

DISASTER PREPAREDNESS GUIDE FOR PERITONEAL DIALYSIS PATIENTS

In Malaysia, natural disasters and severe weather conditions, for example floods, remain among the unpredictable parts of life.

Dialysis patients are particularly at risk, being dependent on electricity supply and water for dialysis treatment. These utilities may be down for several days. In emergency situations, telephones may not work, and roads and bridges may be impassable. You or your facility staff may not be able to get to your dialysis centre.

This guide is provided to you as a general resource and reference. It will help **you** to be prepared in case the unexpected happens. It is important for you to know the emergency plan for your centre, know how to survive two or more days if your facility is unable to operate, and know how to limit your food and fluid intake. It is important to talk with your dietitian or doctor for more detailed advice.

Frequently asked questions (FAQ)

1. When is there an emergency situation?

It is when there are hazardous conditions, such as fire, flooding etc. You will be unable to be dialysed as usual.

2. Where do I go if my dialysis centre is closed?

Your dialysis unit provider should contact you with information on where to go for dialysis or you should contact the **National Hotline For Dialysis Disaster Relief** (Tel : _____)

3. What happens if I can't find a dialysis unit and I am feeling sick?

Go to the nearest available hospital or call 999.

4. How do I pay for my treatment if I have to go to another facility?

Do not worry about payment - your dialysis providers will have sorted this out with other dialysis centres or your payer.

5. Will I be able to do my peritoneal dialysis exchanges during disaster?

Due to the emergency situation, your dialysis schedules and durations may need to be modified.

OUTLINE OF EMERGENCY PREPAREDNESS PLAN FOR PERITONEAL DIALYSIS PATIENTS

- A. General Survival requirements – food, medications, safety
- B. Ensuring continued access to dialysis treatment
- C. Specific measures for care of exit site in Peritoneal Dialysis patients

A. GENERAL SURVIVAL REQUIREMENTS - FOOD, MEDICATIONS, SAFETY

- Know the **Emergency Preparedness Plan** of your dialysis facility.
- Consider staying with relatives in unaffected areas which can provide dialysis facilities during the predicted disaster period (e.g. monsoon season)

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- Provide your dialysis facility with current telephone numbers: personal, relatives, and friends.
- Keep copies of your medical and dialysis history.
- Wear an identifying bracelet and keep your dialysis identification card with you.
- Maintain a week's supply of your current medications at all times and a stand-by supply of potassium binders (a medicine that helps the body remove excess potassium via bowel movements), if advised by your Nephrologist.
- Know how to care for your dialysis access.
- Maintain emergency general survival kits:

EMERGENCY GENERAL SURVIVAL KITS

Hand phone

Extra batteries/charged power bank

Torch light/battery powered lantern,

Foldable mats/sleeping bags/blanket

Insecticide spray/ mosquito nets/coils

Important personal items

- Towel and extra clothes,sandals/rubber slippers
- Toiletries-Tooth brush, tooth paste, haircomb/brush, shaver, and etc

Manual can opener

Disposable eating utensils eg: paper/plastic cups, spoons etc

First aid kit i.e. cotton, gauze, tourniquet, plaster, scissors etc

Drinking water

Radio

Candles and matches/lighter

Wet wipes

Prescribed medications

- Prepare at least a week supply of your medications. Check the expiry date and replace items when needed
- You may also want to carry oral potassium binders, just in case you need it.

- Remain at home and listen for public service broadcasts on local radio or TV stations. Your dialysis facility staff will attempt to contact you.
- If you must seek shelter, take your week's supply of medications, emergency supplies, personal items, foldable mats/sleeping bags/blanket, medical information and identifying bracelet. Tell the person in charge at the shelter about your special needs.
- Know your dietary guidelines for emergency preparedness.
 - Follow the Diet Plan for Disaster Situations
 - Maintain dietary supplies (see the 3-day grocery/shopping list in Appendix 1 for suggested items and Appendix 2 for a 3-day Menu plan)

DIET PLAN FOR DISASTER SITUATIONS

During disasters, you may not be able to be dialysed adequately as the duration of dialysis may be shortened and you may only be able to be dialysed twice a week instead of the usual three times per week.

