

Philippine Society
of Nephrology, Inc.



THE PERITONEAL DIALYSIS MANUAL

A GUIDE FOR PATIENTS

Expert Champions for Kidney Health

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Cover Design, Layout and Graphics by Rene H. Francisco, MD
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Printed in the Philippines

THE
**PERITONEAL
DIALYSIS**
MANUAL

A GUIDE FOR PATIENTS



PHILIPPINE SOCIETY OF NEPHROLOGY, INC.

2017



MESSAGE

Greetings!

In behalf of the Officers and Members of the Philippine Society of Nephrology, Inc. (PSN, Inc.), I would like to extend my congratulations to the Committee on Peritoneal Dialysis headed by Dr. Mary Rose Y. Bisquera, which belongs to the Cluster on Quality Management under Dr. Noel M. Castillo.

This Manual on Peritoneal Dialysis is a work of dedication as a genuine commitment to the PSN in its thrust to serve kidney patients. It is light enough to be understood, promising to be very acceptable to patients and their families, inspiring which gives hope to live life when one aspect of the human body begins to fail.

We, as nephrologists and the members of the Peritoneal Dialysis Team, dedicate this manual to all kidney patients and their supportive loved ones as our true commitment to serve humanity.

Mabuhay ang Filipino!


A handwritten signature in black ink, appearing to read 'Victor S. Doctor, M.D.' with a stylized flourish at the end.

VICTOR S. DOCTOR, MD, FPPS, FPSN
President
Philippine Society of Nephrology, Inc

MESSAGE

Greetings!

Peritoneal dialysis (PD) is one of the therapeutic modalities available for Stage 5 Chronic Kidney Disease patients. It is in fact the modality of choice for a significant number and a specific segment of patients with End Stage Renal Disease (ESRD). This manual aims to familiarize the patients and their families with the basic concepts of PD and to help them deal with the common issues encountered in this particular treatment method. In behalf of the Officers and the Board of Trustees of the Philippine Society of Nephrology, I would like to express my sincere gratitude to the PD Committee, headed by their chairman, Dr. Mary Rose Y. Bisquera and their adviser, Dr. Antonio V. Cayco. Their tireless efforts have resulted in the crafting of a simple but clear and comprehensive treatment tool for both patients and nephrologists.



NOEL M. CASTILLO, MD, FPCP, FPSN
Head, Cluster on Quality Assurance and Accreditation
Philippine Society of Nephrology, Inc.





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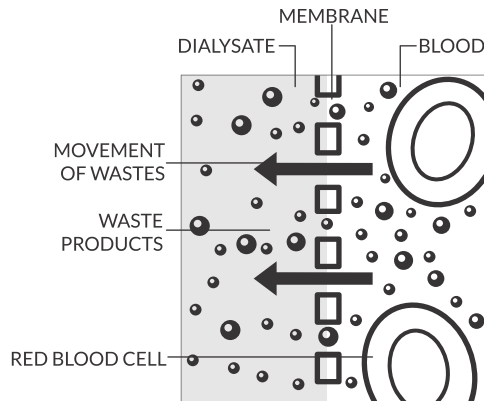
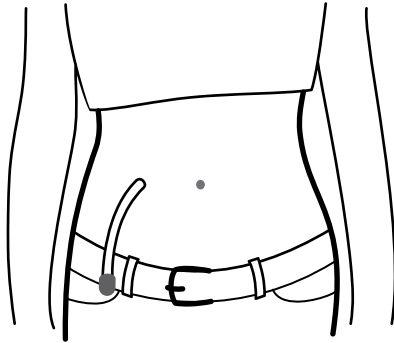
Rene H. Francisco, MD

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What is peritoneal dialysis?

- Peritoneal dialysis (PD) is a process of cleaning toxins and removing excess fluids from your body without bringing out your blood.
- PD involves filling up your abdomen with a dialysis solution through a PD catheter.
- The dialysis solution gets in contact with the membrane inside your abdomen called the peritoneum that acts as the filter of the blood that flows through it.



What are the modes of PD?

1. Continuous Ambulatory Peritoneal Dialysis (CAPD)

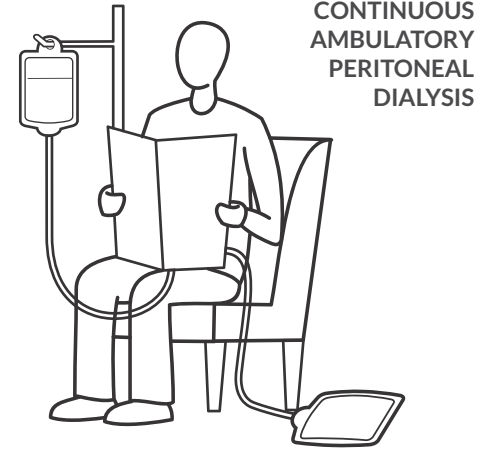
- CAPD is performed manually by gravity without using a machine.
- Three to five exchanges are done per day based on your prescription.
- It will only take around 30 minutes to complete an exchange. You can return to your daily activities and work in between exchanges.

2. Automated Peritoneal Dialysis (APD)

- APD is another mode of PD where a cycler machine performs your treatment while you are asleep at night.
- In the morning, you are detached from the machine and you can resume your daily activities.
- Depending on your prescription, a PD solution may dwell throughout the day until the next cycler treatment at night, or an extra exchange is performed manually within the day.

