

Emergency Food and Water Supplies and Service



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Emergency Food and Water Supplies and Service Inservice

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Emergency Food and Water Supplies and Service Inservice

Instructions

Slides for the Inservice:

- The slides can be shown on computer or projected on a screen using a data projector.
- You can show the slides directly from the Acrobat file by simply clicking on the icon that looks like a computer screen. Or you can go to the tool bar and click on “View” and “Full Screen” to show the slides on your screen.
- Then click the down arrow button or the page down button on your keyboard.

Presenter’s Notes for the Inservice:

- Review the presenter’s notes prior to presenting the slides.
- The presenter’s notes offer additional information not included on the slides, suggestions for how to present some of the information, and activities you may want to incorporate.

Handouts for the Inservice:

- Simply copy the handouts and the pre- post-tests for participants.
- Do not provide the answer key for the pre-post tests.
- You can choose to give the test before and after the training, or just after the training to determine the effectiveness of your inservice and whether or not additional training is needed.

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Slides

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Objectives



1. Learn how to keep food safe during an emergency
2. Review individualizations and liberalization of diets during an emergency
3. Determine what to do if there is no gas, electricity or water
4. Learn how to purify water

Emergency Meal Planning



- Determine how to use the perishable food items in the coolers and freezers within the first 1-2 days
- Use foods in order of keeping qualities:
 1. Food in refrigerators – Check internal temperatures to assure safety
 2. Food in freezers - Assure safety
 3. Canned and dry foods—use last

Emergency Menu



- Once perishable food items have been used, follow the disaster menu plans
- All foods on the disaster menu must be on hand at all times
 - Follow inventory rotation and monitor expiration dates and safe food temps

General Recipes



- Use recipes that are included with your emergency menus (these require minimal preparation and cooking)
- Recipes are especially important for staff members or volunteers that are not trained in your department
- Follow the instructions on the packages for appropriate preparation and serving sizes of packaged or prepared foods

Mechanically Altered Diets



- Use frozen pureed foods first (following safe food handling procedures), then use canned pureed foods
- Use back up generator to power the food processor as needed
- If no power is available, chop mechanical soft food by hand or use a hand grinder

Diets for Diabetes



- Maintain careful portion control for patients with diabetes. Individualize diets as necessary. Provide sweetener as needed
- Use half portion desserts as appropriate if no sugar free desserts are on hand
- The person in charge will let nursing know about diet changes so that they can determine how blood sugars will be monitored (and adjust medications as needed)

No Gas Supply



- If the range and conventional ovens in the kitchen use gas, utilize microwave ovens, and electric stoves
- Use simple, plain foods that need only minimal heating
- If activity or nursing areas have electric stoves or microwave ovens available, cook and serve food directly from these areas

No Electricity



- Generator or auxiliary power should take over fairly quickly
 - Backup generator equipment
 - Location of generator outlets
- Do not open refrigerator or freezer doors unless necessary until the power returns
- Place blankets or bath towels along the seals of refrigerator and freezer doors to keep the cold air in

No Electricity



- Enteral feeding pumps will have a limited battery back up
- It may be necessary to provide bolus feedings for residents/patients if extended time frames will be needed. Make sure the needed gravity or bolus supplies are in the designated disaster supply area
- Careful monitoring by all professional staff is necessary to avoid negative outcomes

No Water Supply or Water Contamination



- Use emergency water supply
- Bottled or distilled water for emergency purposes is labeled “for emergency use only”
- Save this for cooking and drinking only
- Water should not be rationed during an emergency situation - Every person must have adequate fluids

General Guide for Water



Drinking Water:

- 1/2 gallon/person/day is essential
- 1 gallon/person/day in hot climates
- Extra for internal staff, evacuees

All Purpose Water:

- 1 gallon/person/day (up to 2 gallons for hot climates)

Emergency Sources of All Purpose Water



- Ice machine
- Unpurified water for use as all-purpose water, not drinking water:
 - Hot water tanks (contain some emergency water)

