

A collection of survival gear arranged on a dark surface. In the center is a green first aid kit with a white cross and the text 'FIRST AID KIT'. To its left is a white envelope labeled 'IMPORTANT DOCUMENTS' resting on a green tent. Above the tent is a roll of white paper and a green cup with a toothbrush. To the right of the first aid kit are two large clear water bottles, a smaller clear bottle, and two metal food cans. In front of the cans is a clear bag of nuts and a long metal tool. Below the first aid kit is a black flashlight, two AA batteries, and a small yellow matchbox. In the bottom right corner is a green portable radio with a frequency dial showing FM, AM, and SW bands.





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Introduction

Historically, Puerto Rico has been affected by weather systems such as storms and hurricanes. While a storm stands out more for the amount of rain, a **hurricane** is atmospheric phenomenon that circles around a low-pressure center (eye of the hurricane) and generates strong winds and rains. The impact of a hurricane not only causes great damage to the infrastructure, but also affects the services offered to the population, such as those related to health.

Remember that the planning and preparation you have done before the hurricane makes a big difference in managing emergencies and can help you keep your health conditions under control.

This guide will help you take action to protect you and your family's health before, during, and after a hurricane.



Before the hurricane: **BE PREPARED!**

The force of a hurricane's winds are usually of such a magnitude that they cause damage or destruction to houses, buildings and roads, among others.

However, the consequences of a hurricane are not only limited to physical damage to infrastructure, but also become the cause of illness and loss of life.

To minimize the impact on your health and your life, it is important to be prepared. Here are a series of recommendations that will help you to be prepared.

First aid kit

In an emergency, you or a member of your family may suffer a cut, burn or other type of injury. It is important to treat any type of these injuries, even if they are not life-threatening.



Having a first aid kit with basic items will help you be prepared to help your loved ones. Below is a list of some of the items you should have available in case of an emergency:

Bandages and compresses

- Adhesive bandages (wound dressings), sorted by size.
- Aluminum finger immobilizer.
- Elastic bandage to cover wrist, ankle, knee and elbow injuries and limit their movement.
- Eye shields, pads and bandages.
- Gloves (latex or non-latex) to reduce the risk of contamination.
- Sterile gauze (non-adhesive pads) and adhesive tape.
- Triangular bandage to make an arm sling (bandage to hold the arm still and rest against the chest with fingertips exposed).

Note: You must have the first-aid kit in an area that is easily accessible and that is not exposed to water.



Equipment

- Suction devices (bulb or syringe) and droppers.
- Disposable instant ice packs.
- Face mask to reduce the risk of contamination.
- Hand sanitizer.
- Gloves (latex or non-latex) to reduce risk of contamination.
- Sterile cotton balls.
- Sterile cotton swabs or applicators.
- Oral syringe, cup or dosing spoon for administering specific doses of medication.
- Thermometer.
- Tweezers.



Medications for cuts and injuries

- Antiseptic solution or wipes, such as hydrogen peroxide.
- Triple antibiotic cream.
- Sterile rinse, such as contact lens saline solution.
- Calamine lotion for stings.
- Hydrocortisone cream, ointment or lotion for itching.

REMEMBER

**to check the first aid kit on a regular basis.
Replace any items that have run out or
expired.**



Maintenance Medications

After a hurricane or storm, health services could be affected and access to doctors, pharmacies and medications may be difficult. You may not have the necessary medications available for the management and control of your chronic health condition or you may not be able to pick them up at the nearest pharmacy, creating a risky situation for your health.

To make sure you have the medications you need for your health care available before the emergency, it is important that you prepare.

Mark with a  each time you complete one of the following actions:

- ☐ I checked the supply of medications I have at home, and I have enough supply for 30 to 90 days.
- ☐ I checked with the pharmacist to see if I had any refills left for my medication and picked up the refill.
- ☐ I asked my physician for a prescription for the medication that did not have a refill available at the pharmacy
- ☐ I asked my physician for an extra prescription for my medication to have on hand in case I needed to go to another pharmacy after the emergency.
- ☐ I talked to my physician about my care plan for my health condition after the hurricane passes.

- ☐ I identified a safe place where I can store medications without getting them wet and where they are not accessible to children.
- ☐ I placed the medication bottles in a waterproof bag or container (example: plastic storage bag or box).
- ☐ I have a cooler and ice pack on hand where I will keep medications that need to be cold
- ☐ I prepared a list with the name of the medications I use and shared it with immediate family members.
- ☐ If your medications require refrigeration or use of electronic equipment, talk to your physician or a pharmacist to set up a plan for use and storage or alternatives.



Food and drinking water

Feeding and hydrating yourself during an emergency is of utmost importance. This will help you meet your daily recovery activities. It is important that you select the foods you will store according to your current health status.