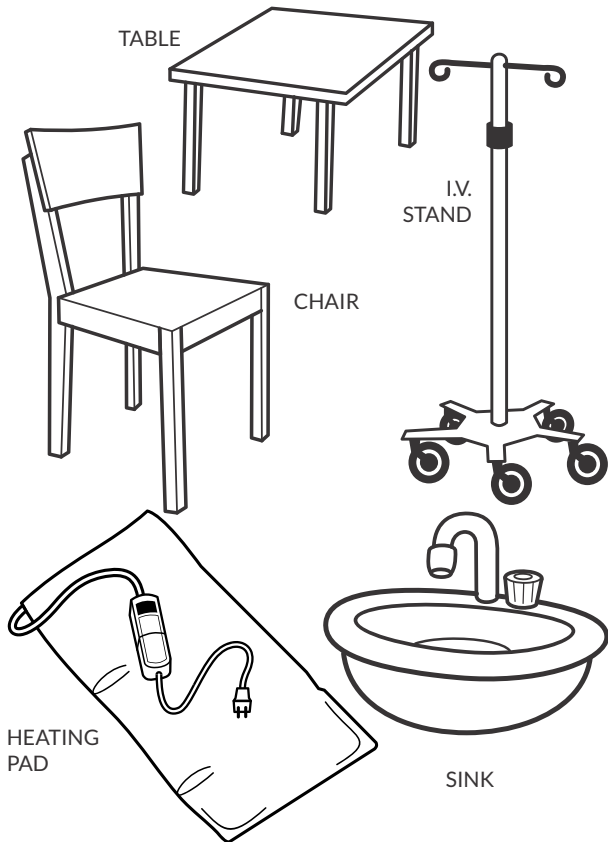
Difference between CAPD and APD

MODE	CAPD	APD
Time of exchanges	At scheduled interval throughout the day and customized to your daily activity	At night while asleep
Machine needed?	No	Yes
Time needed to set-up	20 – 30 minutes per exchange	30 minutes



AUTOMATED PERITONEAL DIALYSIS





How do I start with my PD treatment?

PD treatment should be done in a clean, dry and adequately-sized area. When doing an exchange, always remember the following:

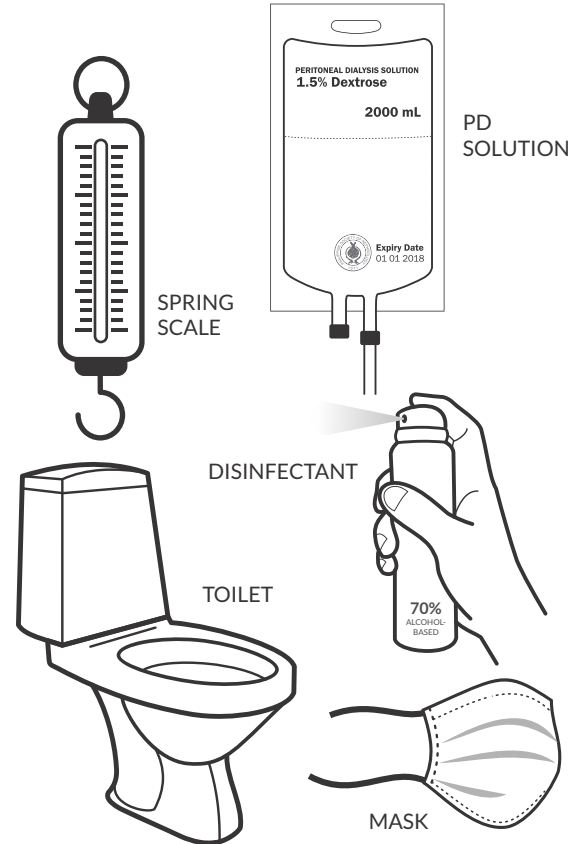
- **NO** passing through; keep the door closed
- **NO** open windows
- **TURN OFF** the electric fan or air conditioner

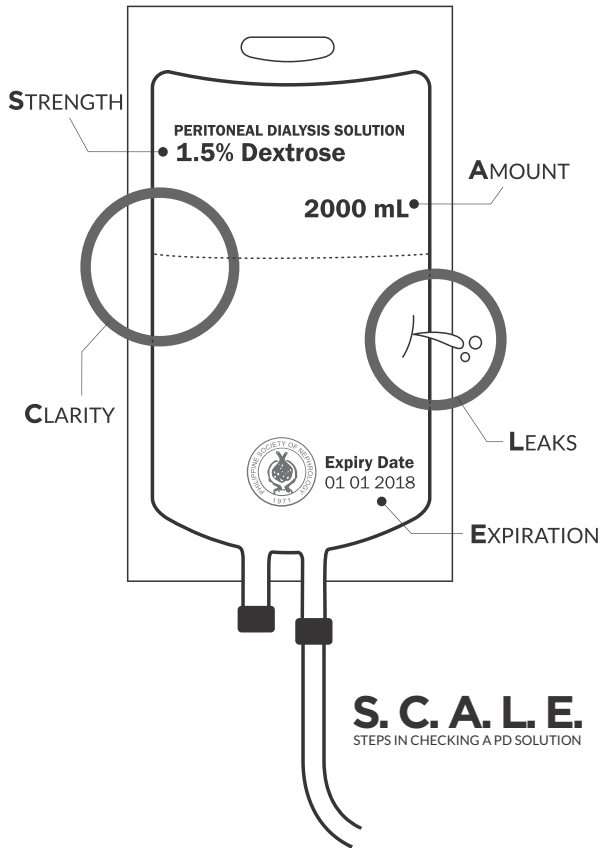
What are the materials that I need for PD?