Water Purification: Boiling



- Boiling is one of the most common ways to purify water
- Water should be poured into an appropriate container and brought to a rolling boil
- Boil the water vigorously for 1 minute
- Cool as appropriate before use

Water Purification: Purification Tablets



- Location of tablets
- Follow the manufacturer's directions that come with the tablets

Water Purification: Bleach Purification



- Use 5.25% hypochlorite liquid household bleach (with no scent or additives)
- Add the bleach according to the table on the following slide, and then mix well
- Let stand for 30 minutes
- If water does not taste and smell of chlorine, add another dose of bleach and let stand 15 minutes
- Use water within 24 hours of preparation

Bleach Purification



Amount of Water	Amount of Bleach
1 Quart	4 drops*
1 Gallon	16 drops*
5 Gallons	1 teaspoon

An eyedropper is a good measuring tool (www.fema.gov)

Use within 24 hours of preparation

Equipment Items and Locations



- Manual can openers, egg beaters
- Battery operated equipment (whisks, heating elements)
- Flashlights, battery operated radio
- Standard first aid kits, alcohol swabs
- Terry cloth towels or rags
- Hand sanitizer
- Sanitizing solutions or tablets

Extra Precautions for Sanitation



- Separate clean areas from dirty areas
- Keep waste and garbage in covered and closed containers and remove from food areas as soon as possible
- If water supply is questionable, boil water prior to use in cooking or for drinking
- Do not use any food that might be spoiled
- Do not taste any food in question - If in doubt, throw it out!

Internal Food Temperatures



- Always start with safe food
- Use thermometers to check internal food temperatures to assure food safety prior to use
- Heat foods to a ***minimum*** internal temp of 165F for a minimum of 15 seconds
- Be sure to observe safe internal cooking temperatures

Handwashing



- In the event that the water supply is contaminated, boil water before using
- Set up a hand-washing station where boiled water (cooled) is in a container
 - One person will pour water over the hands of another person allowing them to soap their hands and then pour the water over the clean hands to rinse
 - Do not wash and rinse hands in the bucket

Hand-Sanitizing



- Second option: Use an instant hand sanitizer that does not require rinsing
- These products report high levels of success in killing most common disease causing germs
- They also provide a fast and easy way to sanitize your hands
- However, they do not take the place of appropriate hand washing

Sanitizing Dishes



- 1. Wash:** Scrape dishes first, then wash in a solution of dish soap and hot water
- 2. Rinse:** Rinse dishes in a basin filled with clean hot water
- 3. Sanitize:** Place dishes in a third basin which contains a sanitizing solution

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Presenter's Notes



Presenter Note: There is a separate inservice on Dining Services Disaster Preparedness.

Audience: Food and nutrition service/dining staff

Welcome to our inservice on Emergency Food and Water Supplies and Service.

Presenter Note (Optional): Before we get started, let's test your knowledge with a short pre-test.

Objectives



1. Learn how to keep food safe during an emergency
2. Review individualizations and liberalization of diets during an emergency
3. Determine what to do if there is no gas, electricity or water
4. Learn how to purify water

Our objectives today are to:

1. Learn how to keep food safe during an emergency.
2. Review individualizations and liberalization of diets during an emergency.
3. Determine what to do if there is no gas, electricity or water.
4. Learn how to purify water.

Emergency Meal Planning



- Determine how to use the perishable food items in the coolers and freezers within the first 1-2 days
- Use foods in order of keeping qualities:
 1. Food in refrigerators – Check internal temperatures to assure safety
 2. Food in freezers - Assure safety
 3. Canned and dry foods—use last

After everyone is safe and we know we are staying in the facility during the emergency situation, we need to determine how to use the perishable food items in the coolers and freezers within the first 1-2 days. We will need to use foods in order of keeping qualities:

1. Food in refrigerators: If ice has been placed in the refrigerators to keep them cold, and doors remain closed as much as possible, the food should probably good for up to 12 hours without electricity. This may depend on the temperature in the kitchen as well. So it is imperative that you always check internal temperatures before using to assure safety.
2. Food in freezers: - If ice has been placed in the refrigerators to keep them cold, and doors remain closed as much as possible, the food may be safe for up to a few days without electricity. This may depend on the temperature in the kitchen as well. So it is imperative that you always check for safety first. If the food has ice crystals and is at 41 degrees or lower, it should be safe to use.
3. Canned and dry foods—use last

Emergency Menu



- Once perishable food items have been used, follow the disaster menu plans
- All foods on the disaster menu must be on hand at all times
 - Follow inventory rotation and monitor expiration dates and safe food temps

Once perishable food items have been used, follow the disaster menu plans.

