choice for all-day picnics or long car trips.

Cooler testing, Good Housekeeping

- **Coleman Party Stackers, \$20**
- **Pros:** These rectangular coolers neatly stack on top of each other, making it easy to organize the trunk. And since they come in a variety of colors (red, blue, green, and tan), you can designate different ones for different routes. **Count on them to remain safely chilled for more than 12 hours.**

Cooler testing, Good Housekeeping

- **Igloo Earth 12, \$13**
- **Pros:** This hard-sided cooler, which is made of reclaimed material, **keeps food safely chilled for 10 hours**. With its rigid sides, we found it easy to pack and unpack as well as stain and odor resistant.

Aluminum Containers

- Webrestaurantstore.com
- Foil w/ cardboard lid
- \$61.99 / 250
 - ~\$0.25 each



Oliver System



Oliver System

- Paper vs. plastic trays
 - Paper is biodegradable and compostable
 - Both are oven safe for reheating or heating frozen meals
 - Plastic is recyclable and is BPA free
- Oliver will honor group-purchasing discounts (organization discounts)
- If enough trays are purchased, Oliver will provide sealing machine at no charge

Oliver Speed Seal System

- 3-compartment (deep-*ish*) with film
 - 800 count case
 - 8 cases = \$223 per case (\$0.28 per unit)
 - 648 cases = \$162 per case (\$0.20 per unit)
- Trays come in black or cream color
- Can get plastic seal with re-heating instructions pre-printed on them

Oliver System - temp testing

- Oliver Hot Sheet – plugged into car outlet
- Data demonstrates that the Hot Sheet will maintain food temperatures above 150°F for two hours (food cooked to 165°F)
- Reaches 175°F in less than 10 minutes



Oliver soft side transport container

- Testing was conducted during an actual delivery route. Trays were removed as the driver delivered meals. Test time 1 hour 30 minutes.
- 140° F after 1.5 hours

Nutri-Systems electric heater

- Plugs into vehicle outlet
- \$75.00 each



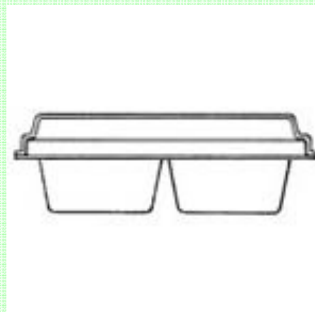
Reusable Containers

- Nutri-Systems®
- Standard tray / raised lid
- 40 / case
- \$320 / case
 - \$8.00 each
- -40 °F to +260 °F



Monroe Tray - Deep Tray with Raised Lid

- *“Our most popular...”*
- 40/case
- \$650.00 per case
 - \$16.25 each



Gel Packs

- Microwave or freezer
- \$8-12 each, depending on size and company



Nutri-Systems Heat Unit

- Claims to maintain food temperatures in the range of 140°F to 160°F
- Place in boiling water for 15-20 minutes
- Releases that heat for up to four hours
- \$20.00 each



Ice Packs

- Icepackstore.com
 - 54 pack - \$9.95
 - 216 pack - \$29.50
 - 864 pack - \$85.00



Flexible, reusable hundreds of times, non-toxic, The ice packs measure 3.3" x 3.7" and absorb 2.3 oz. of water when hydrated. Will send free samples.

"Generally speaking, the ice packs will stay frozen from 24-36 hours in an insulated container. At room temperature, figure on about 3-4 hours."

Brown Paper Bags

- Little if any thermal capabilities
- Okay for room temp foods
 - Bakery desserts
 - Bread and butter
 - Napkins, utensils, etc.
- Okay for temp-controlled foods on **very** short routes (no more than 10-12 minutes)
- Not strong enough to protect the food

Styrofoam / foam containers

- Okay for limited applications:
 - Senior apartment buildings, salads, large baked potatoes, soups, room-temp food items
- Problems:
 - Do not seal; spills, possible contamination, heat loss – lack of temperature control
 - Can only stack a couple or will crush
 - Large empty airspace above food – heat loss
 - Food spillage / inappropriate comingling
 - Cannot microwave - Not biodegradable

In The Car

- Is the ***temperature*** of the food protected?
 - In appropriate transport carriers?
 - In the cab? Trunk? Is this okay?
 - Is the route under 45-60 minutes long?

What are your test trays and data showing?

In The Car, continued

- Is the **sanitation** of the food protected?
 - Are all containers closed and safe from contamination?
 - Are there any animals in the car?
 - Pests – i.e. flies, fleas and ticks, spiders, mice?
 - Cleaners, lubricants, solvents, other chemicals around?
 - Rusty objects, tools, spare tires, etc.?

In The Car, continued

- Is the **quality** of the food protected?
 - Food containers secured?
 - Protected from spillage?
 - Protected from disruption – bumpy roads, poor driving, loose objects in car, etc.
 - Can anything fall on or crush food?
 - Are the drivers keeping the bags and containers separated (versus stacking → crushing)?

Food Safety Check...



- Remind them to put the meal in the refrigerator if they are not going to eat it right away and to put leftovers in the refrigerator immediately
- Food safety handouts and training for clients

Food Safety Check...



- Refrigerator magnet or handout with storing and re-heating instructions (ex. “use within 3 days”, or “refrigerate any unused leftovers”)
- Date all packages before delivering
- Provide menu to all participants so they and family members can monitor how old the food is

Reheating Tips...