- **Chair or bed:** where you will do your exchanges
- **Table:** where you can place your supplies used for exchanges; this should be clean
- **I.V. pole:** where your PD solutions are suspended for infusion by gravity
- **Heating pad or drop light:** use this for pre-heating the PD solution to your body's temperature prior to an exchange
- **Sink:** where you wash your hands before and after an exchange

What are the materials that I need for PD?

- **Spring scale:** measures the weight of PD solution before and after an exchange to determine the amount of solution drained (this is called ultrafiltration or UF)
- **Disinfectant:** keeps you and your work surfaces clean and avoid infection (70% alcohol-based hand rubs)
- **Masks:** worn by you and your caregiver to avoid the spread of infection
- **Dialysis solution:** strength and volume depends on the PD prescription
- **Clamps:** used for clamping the PD bag tubings during drain and fill
- **Sterile cap:** this closes the extension catheter after filling your abdomen with PD solution for dwell
- **Toilet:** where your dialysate is disposed and flushed
- **Cycler machine:** if you are on automated PD





What is a PD solution?

The PD solution is a sterile (germ-free) solution containing sugar called glucose and small amounts of minerals similar to those that are in your blood stream.

Before starting an exchange, check every bag of PD solution using the mnemonic **S. C. A. L. E.:**

STRENGTH: PD solution comes in different strengths of sugar (1.5%, 2.5%, 4.25%); make sure that you have the correct strength based on your prescription.

CLARITY: The print of a reading material can be seen clearly through the opposite side of the infusion bag to check for clarity.

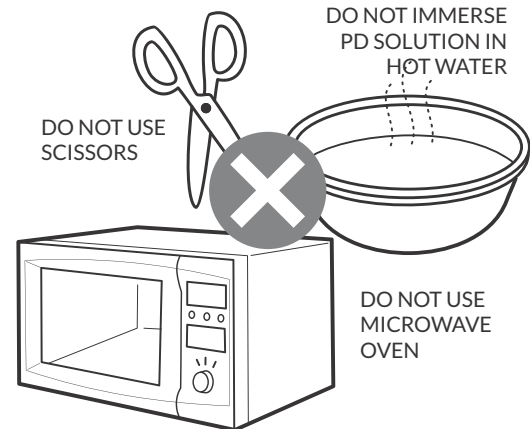
AMOUNT: The volume of PD solution varies and should be checked based on your PD prescription.

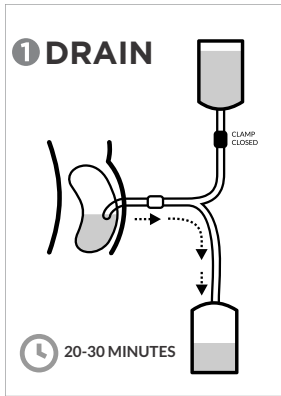
LEAKS: Press the PD bag against the table and check for any leaks. If with leaks, discard the solution and preheat a new one.

EXPIRATION: Check the expiration date of the PD solution. If expired, do not use it anymore.

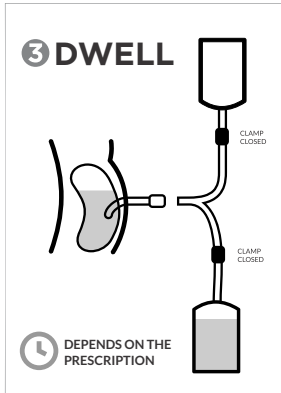
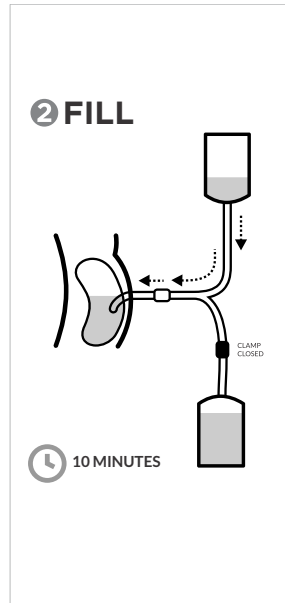
How do I prepare the solution before my PD?

- Always wash your hands before preparing the PD solution.
- Pre-heat the PD solution to your body's temperature using a drop light or heating pad. Do not immerse it in hot water or place in a microwave oven.
- Place the pre-heated PD solution on the work area and open by peeling off the bag; do not use scissors.
- Make sure that there are no kinks in the tubings.
- Hang the infusion bag on the spring scale that is attached to the IV pole, and place the drain bag in a clean wash basin positioned on the floor. Note the weight of the PD solution.





3 STEPS IN PERITONEAL DIALYSIS EXCHANGE



What is a PD exchange?

An exchange consists of 3 steps: **DRAIN**, **FILL** and **DWELL**. The number of exchanges performed per day is based on your nephrologist's prescription.

Step 1. DRAIN

- An exchange starts by draining the dialysate from the previous exchange. It takes around 20 - 30 minutes to complete the drain. The color of the dialysate should be clear yellow.

Step 2. FILL

- After completing the drain, flush the PD catheter with fresh PD solution for 5 seconds before filling your abdomen ("flush before fill").
- After flushing, fill your abdomen with fresh PD solution. It will take around 10 minutes to complete this step.