All foods on the disaster menu must be on hand at all times. Follow the appropriate inventory rotation and monitor expiration dates and safe food temperatures.

The person in charge will try to maintain well-balanced meals as close to normal as possible.

If necessary, we will repeat the cycle of menus for extended emergencies.

Presenter Note: Review where the emergency menus are located and briefly discuss them.

General Recipes



- Use recipes that are included with your emergency menus (these require minimal preparation and cooking)
- Recipes are especially important for staff members or volunteers that are not trained in your department
- Follow the instructions on the packages for appropriate preparation and serving sizes of packaged or prepared foods

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Recipes are especially important for staff members or volunteers that are not trained in your department.

Follow the instructions on the packages for appropriate preparation and serving sizes of packaged or prepared foods.

It will be necessary to simplify special diets as much as possible. **Presenter Note:** Review your facility policy on this.

Mechanically Altered Diets



- Use frozen pureed foods first (following safe food handling procedures), then use canned pureed foods
- Use back up generator to power the food processor as needed
- If no power is available, chop mechanical soft food by hand or use a hand grinder

For mechanically altered diets:

- Use frozen pureed foods first (following safe food handling procedures), then use canned pureed foods.
- Use back up generator to power the food processor as needed.
- If no power is available, chop mechanical soft food by hand or use a hand grinder if needed.

Note: For pureed food, you can use juice from canned fruits, and broth or gravy (canned) for meats and vegetables.

Diets for Diabetes



- Maintain careful portion control for patients with diabetes. Individualize diets as necessary. Provide sweetener as needed
- Use half portion desserts as appropriate if no sugar free desserts are on hand
- The person in charge will let nursing know about diet changes so that they can determine how blood sugars will be monitored (and adjust medications as needed)

For people with diabetes:

- Maintain careful portion control for patients with diabetes and individualize diets as necessary. Provide sweetener as needed
- Use half portion desserts as appropriate if no sugar free desserts are on hand
- The person in charge will let nursing know about diet changes so that they can determine how blood sugars will be monitored (and adjust medications as needed)

No Gas Supply



- If the range and conventional ovens in the kitchen use gas, utilize microwave ovens, and electric stoves
- Use simple, plain foods that need only minimal heating
- If activity or nursing areas have electric stoves or microwave ovens available, cook and serve food directly from these areas

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Use simple, plain foods that need only minimal heating.

If activity or nursing areas have electric stoves or microwave ovens available, cook and serve food directly from these areas.

No Electricity



- Generator or auxiliary power should take over fairly quickly
 - Backup generator equipment
 - Location of generator outlets
- Do not open refrigerator or freezer doors unless necessary until the power returns
- Place blankets or bath towels along the seals of refrigerator and freezer doors to keep the cold air in

If there is no electricity available:

- Generator or auxiliary power should take over fairly quickly. **Presenter Note:** Explain the backup generator equipment and the location of generator outlets for use by the dining staff.
- Do not open refrigerator or freezer doors unless necessary until the power returns.
- Place blankets or bath towels along the seals of refrigerator and freezer doors to keep the cold air in.

A combination of these situations may exist. Be ready to combine these instructions as needed.