Here is a list of non-perishable foods that you must have in your pantry:

- ☐ Drinking water for two (2) weeks. (It is recommended to calculate one (1) gallon per person, per day).
- ☐ Canned tuna, salmon, chicken, and turkey in water.
- ☐ Canned fruits in their own juice.
- ☐ Low-sodium canned vegetables
- ☐ Low sodium canned grains (beans, lentils, chickpeas, etc.).
- ☐ Whole-grain sandwich bread (three (3) grams or more of fiber).
- ☐ Whole-grain crackers.



- ☐ Whole-grain burrito tortillas (three (3) grams or more fiber).
- ☐ Unsweetened dry cereal.
- ☐ Complete Pancake Mix.
- ☐ Evaporated, powdered, or low-fat UHT milk.
- ☐ Dried fruit (raisins, cranberries).
- ☐ Applesauce with no added sugar.
- ☐ Unsalted nuts (almonds, walnuts).
- ☐ Cereal bars.



Specific considerations for your health care

- ☐ Have your physicians, pharmacy, and medical plan information on hand.
- ☐ Have identified, with your first and last name, all medical equipment (for example, glucometer, blood pressure machine, oxygen machine) required for your health condition.
- ☐ Have your wheelchair, cane, hearing aids, and your glasses.
- ☐ Have up to date your vaccinations (influenza, pneumonia and COVID-19).
- ☐ Established an emergency plan with my physician in case of dialysis, therapy, or treatment care.

After the hurricane: **SAFE AND HEALTHY**

After the hurricane, floodings, the lack of basic services, such as drinking water and electricity, can lead to limitations in maintaining hygiene. This causes the appearance and spread of diseases that are easy to prevent, but that can become threats to health and life if adequate measures are not taken.

Below are some action steps to take.

Protect yourself from mosquitoes

- Use insect repellent containing DEET, Picaridin, eucalyptus oil, lemon oil, or citronella oil as the active ingredient.
- Wear long-sleeved shirts and pants.
- Empty all containers of standing water in the surrounding area.
- Cover the garbage cans and containers that hold the water you will use for toilets and bathing.
- Use metal screens to cover doors and windows.
- Do not leave car tires, cans, and bottles out in the open.



Clean and disinfect safely

- Wear gloves, mask, safety glasses and plastic boots.
- Open all doors and windows in the house while cleaning. Leave as many windows open as possible.
- Throw away anything that cannot be washed or dried quickly (e.g., mattresses, pillows, quilts, rugs, furniture, toys, pressboard furniture, books, etc.).
- Thoroughly clean all wet equipment, objects and surfaces with water and detergent.

Store food safely

- Throw away food that has an unusual odor, color, or texture. If you have any question about the quality of the food, discard it.
- Discard canned foods that are swollen, opened, or damaged. Also, those in containers with screw-top, snap-top, and other types of lids that open manually.
- Remove labels from cans. Label cans with a permanent marker. Include the expiration date.
- Wash cans with clean water and soap. Disinfect them with a solution of one (1) cup of unscented household bleach in five (5) gallons of water for 15 minutes.



Make water safe

- **Boil water**

1. Place the water in a pot over high heat. Once it starts to boil, keep it in that state for one minute. Remove from the heat source (stove).
2. Let the water cool.
3. Store the boiled water in clean and disinfected containers with airtight lids.
4. Label the containers with disinfected water. Include the date.

- **Disinfect water with chlorine**

1. Clean and disinfect water containers properly before each use.
2. Filter water using a clean cloth, paper towel, or coffee filter. Allow it to settle.
3. Add eight (8) drops of unscented liquid chlorine bleach per gallon of clear water.
4. Mix well.
5. Let stand at least 30 minutes before using.
6. Store disinfected water in clean, disinfected containers with tight-fitting lids.
7. Label the containers with disinfected water. Include the date.

Wash your hands constantly

- Wet your hands with clean water and apply soap.
- Rub your hands together to form a lather. Be sure to scrub the back of your hands, between your fingers, and under your nails for at least 20 seconds. If you are uncertain of the time, sing the “Happy Birthday” song two (2) times.
- Rinse your hands well with clean water.
- Dry them with a clean towel or air dryer.
- If you don’t have soap and water, use a hand sanitizer that contains at least 60% alcohol.



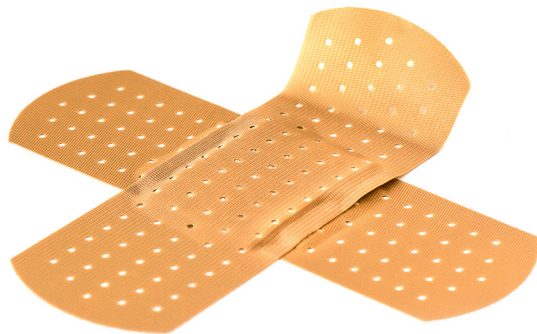
Make personal hygiene a priority

- Bathe with clean water and soap.
- Brush your teeth with clean water.
- Pay attention to local health and drinking water authorities about the use of water for bathing.