Step 3. DWELL

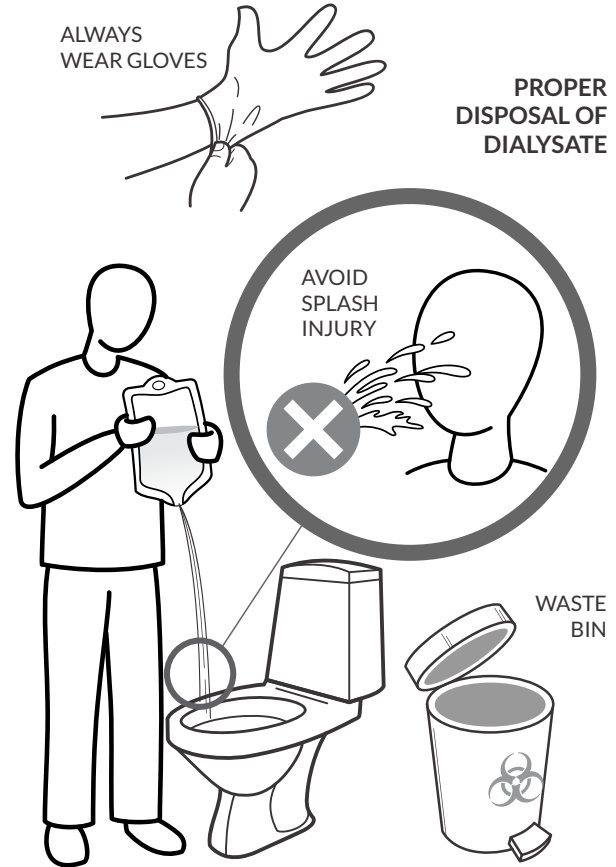
- The PD solution stays or dwells in your abdomen, where waste products, toxins and fluids will be removed from your bloodstream. The duration of dwell depends on your nephrologist's prescription.

What will I feel during my treatment?

- If you have just started on PD, it is normal to feel like you want to urinate or to move your bowels while filling up your abdomen with PD fluid.
- During dwell, you may also feel bloated. However, if you have difficulty of breathing or you cannot eat because of distended abdomen, you should inform your nephrologist.

How should I dispose the PD fluid after an exchange?

- Wear gloves at all times.
- Close all clamps before disconnecting.
- Disconnect the dialysate bag from the extension tubing.
- Drain the dialysate to the toilet bowl. Avoid splash injury.
- Flush the toilet twice.
- Dispose the empty bag in the infectious waste bin (yellow bag).



How do I monitor my treatment?

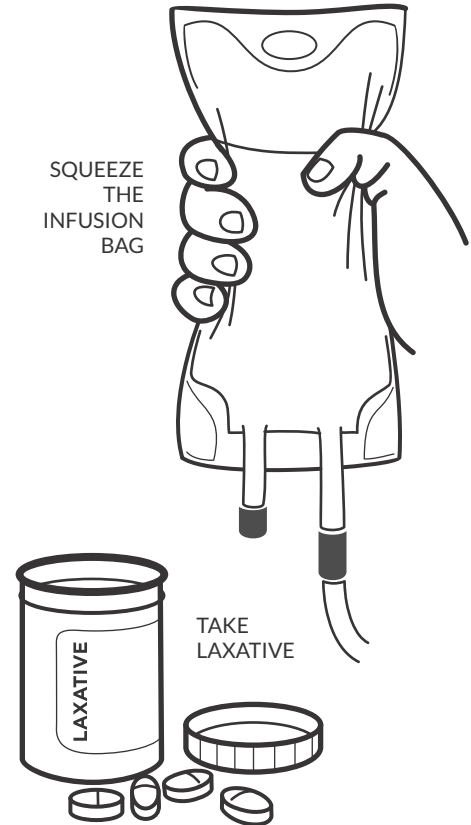


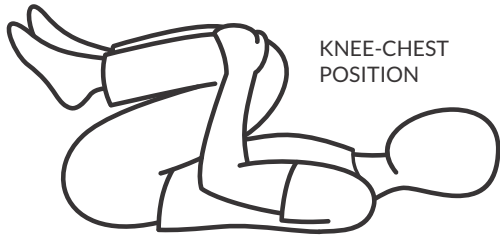
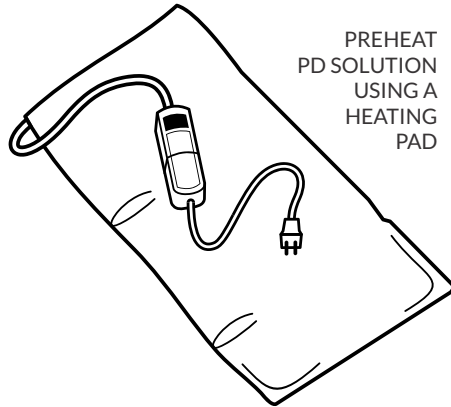
- Record daily treatment in your PD chart.
- Accurately record the volume drained per exchange.
- Take note and record the character of the dialysate: appearance of hazy or blood-stained dialysate, blood clots or fibrin.
- Monitor the duration of infusion and drain in minutes.
- Report to your nephrologist:
 - *If it takes longer to infuse your dialysate (more than 10 minutes)*
 - *If it takes longer to drain your dialysate (more than 30 minutes)*
 - *If there is decreasing volume drained or there is fluid retention*
 - *If there is a change in the character of the dialysate*
- Bring your **Treatment Record** during your regular check-up. This will help your nephrologist to review your performance and compliance.