No Electricity



- Enteral feeding pumps will have a limited battery back up
- It may be necessary to provide bolus feedings for residents/patients if extended time frames will be needed. Make sure the needed gravity or bolus supplies are in the designated disaster supply area
- Careful monitoring by all professional staff is necessary to avoid negative outcomes

Presenter Notes (You may wish to share this information as appropriate with nursing staff):

- Enteral feeding pumps will have a limited battery back up. Contact the pump manufacturer so you know how long the pumps will function on battery back-up mode.
- It may be necessary to provide bolus feedings for residents/patients if extended time frames will be needed. Make sure the needed gravity or bolus supplies are in the designated disaster supply area.
- Careful monitoring by all professional staff is necessary to avoid negative outcomes.

No Water Supply or Water Contamination



- Use emergency water supply
- Bottled or distilled water for emergency purposes is labeled “for emergency use only”
- Save this for cooking and drinking only
- Water should not be rationed during an emergency situation - Every person must have adequate fluids

Presenter Note: Add explanations as needed.

If there is no water supply or if the water is contaminated:

- Use emergency water supply
- Bottled or distilled water for emergency purposes is labeled “for emergency use only”.
- Save this for cooking and drinking only.
- Water should not be rationed during an emergency situation - Every person must have adequate fluids.

Additional notes:

- In an emergency, hot water tanks contain some emergency water for all purpose use. This water is not purified and should be used as all-purpose water, not drinking water.
- The Nursing Department may want to designate a specific amount of distilled or sterile water for nursing procedures such as flushes, sterile dressing uses, or any other nursing procedures. This water must be clearly marked to use only for that purpose.

General Guide for Water



Drinking Water:

- 1/2 gallon/person/day is essential
- 1 gallon/person/day in hot climates
- Extra for internal staff, evacuees

All Purpose Water:

- 1 gallon/person/day (up to 2 gallons for hot climates)

An adequate supply of water is needed for drinking, food preparation, cleaning, and sanitizing.

A minimum 3-7 day supply of water available. (**Presenter Note:** Recognizing that suppliers may be unable to deliver immediately, a 7 day supply is recommended.) Here are some general guidelines for water needs and conserving available water.

Read the slide. (**Presenter Note:** Also check your state regulations to see if there are specific guidelines.)

Drinking water: 0.5 gallon/person/day

Ex. 100 people X 7 days: Number of people X 1 gallon X 7 days = 350 gallons of drinking water needed

All-purpose water: 1 gallon/person/day

Ex. 100 people X 7 days: Number of people X 1 gallon X 7 days = 700 gallons of all purpose water needed

Other sources of fluids include: Fruit juices, canned soups, canned broth, ice cream, sherbet, fruit ice, carbonated beverages, etc.

Emergency Sources of All Purpose Water



- Ice machine
- Unpurified water for use as all-purpose water, not drinking water:
 - Hot water tanks (contain some emergency water)

Emergency sources of all purpose water include:

- Ice machine
- Unpurified water for use as all-purpose water, not drinking water:
 - Hot water tanks (contain some emergency water)
 - In extreme conditions rainwater, streams, rivers, ponds, lakes, natural springs. This water must be strained and may need to be treated even for use as all purpose water

Water Purification: Boiling



- Boiling is one of the most common ways to purify water
- Water should be poured into an appropriate container and brought to a rolling boil
- Boil the water vigorously for 1 minute
- Cool as appropriate before use

Even if utilities remain in effect, the water supply may be contaminated. In that case, we will need to purify the water before using it. **Note:** Strain water through cheesecloth or coffee filter if needed to remove any debris.

There are three (3) basic ways to purify water: Boiling, purification tablets and bleach purification.

Boiling is one of the most common ways to purify water:

1. Water should be poured into an appropriate container and brought to a rolling boil.
2. Boil the water vigorously for 1 minute.
3. Cool as appropriate before use.

To improve the taste of the water, the water can be poured from one container to another several times.

It is important to remember that a loss of utilities may result in not having a heat source available to boil the water.

Water Purification: Purification Tablets



- Location of tablets
- Follow the manufacturer's directions that come with the tablets

To use purification tablets to purify water:

Presenter Note: Discuss the location of the purification tablets, and how to follow the manufacturer's directions that come with the tablets. Add detailed explanations as needed. A demonstration is ideal.