Treat minor wounds

- Wash your hands with soap and clean water.
- Avoid touching the wound with your fingers while treating it (wear disposable gloves if possible)
- Remove clothing and accessories that are near the wound.
- Apply direct pressure to any bleeding wound to control bleeding.
- Clean the wound when it is no longer bleeding.
 - » Examine the wound for dirt or foreign objects.
 - » Wet the wound carefully with clean water or saline solution.
 - » Clean around the wound with clean water and soap.
 - » Pat the wound dry, without rubbing, and cover it with an adhesive bandage or a clean dry cloth.
- Do not cover wounds, bites, or puncture wounds that you have not cleaned. Wounds that have not been properly cleaned can retain bacteria and cause infection.
- Take pain relieving medication
- Check the wound every 24 hours.
- Seek medical help as soon as possible.



Keep your medicines safe

- Medicines exposed **to contaminated or flood water should be discarded.**
- Medications that require refrigeration must be kept at the coldest temperature possible under the circumstances. Some medications that require refrigeration are:
 - » **Insulins**
 - » **Biologics**
 - » **Glaucoma drops**
 - » **Liquid antibiotics**
- Keep insulin as cold as possible. If you use ice, avoid freezing it. Do not use insulin that has frozen. Keep insulin away from heat and out of direct sunlight.
- Keep the medication in a cooler with an ice pack to keep it cold.

Note: Insulin loses some efficacy when exposed to extreme temperatures. The longer the exposure to extreme temperatures, the less effective it becomes. This may result in loss of blood glucose control over time. In emergency conditions, it may still be necessary for you to use insulin that has been stored above 86°F.



Acute illnesses that can arise after a hurricane

Despite taking preventive measures, there is still a possibility of you getting sick. To prevent any setback with your health, it is important that you know how to treat some of the most common diseases in time to avoid complications.

Disease	Form of infection	Symptoms
Leptospirosis	<p>There are two (2) forms of infection:</p> <ol style="list-style-type: none">1. Drinking or having contact with water or soil which has been contaminated by urine or bodily fluids of infected animals.2. Exposure to urine or bodily fluids of infected animals (Example: Rats)	<p>May occur within two (2) days to four (4) weeks after exposure.</p> <ul style="list-style-type: none">• Fever• Chills- Headache• Muscle pain• Vomiting and diarrhea• Yellow skin and eyes
Human scabies	<p>It is transmitted by skin-to-skin contact with a person who has it.</p>	<ul style="list-style-type: none">• Itching, especially at night.• Skin rashes, especially between the fingers, toes, underside of wrists, armpits, breasts, and buttocks.• Groove marks (fine lines) on the skin.

Disease	Form of infection	Symptoms
Conjunctivitis	<p>May be caused by:</p> <ul style="list-style-type: none"> • Viruses (very contagious) • Bacteria (very contagious) • Allergens such as pollen (not contagious) - Irritants such as smoke or dust (not contagious) • Irritants such as smoke or dust (not contagious) 	<ul style="list-style-type: none"> • Redness or swelling • Tearing • Rough sensation • Itching, irritation or burning • Discharge • Crusting of the eyelids and eyelashes
Dengue	<p>It is transmitted through the bite of a mosquito contaminated with the virus.</p>	<ul style="list-style-type: none"> • Sudden high fever • Headache • Pain behind the eyes • Drowsiness or tiredness • Severe muscle and joint pain • Rash • General discomfort
Influenza and COVID 19	<p>They can spread from person to person by close contact through large or small particles containing the virus that are shed when sick people (with COVID-19 or influenza) cough, sneeze, or talk.</p>	<ul style="list-style-type: none"> • Fever or chills • Cough • Difficulty breathing (feeling short of breath) • Fatigue (tiredness) • Sore throat • Runny or stuffy nose • Muscle pain and body aches • Headache • Vomiting • Diarrhea • Change or loss of taste or smell, more frequent with COVID-19.

Management of chronic illness after a hurricane

Keeping a chronic illness under control after a hurricane or storm can be a challenge, but it is possible. Here are some recommendations that can help you.

Kidney disease

If you have kidney disease, you should follow the recommended diet. For some, it is necessary to control the accumulation of toxins, such as potassium, phosphorus, urea and fluids, which can be life threatening if an emergency prevents you from attending several dialysis treatments. We recommend that you continue your treatment, eat salt-free foods and avoid foods high in potassium as much as possible.