What are the common problems during PD?

1. PD fluid does not flow in

- Place the infusion bag at a level way above your belly.
- Check for and release:
 - *clamped catheter*
 - *kinked catheter*
 - *tight dressing*
- Unclog the catheter by squeezing the infusion bag to create a positive pressure within the catheter to:
 - *dislodge the fibrin*
 - *move the blocking omentum or bowel*
- Take a laxative to relieve constipation and unblock the flow of the PD fluid inside your belly.
- If fibrin is noted in the PD fluid from previous exchange, add heparin to the PD fluid as prescribed by your nephrologist.
- If infusion of PD fluid takes more than 10 minutes, report this to your nephrologist.





What are the common problems during PD?

2. Pain during infusion

- Regulate the flow of PD fluid to slow infusion.
- Pre-heat the PD fluid to your body's temperature.

3. Pain during draining

- Position yourself in a knee-chest position.
- Report to your nephrologist for possible switching of treatment mode to Tidal PD.

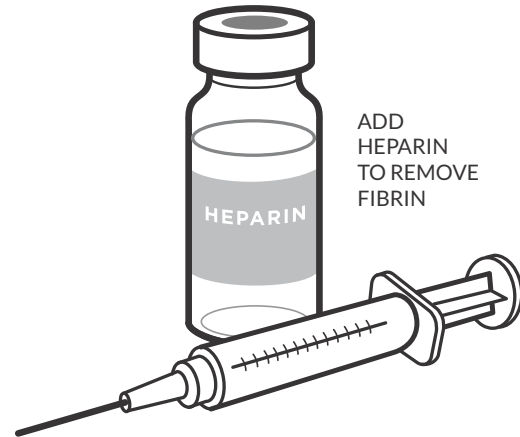
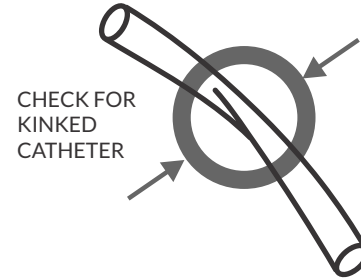
4. Bellyache

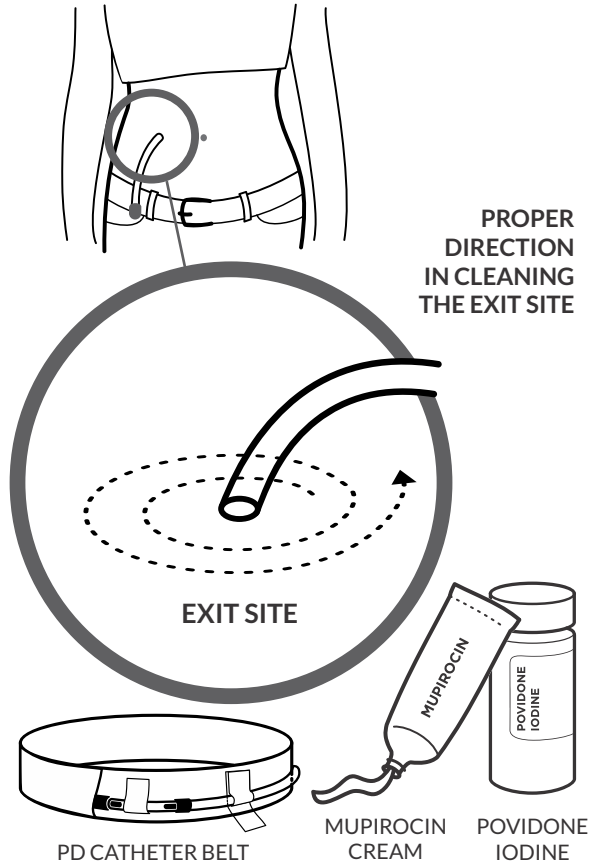
- Suspect for peritonitis and report to your nephrologist or PD Center.

What are the common problems during PD?

5. PD fluid drain is low

- Place the drain bag at the level way below your belly
- Check for and release:
 - *clamped catheter*
 - *kinked catheter*
 - *tight dressing*
- Check for wet dressing or skin swelling or PD fluid leaking around the catheter and report immediately to your nephrologist.
- Take a laxative to relieve constipation.
- If the PD fluid drain has fibrin, add heparin to the next PD fluids as prescribed by your nephrologist.
- If the PD fluid turns cloudy or is blood-stained, inform your PD Center or nephrologist
- If draining of PD fluid takes more than 30 minutes, report to your nephrologist





How should I take care of my PD catheter?

- Clean gently around the exit site of your PD catheter with **povidone iodine solution** and sterile gauze.
- Start cleaning the exit site in a circular motion, moving away from it.
- Rinse the area gently and thoroughly with saline solution and dry with sterile gauze.
- Apply mupirocin cream around the exit site, place a small piece of sterile gauze and secure it using a clear adhesive.
- Secure your PD catheter in place on your abdomen using a tape or a PD catheter belt.
- Avoid submerging your PD catheter in water such as in bath tubs, pools and any body of water.
- Regularly change the extension tubing every 6 months to prevent infection.

How can I keep myself clean?