- Ask how they reheat the meals and if the microwave or oven works properly and if they need assistance operating them
- Food to be heated in the microwave should be placed in a microwave safe container, not heated in aluminum or plastic containers
- Remind clients to frequently stir food reheated in a microwave to ensure even heating

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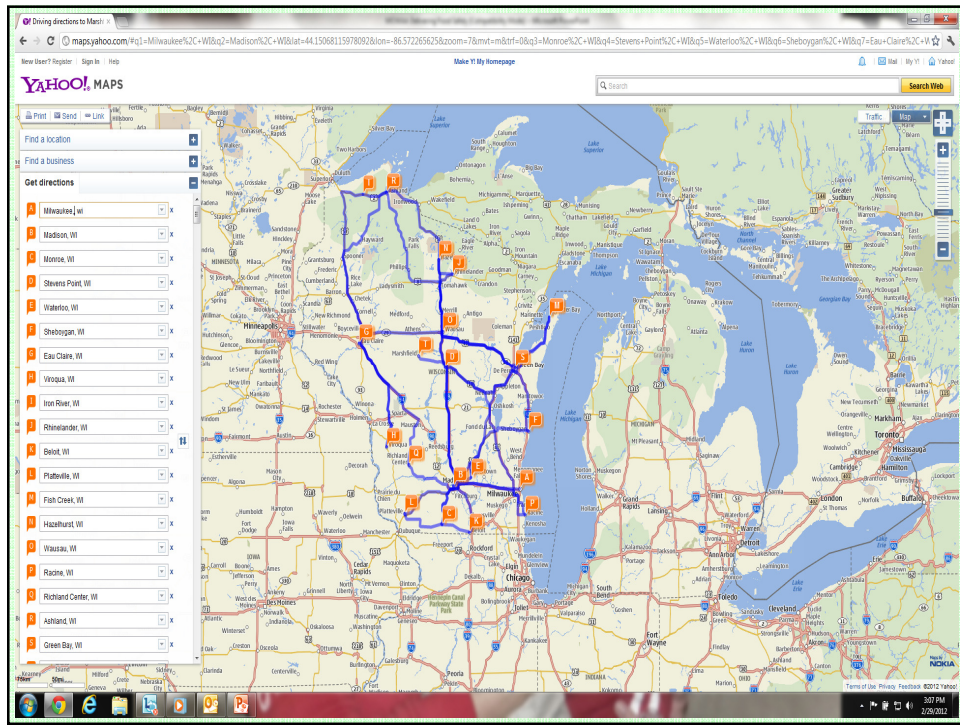
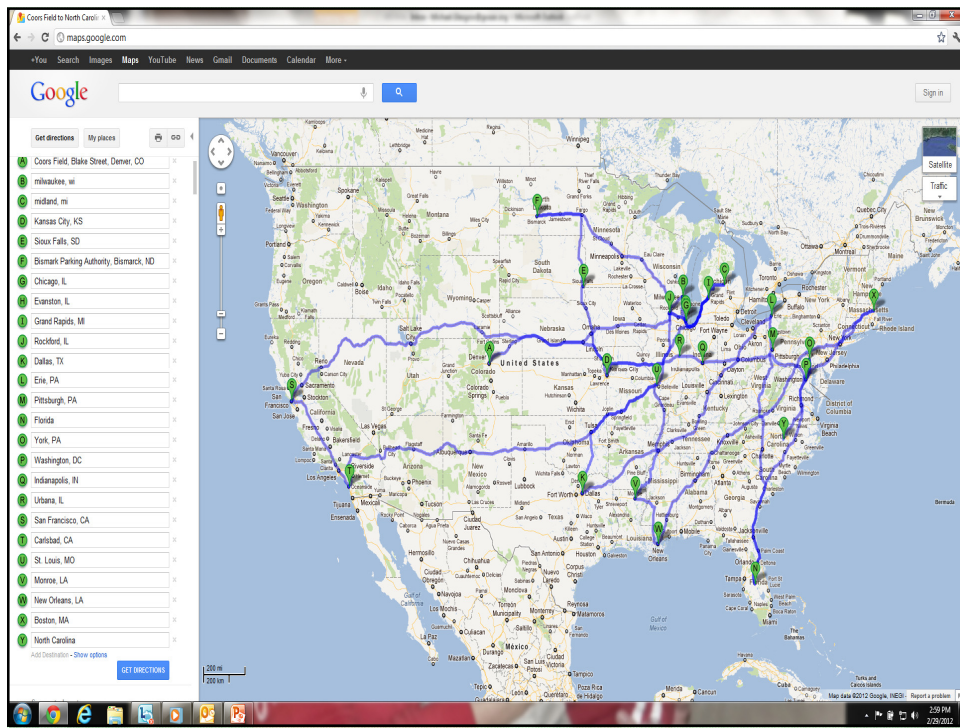


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Route Mapping Software

- Google Maps
 - Up to 26 different destinations
- Yahoo Maps
 - Up to 20 different destinations

Both provide options for written directions only, directions with maps, or maps only. Both will flowchart routes (A to B to C to D, etc.) and will suggest the best routes as well as alternate routes



Route Mapping Software

- **C2RouteApp Route Planning Software**
 - Claims to be “Less than \$1.50 per day per route”
- **Dashfly**
 - Route up to 25 stops – can reroute with premium package
 - \$99.99 / year
 - Can save routes, track mileage, import addresses, iPhone app, make reports
- **Route Coordinator**
 - Pricing based on number of trips up to 50/100/200/500 (no online pricing guide)

In conclusion

- MUST follow the food code
- MUST maintain temperatures prior to delivery
- MUST ensure food is kept safe at all times
- MUST ensure staff and volunteers are properly trained
- MUST use the proper equipment for the job

THANK YOU!
Any questions?

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