For your reference, we provide an example of a lunch or dinner menu for a person with kidney disease:

Two (2) slices white bread.

Half ($\frac{1}{2}$) cup of low sodium tuna fish.

One (1) tablespoon margarine or mayonnaise (use a single packet).

Half ($\frac{1}{2}$) cup pears.

Powdered drink to mix with half ($\frac{1}{2}$) cup of distilled water.



Diabetes

If you have diabetes and your treatment is insulin, you should have enough supplies on hand and storage to help you keep it refrigerated. If you have oral medications or tablets, you should make sure you have, at least, a 30 to 90 day supply. Be sure that you have a glucometer and extra batteries on hand, as well as sufficient supplies of lancets and strips.

Have instant glucose tablets, hard candy or 100% fruit juice (low potassium if you have kidney disease with potassium restriction) on hand so you can use them in case your glucose levels drop.

If you have a blood sugar dip between 55-69mg/dL, you can treat it with the 15-15 rule: take 15 grams of sugar (four (4) oz of juice or three (3)- four (4) glucose tablets as indicated) and check your blood sugar after 15 minutes. Repeat if it continues to fall below your goal.

Recommendations for good insulin maintenance

- Unopened, refrigerated insulin maintains its potency until the expiration date indicated on the container (usually months or years).
- Once opened, insulin can last for approximately 28 days (varies by insulin).
- In emergency conditions, insulin can be used even if it has been stored unrefrigerated (outside of the refrigerator), only if it is kept at room temperature between 59°F and 86°F. Insulin should be kept in a cool, dark place.
- Because insulin loses effectiveness if exposed to extreme temperatures, you should keep it away from direct heat and away from sunlight.
- Because insulin loses effectiveness if exposed to extreme temperatures, you should keep it away from direct heat and away from sunlight.
- If you have access to ice or a refrigerator, you should try to keep the insulin as cold as possible without freezing it. Do not use insulin that has frozen.

An example of a lunch or dinner menu for a person with diabetes might be:

Two (2) slices of whole wheat bread
Half (½) cup (two (2) ounces) low-sodium chicken
Two (2) tablespoons margarine or mayonnaise (use a single packet)
Half (½) cup unsweetened pineapple juice
Half (½) cup unsweetened apple juice



Bedridden persons

The heat and the lack of electricity and drinking water make bedridden people more vulnerable. Therefore, it is extremely important for the caregiver to take the necessary measures to prevent the formation of pressure ulcers and urinary tract infections. Here are some recommendations that may help you:

- Keep the temperature in the room as cool as possible.
- Use and keep sheets clean and fresh.
- Keep skin dry and clean at all times.
- Consult with your physician about the use of vitamin C and zinc to promote skin health.
- Avoid dragging the person when changing their position, this can cause skin rupture.
- Check their skin regularly for red or sore areas and notify the physician immediately of any changes.
- Change the person's position every two (2) hours.
- Keep the person hydrated. This will help move phlegm from the chest and promote urine flow.
- If the person wears diapers, you should use a barrier cream.

Additional recommendations

- **Do not walk through standing water** which may contain hazardous debris such as broken glass, metal, dead animals, sewage, gasoline, oil, and downed power lines.
- **Wear gloves, safety goggles, plastic boots, and a face mask** to protect against dust and mold.
- **Never use an electrical appliance** that is wet or while you are standing in water.
- **Use flashlights instead of candles.** If you must use candles, place them away from materials that can catch fire. Stay close to lit candles to keep an eye on them.
- **Do not use the electric generator or gas or coal burning equipment inside the house.** Place them outside at least 20 feet from any windows or doors.
- Share copies of **emergency numbers** with family members, including primary care physicians and their addresses.
- Make a **list of the medications** you use and share it with your family members.

This guide will help you take action, stay healthy, and enjoy complete health before, during, and after a hurricane.

References:

US Department of Homeland Security - FEMA: www.ready.gov

Centros para el Control y la Prevención de Enfermedades: <https://www.cdc.gov/es/disasters/hurricanes>

Hurricane Safety Checklist American National Red Cross: <http://www.redcross.org>

National Kidney Foundation: www.kidney.org

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Do you know the difference between a hurricane watch and a hurricane warning?



A watch indicates that hurricane conditions (sustained winds of 74 mph or greater) are possible. It is announced 48 hours before it is expected to happen.

A hurricane warning means that hurricane force winds are expected. This warning is announced 36 hours before winds are expected to begin in the area.

Know the categories of hurricanes, according to the intensity of winds:

1	2	3	4	5
74-95 mph	96-110 mph	111-129 mph	130-156 mph	157 mph o más

**This hurricane season,
make your plan!**

Deborah Martorell
Meteorologist



At MCS, our priority is your health, that you feel safe and calm and stay healthy.



Complete Health

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