- Hand hygiene:
 - *Using an alcohol-based hand rub (70%), pump enough solution to your dry palms and rub for 15 seconds.*
 - *Using pump soap and water, rub your hands vigorously, lather for 15 seconds, rinse well and dry them with a clean towel.*
- Bathe daily.
- Keep your work dialysis area always clean.
- Dispose all your used materials properly.
- Keep pets and unnecessary people away from your dialysis area.
- To avoid PD catheter contamination:
 - *Do not touch the tip of the extension tubing.*
 - *Do not detach the connection between the adapter and the extension tubing.*
 - *Clamp and stop your PD if there is a leak along the PD catheter or extension tubing.*

PROPER HAND HYGIENE



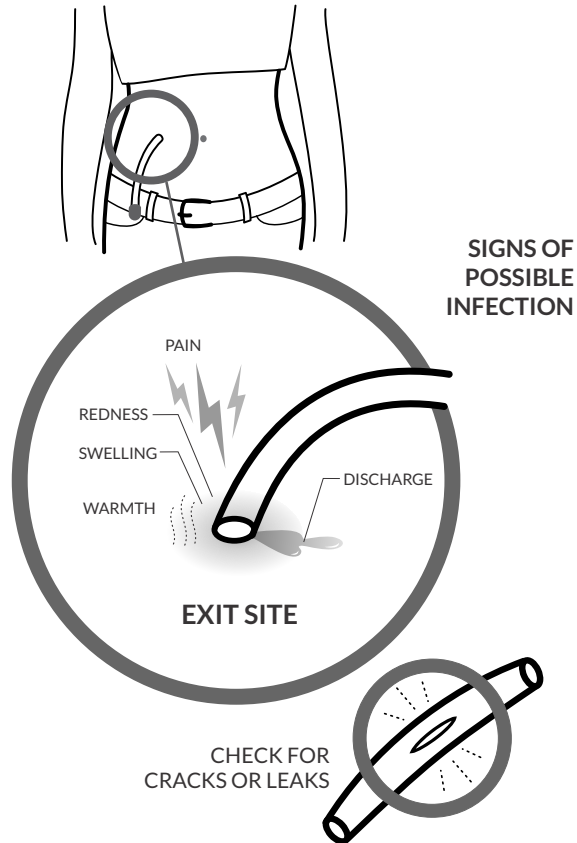
KEEP YOUR PD AREA ALWAYS CLEAN



NO PETS
ALLOWED



NO PASSING
THROUGH



How can I check for possible infection?

- Check the skin around your PD catheter for:
 - *redness*
 - *warmth*
 - *pain*
 - *swelling*
 - *discharge*
- Check the PD catheter for cracks or leaks.
- Check the PD fluid if it turns cloudy.
- Note for:
 - *nausea or vomiting*
 - *abdominal pain*
 - *diarrhea*
 - *fever*
- Report immediately to your PD nurse or nephrologist for any of the above signs and symptoms.

What can I eat?

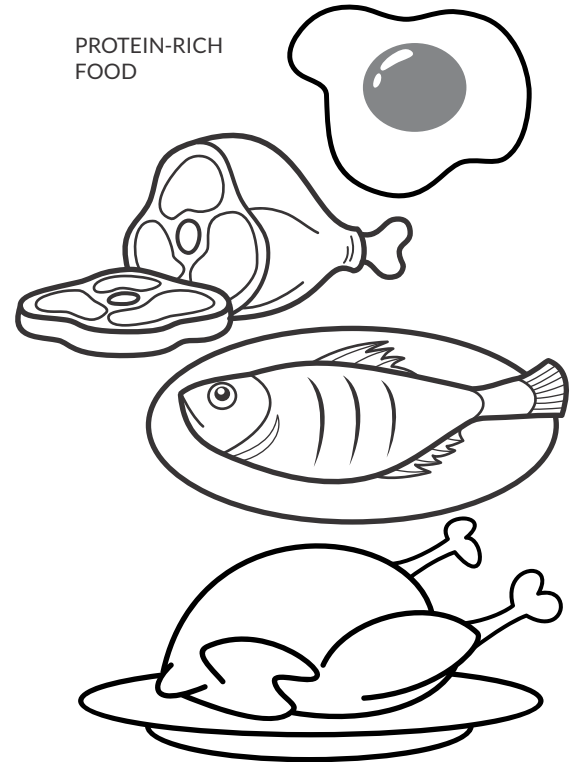
Once you undergo PD, you need to follow a special diet because your kidneys are unable to regulate waste products and excess fluids efficiently. You need to consult a renal dietitian to get a proper balance of the following:

1. Protein

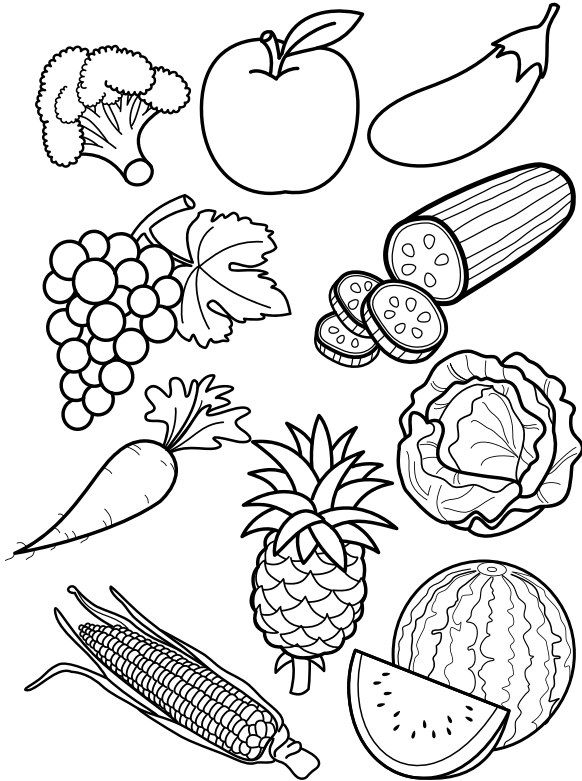
- Before you start PD, your nephrologist advised you to lower your protein intake to reduce the formation and accumulation of toxins.
- However, once you start PD, you may lose protein during your treatment which may lead to protein energy malnutrition.
- To avoid this, you need to replace your losses by eating additional amount of high value protein from animal sources.