Therefore until the dialysis is able to be recommenced properly, your diet should be more restricted than your usual diet. You need to:

- **restrict fluid** intake, stricter than normal
 - limit to 2 cups per day or half of your usual fluid consumption
 - practice the usual tips to reduce thirst such as chewing gum, rinsing of mouth, use of smaller sized cups
- **follow a lower protein diet** to reduce urea and creatinine in the blood
 - Take half ($\frac{1}{2}$) to two third ($\frac{2}{3}$) of your usual protein portions, twice a day.
- **follow a lower potassium diet** to reduce the risk of elevated potassium in the blood.

You still need to consume:

- **adequate calories**
 - continue with usual intake of carbohydrate food (starchy food)
 - add in oils/ margarine 2 – 3 tsps/ meal whenever appropriate
 - add in jam 2 – 3 tsps/ meal whenever appropriate
- **low salt diet** to reduce the risk of high blood pressure and fluid overload

Other considerations include:

Food safety:

1. For food that usually needs to be refrigerated, consume within four (4) hours
2. Discard the balance
3. Throw away disposable utensils once used.

Food storage:

1. Keep dried food in airtight containers
2. Keep food away from water, animals and protect from insects.
3. Check and replace food before expiry dates
4. Replace bottled water twice yearly

B. ENSURING ACCESS TO CONTINUED PERITONEAL DIALYSIS TREATMENT

Disasters usually happen suddenly, but to certain extent, it can be predicted especially the monsoon flooding season. You should be informed whether your area will be affected. You can keep yourself updated by monitoring warnings from the related governmental agencies.

You also may opt to move away from your area to other safe places with a suitable environment for PD exchanges (e.g.: staying with relatives) prior to the predicted timing of disaster.

If you cannot do this, and find that you **need to evacuate during disaster, the following steps are advised:**

- You need to contact your own dialysis centre/manager to be informed what will be the next step.
- Alternatively you may also be contacted by your own PD unit manager regarding the disaster. This is why it is important to always keep your contact information updated with the dialysis centre and to provide as many phone numbers as possible for you, your relatives or friends.
- If you have to seek shelter take your week's supply of medications and PD disposables, and bring along the emergency dialysis kit with you (see below).
- If you have to evacuate immediately to safety and do not have time to contact your dialysis centre, you should identify yourself to the disaster relief personnel who are in charge of the shelter that you are taken to.
- Take as much PD supplies as possible with you but stay in contact with your PD unit and the PD supplier for more information and assistance.
- Please be aware that evacuation shelters may be crowded and there may not be an area to do an exchange safely - if this happens, try to consult your PD doctor or nurse. If you still pass a lot of urine, it may be safer to omit the PD exchanges for 1-2 days instead of doing exchanges in an unsafe place where the risks of peritonitis are greater.
- If you are able to continue your usual PD exchanges but **supplies are running low**, you may need to **decrease the number of exchanges a day** to enable your supplies to last longer.
- **For patients on automated PD (APD)**, it may be necessary to **change to manual exchanges (CAPD) if the power supply is disrupted**. It will be necessary for you or your assistant to be given refresher training for CAPD prior to the predicted natural disaster period. You will also need to contact your PD supplier for one week supply of CAPD supplies in reserve.

EMERGENCY DIALYSIS KIT

Checklist:

1. General instructions/information
2. Personal Medical and Dialysis Information Form/ Card
3. Information on emergency dialysis centres /contact numbers
4. Dialysis bracelet

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General instructions

In an emergency situation, you may need to seek treatment in other centres which will not have important information about you. Therefore, the dialysis information/medical card must be with you and please wear your identifying bracelet.