Presenter Note: Order these tablets in advance to ensure you have them on hand when needed. Purification tablets are available from a number of different supplier sources or can be purchased locally at drug stores or camping supply stores.

Water Purification: Bleach Purification



- Use 5.25% hypochlorite liquid household bleach (with no scent or additives)
- Add the bleach according to the table on the following slide, and then mix well
- Let stand for 30 minutes
- If water does not taste and smell of chlorine, add another dose of bleach and let stand 15 minutes
- Use water within 24 hours of preparation

To purify water using bleach:

- Use 5.25% hypochlorite liquid household bleach (with no scent or additives).
- Add the bleach according to the table on the following slide, and then mix well.
- Let stand for 30 minutes.
- If water does not taste and smell of chlorine, add another dose of bleach and let stand 15 minutes.
- Use water within 24 hours of preparation.

Bleach Purification



Amount of Water	Amount of Bleach
1 Quart	4 drops*
1 Gallon	16 drops*
5 Gallons	1 teaspoon

An eyedropper is a good measuring tool (www.fema.gov)

Use within 24 hours of preparation

Review the slide. Follow instructions carefully. Only add the amount of bleach needed (with the exception of this: If water does not taste and smell of chlorine, add another dose of bleach and let stand 15 minutes).

Equipment Items and Locations



- Manual can openers, egg beaters
- Battery operated equipment (whisks, heating elements)
- Flashlights, battery operated radio
- Standard first aid kits, alcohol swabs
- Terry cloth towels or rags
- Hand sanitizer
- Sanitizing solutions or tablets

Explain where the items listed on the slide are stored and how they can be used in an emergency situation.

Extra Precautions for Sanitation



- Separate clean areas from dirty areas
- Keep waste and garbage in covered and closed containers and remove from food areas as soon as possible
- If water supply is questionable, boil water prior to use in cooking or for drinking
- Do not use any food that might be spoiled
- Do not taste any food in question - If in doubt, throw it out!

Take extra precautions for sanitation during an emergency situation.

- Separate clean areas from dirty areas.
- Keep waste and garbage in covered and closed containers and remove from food areas as soon as possible.
- If water supply is questionable, boil water prior to use in cooking or for drinking.
- Do not use any food that might be spoiled.
- Do not taste any food in question - If in doubt, throw it out!

Internal Food Temperatures



- Always start with safe food
- Use thermometers to check internal food temperatures to assure food safety prior to use
- Heat foods to a ***minimum*** internal temp of 165F for a minimum of 15 seconds
- Be sure to observe safe internal cooking temperatures

To assure food safety during a disaster, it is essential to:

- Always start with safe food
- Use thermometers to check internal food temperatures to assure food safety prior to use
- Heat foods to a ***minimum*** internal temp of 165F for a minimum of 15 seconds
- Be sure to observe safe internal cooking temperatures

Handwashing



- In the event that the water supply is contaminated, boil water before using
- Set up a hand-washing station where boiled water (cooled) is in a container
 - One person will pour water over the hands of another person allowing them to soap their hands and then pour the water over the clean hands to rinse
 - Do not wash and rinse hands in the bucket

Handwashing may be challenging if water is not available or is contaminated.

- In the event that the water supply is contaminated, boil water before using.
- Set up a hand-washing station where boiled water (cooled) is in a container.
- One person will pour water over the hands of another person allowing them to soap their hands and then pour the water over the clean hands to rinse.
- Do not wash and rinse hands in the bucket.

Hand-Sanitizing



- Second option: Use an instant hand sanitizer that does not require rinsing
- These products report high levels of success in killing most common disease causing germs
- They also provide a fast and easy way to sanitize your hands
- However, they do not take the place of appropriate hand washing

The alternative to handwashing is hand sanitizing.

- Use an instant hand sanitizer that does not require rinsing.
- These products report high levels of success in killing most common disease causing germs.
- They also provide a fast and easy way to sanitize your hands.
- However, they do not take the place of appropriate hand washing.