2. Energy

- Energy may come from the food that you eat and from the glucose in your PD solution.
- If you have poor oral intake, you can take commercially available oral nutritional supplements specifically made for dialysis patients which may be in liquid or powder form to meet your daily energy needs.



LOW-POTASSIUM
FRUITS & VEGETABLES



What can I eat?

3. Potassium

- Both high and low potassium levels have dangerous effects to your heart leading to life-threatening consequences such as irregular rhythm (felt as palpitations) and even cardiac arrest.
- Avoid potassium-rich foods such as dried fruits, beans, peas, nuts and salt substitutes.

4. Fluid and Sodium

- Excess intake of salt can cause elevated blood pressure and fluid accumulation.
- If you are still producing urine, you can replace your fluid by following the amount of your total daily urine and ultrafiltration volume. However, if you have no more urine output, you should limit your fluid intake to about 800 to 1000 mL per day.
- Limit salt intake to less than 2000 mg/day, which is a teaspoon of table salt per day. Instead of adding salt, you can season your food with spices to enhance the taste.
- Avoid salty food, fast food, canned and processed food.
- Make it a habit to read food labels to check for their sodium content.

What can I eat?

5. Phosphorus

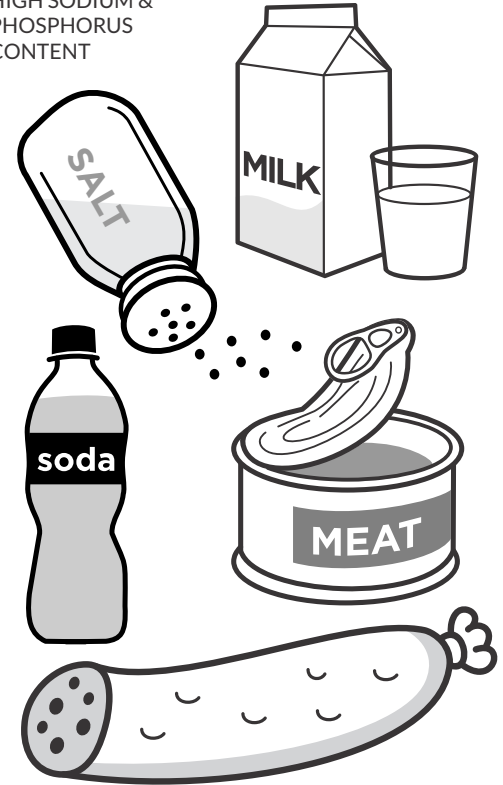
- Elevated levels of phosphorus make your bones weak and your blood vessels and heart stiff.
- Avoid high phosphorus-containing foods such as dark colas, cocoa, dairy products, canned, preserved and processed food.

6. Vitamins and Minerals

- Some water soluble nutrients are also removed during PD, like vitamins B, C, D, calcium and iron. These can be replaced by supplements that your nephrologist will prescribe to you.
- It is not safe to take herbal supplements because they are not made for patients with kidney disease. They may also have high potassium content.

When in doubt, always discuss and review your diet plan with a renal dietitian.

HIGH SODIUM &
PHOSPHORUS
CONTENT



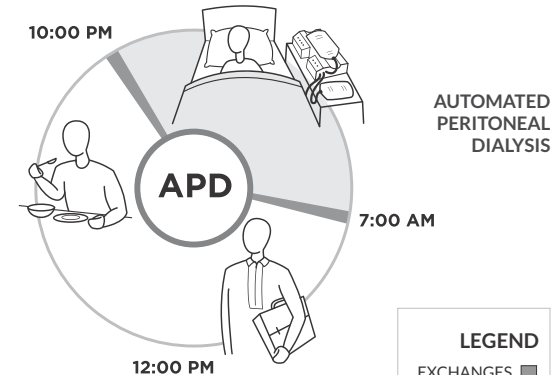
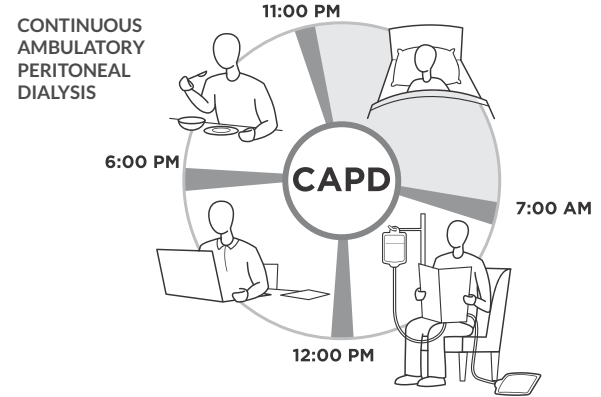


How can I have a successful PD?