Patient Medical History and Peritoneal Dialysis Treatment Information Form

DIALYSIS CENTRE: _____ TEL NO: _____

Name of Peritoneal Dialysis Manager/ Nurse: _____

TEL NO: _____

PATIENT'S NAME: _____ NRIC no: _____

Address: _____

Tel.: _____ Email: _____

Name of Next-of-Kin: _____ Tel. of Next-of-Kin: _____

MEDICAL HISTORY AND CLINICAL INFORMATION

Nephrologist's Name: _____ Tel. No.: _____

Primary Cause of Kidney Failure: _____

Allergies: _____

Other Medical Conditions Being Treated: _____

Hepatitis Status: _____ Date of Test: _____

Medications:

PERITONEAL DIALYSIS INFORMATION

Type of PD Treatment: CAPD/ NIPD/ CCPD/ APD/ Other: _____

System Used: Baxter / Fresenius / Other: _____

No. of exchanges per day: _____ Dwell volume: _____ litre

Dialysate concentration: _____

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Personal Medical and Peritoneal Dialysis Information Form/Card:

What is this?

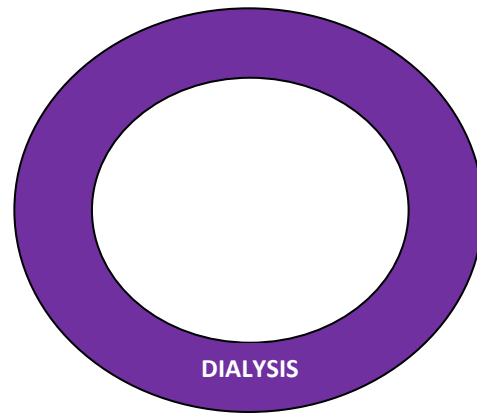
It is an important card containing your personal data and information on your medical conditions and peritoneal dialysis treatment information and medication.

Where to get it?

You will need to fill in the information card provided by the dialysis centre within 1 month of starting your dialysis. You will need to carry this card with you at all times.

IDENTIFYING BRACELET

Colour: lavender



What is this?

A dialysis bracelet is a waterproof rubber band that is meant to be worn around the wrist by dialysis patients during disasters. The word “DIALYSIS” is printed on its surface for easy identification

Where to get it?

All dialysis patients will be provided with this band by their respective dialysis centres. You should keep it in your emergency dialysis kit.

When to wear it?

All dialysis patients should start wearing the dialysis bracelet once the monsoon season starts. Please let your dialysis need be known to the evacuation centre staff . You can take off your bracelet and store it back in the emergency kit once the disaster is over.

Why should I wear the identifying bracelet? Identification of dialysis patients can be difficult when there are many other people needing help in an emergency. The provided dialyzing bracelet should be worn during an emergency for easy identification. If you are injured or unable to talk, medical workers need to know quickly that you are a person on dialysis.

C. SPECIFIC MEASURES FOR CARE OF EXIT SITE IN PERITONEAL DIALYSIS PATIENTS

There are steps one can take to reduce the risk of developing exit site infections. If a PD dressing is used, it should be changed any time it becomes soiled or wet. The PD catheter exit site should also be cleaned any time the area becomes soiled.

Seek consultation and assistance with available healthcare staff or medical providers while in evacuation centers or alternate housing situations.

Exit Site Care with Vinegar Solution for Wet, Red, or Sore Sites

These procedures are recommended **when you do not have any of your supplies** for usual exit site care and:

- the exit site has been submerged;
- water used to clean the exit site may be contaminated; or
- the exit site is red or sore:

Procedure for Preparing Vinegar Solution:

1. Prepare vinegar solution in a very clean jar
2. Add 6 ounces (3/4 cup) boiled or bottled water
3. Add 4 ounces (1/2 cup) white vinegar
4. Add 1 ¾ teaspoon table salt
5. Shake until dissolved
6. Pour solution into a **clean** spray bottle

Procedure for Exit Site Care

1. Clean your exit site
2. When showering, clean your exit site last using liquid antibacterial soap. Use a clean wash cloth for your exit site.
3. Rinse off the soap with water.
4. Spray your exit site with vinegar solution.
5. Pat dry with dry washcloth. You may use a hair dryer on "low." Be sure to hold the dryer pointing downward at least 12-15 inches from your skin. Dry under the catheter.
6. Secure your catheter with a small amount of slack to prevent pulling at the exit site.