Presenter Note: Add explanation about where your hand sanitizer is stored and any specific information on its use.

Sanitizing Dishes



- 1. Wash:** Scrape dishes first, then wash in a solution of dish soap and hot water
- 2. Rinse:** Rinse dishes in a basin filled with clean hot water
- 3. Sanitize:** Place dishes in a third basin which contains a sanitizing solution

If there is no electricity for dishwashing, follow these instructions for hand dishwashing:

1. Wash: Scrape dishes first, then wash in a solution of dish soap and hot water
2. Rinse: Rinse dishes in a basin filled with clean hot water
3. Sanitize: Place dishes in a third basin which contains a sanitizing solution

Presenter Note: If needed, tablets for sanitizing can be found in hardware stores, drug stores and outdoor hiking/camping supply stores. These should be ordered in advance and stored as appropriate.

Presenter Notes:

Questions and Answers.

Optional: Post-test.

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Handouts

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Emergency Menus



- Once perishable food items have been used, follow the disaster menu plans
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 - Follow inventory rotation and monitor expiration dates and safe food temps

General Recipes



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- Location of tablets
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Equipment Items and Locations



- Manual can openers, egg beaters
- Battery operated equipment (whisks, heating elements)
- Flashlights, battery operated radio
- Standard first aid kits, alcohol swabs
- Terry cloth towels or rags
- Hand sanitizer
- Sanitizing solutions or tablets

Emergency Food and Water Supplies and Service Inservice

Extra Precautions for Sanitation



- Separate clean areas from dirty areas
- Keep waste and garbage in covered and closed containers and remove from food areas as soon as possible
- If water supply is questionable, boil water prior to use in cooking or for drinking
- Do not use any food that might be spoiled
- Do not taste any food in question - If in doubt, throw it out!

Internal Food Temperatures



- Always start with safe food
- Use thermometers to check internal food temperatures to assure food safety prior to use
- Heat foods to a **minimum** internal temp of 165F for a minimum of 15 seconds
- Be sure to observe safe internal cooking temperatures

Handwashing



- In the event that the water supply is contaminated, boil water before using
- Set up a hand-washing station where boiled water (cooled) is in a container
 - One person will pour water over the hands of another person allowing them to soap their hands and then pour the water over the clean hands to rinse
 - Do not wash and rinse hands in the bucket

Hand-Sanitizing



- Second option: Use an instant hand sanitizer that does not require rinsing
- These products report high levels of success in killing most common disease causing germs
- They also provide a fast and easy way to sanitize your hands
- However, they do not take the place of appropriate hand washing

Sanitizing Dishes



1. **Wash:** Scrape dishes first, then wash in a solution of dish soap and hot water
2. **Rinse:** Rinse dishes in a basin filled with clean hot water
3. **Sanitize:** Place dishes in a third basin which contains a sanitizing solution

Emergency Food and Water Supplies and Service Inservice

Pre and Post Test: Emergency Food and Water Supplies and Service

1. In an emergency, you should first use up the non-perishable food items.
True False
2. Mechanically-altered diets should be liberalized during an emergency.
True False
3. Your facility should have enough drinking water on hand for a minimum of ½ gallon per person (including staff and guests).
True False
4. Water can be purified by one of three methods: boiling, bleach purification or the use of purification tablets.
True False
5. A manual can opener should be part of your emergency equipment.
6. After an emergency, food from the refrigerator should be tasted to assure that it has not spoiled.
7. Foods must be cooked to an internal temperature of a minimum of 135 degrees F in order to achieve food safety.
True False
8. Hand sanitizing takes the place of hand washing during an emergency.
True False
9. Dishes should be sanitized using the following sequence: Rinse, Wash, Sanitize.
True False
10. For more information on how to prepare for a disaster, contact your local Red Cross.
True False

Emergency Food and Water Supplies and Service Inservice

Pre and Post Test: Emergency Food and Water Supplies and Service Answer Key

1. False
2. False
3. True
4. True
5. True
6. False
7. False
8. False
9. True
10. True