If your exit site is red, sore or infected:

1. Clean your exit site twice a day with liquid antibacterial soap and rinse with water.
 2. Saturate a 4x4 gauze with the vinegar solution and lay it around your catheter for 20 minutes. This solution should feel soothing. Discontinue use if solution burns your skin and seek medical attention.
- **Do not store the vinegar solution for more than 1 week. Discard any unused portion at the end of each week and make a fresh solution.**

Appendix 1**THREE-DAY GROCERY/ SHOPPING LIST**

Item	Amount (per person)
Bread/ Starchy food	
Rice	1 packet (1 kg/ packet)
Bread (white/ bun / prata / nan/ kebab bread)	1 loaf/ packet
Instant cup noodles *	
Biscuits (low salt crackers/ Marie/ biscuit with cream/ wafer)	1 pack (~ 500gm)
Kuih–muih (cake/ muffin)	3 small packets
Fish/Meat	
Canned chicken (curry/ kurma/ lemak/ sambal) *	3 small cans
Canned meat (curry/ kurma/ lemak/ sambal)	3 packets
Chicken floss/ home-made low salt serunding	
Tuna*	
Sweets (to increase calories)	
Jam/ kaya	1 small bottle
Honey	1 small bottle
Sweets	1 small pack
Fat & Oils (to increase calories)	
Low salt margarine/ soft margarine	1 small tub
Water/ drinks	
Bottled water	3 bottles (500 ml/ bottle)
Vegetables	
Canned vegetables *	1
Fruits	
Canned fruits (rambutan/ lychee/ pineapple)*	2 cans

* to discard soup/ can water/seasoning/gravy

Appendix 2**3 DAY MENU PLAN**

Meal	Day 1	Day 2	Day 3
Breakfast	Bread 2 slices (+ 2 tsp jam + 2 tsp margarine) Water/coffee +/- sugar (100 ml)	Cream bun 1 pc Water/coffee +/- sugar (100 ml)	Cracker Biscuits 6 pcs (+ 2 tsp jam + 2 tsp margarine) Water/coffee +/- sugar (100 ml)
Lunch	Roti Nan 1 + 1 ½ matchbox-sized piece of chicken + ½ cup canned fruit (peach) + °packet drink (150 ml)	Prata +1 ½ matchbox-sized piece of meat (without gravy) + ½ cup canned vegetable + ½ cup canned fruit + °packet drink (150 ml)	Roti kebab + 1 ½ matchbox size tuna + ½ cup canned vegetable + ½ cup canned fruit + °packet drink (150 ml)
A/ tea	Cake e.g. Twiggies @ (1 pc) + °packet drink (100 ml)	Muffin(1pc) + °packet drink (100 ml)	Biscuit Marie @(6 pcs) + °packet drink (100 ml)
Dinner	Instant cup noodles *without seasoning (+ 1 ½ matchbox chicken) + ½ cup canned vegetable + ½ cup canned fruit + plain water (150ml)	Bread 3 slices + 1 ½ matchbox-sized piece of meat (without gravy) + ½ cup canned vegetable + ½ cup canned fruit + plain water (150ml)	Instant cup noodles – meehoon* + 1 ½ matchbox-sized serving of tuna* + + ½ cup canned vegetable + ½ cup canned fruit + plain water (150ml)

For people with diabetes, avoid sweets/sugary drinks in this plan unless experiencing symptoms of low blood sugar levels

* to discard soup/can water/seasoning or gravy