- Accept PD as part of your daily life.
- Keep your treatment area clean.
- Keep yourself always clean.
- Keep the skin around your PD catheter clean and dry. Report to your nephrologist if it appears red and irritated, or if there is fluid and pus draining.
- Always wash your hands thoroughly when performing your exchanges.
- Take good care of your catheter. Do not use sharp objects to remove dressings.
- Strictly follow your PD prescription. Avoid shortcuts that may result to undertreatment and infection.
- Regularly follow-up with your nephrologist at least once or twice a month.

Living Well with PD

- PD is a home treatment. You only need to go to your dialysis center once or twice a month for routine check-ups.
- It is simple and patient-friendly, allowing you to schedule your exchanges around your daily activities.
- You can continue to go to work or school and you have more time to go out for your activities and hobbies.
- You can travel and still continue your treatment by arranging with your supplier to deliver your PD bags and equipment to your travel destination.
- Because your toxins are removed daily by PD, you have greater options on food and drinks. Discuss with your renal dietitian your specific nutritional needs.
- There are no needle sticks, which makes it a good choice for children and those who do not like needles.
- You have more savings with PD because you have lesser maintenance medicines including erythropoietin. You can also save on your transportation cost due to less visits to your dialysis center and your PD supplies are cheaper.
- Though there is more freedom with PD, it does not mean that you are on your own. Do not worry because your nephrologist and PD nurse will support you for any problems you may encounter in your treatment.



ANG MANUAL NG
**PERITONEAL
DIALYSIS**

GABAY PARA SA MGA PASYENTE



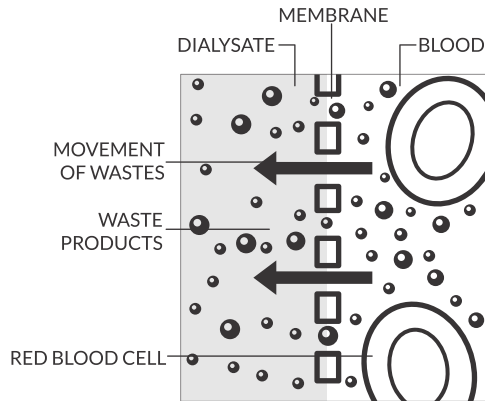
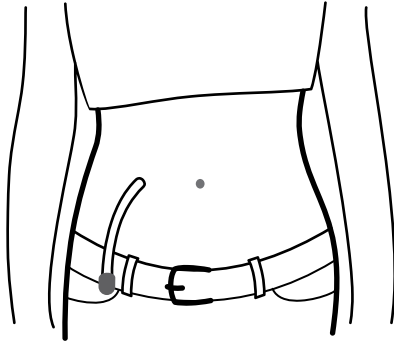
PHILIPPINE SOCIETY OF NEPHROLOGY, INC.

2017

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Ano ang *peritoneal dialysis*?



- Ang *peritoneal dialysis* (PD) ay isang paraan ng pagtanggali ng mga *toxin* o lason at sobrang tubig sa iyong katawan na hindi kailangang ilabas ang iyong dugo.
- Kapag nagpi-PD, pinapadaloy ang *dialysis solution* patungo sa iyong tiyan sa pamamagitan ng isang tubo (*PD catheter*). Pinapanatili ang *dialysis solution* sa loob ng tiyan at ang tagal ng pagkababad nito ay ayon sa inireseta ng iyong *nephrologist*.
- Habang nasa loob ng tiyan, ang mga dumi at lason na nasa dugo ay lumalabas mula sa mga maliliit na ugat (*capillaries*) na nasa *peritoneum* at napupunta sa *PD solution*. Pagkatapos maibabad nang sapat na oras, pinapadaloy palabas ang *PD fluid (dialysate)* kasama ang mga natanggali nitong dumi, lason at sobrang tubig.

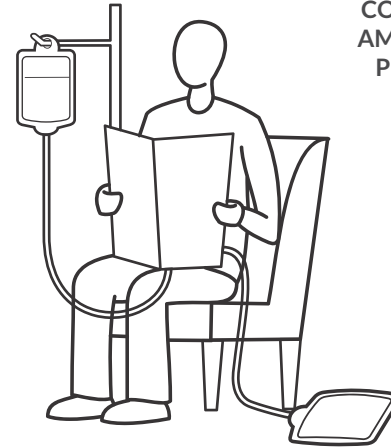
Ano ang iba't ibang uri ng PD?

1. *Continuous Ambulatory Peritoneal Dialysis (CAPD)*

- Ang CAPD ay ang *manual* na klase ng PD. Sa pamamagitan ng *gravity*, pinadadaloy ang PD *solution* papasok at palabas ng tiyan nang hindi kailangang gumamit ng makina.
- Inuulit ang mga *exchange* ng 3 hanggang 5 beses sa buong maghapon depende sa inireseta sa iyo.
- Karaniwan, ang bawat *exchange* ay ginagawa at natatapos sa loob ng halos 30 minuto lamang. Pagkatapos gawin ang *exchange*, pwede mo pa ring ituloy ang iyong trabaho sa pagitan ng mga *exchange*.

2. *Automated Peritoneal Dialysis (APD)*

- Ang APD naman ay gumagamit ng makina na tinatawag na *cycler* na siyang nagpapasok at naglalabas ng PD *solution* sa tiyan matapos ikabit ito sa iyong PD *catheter*. Ito ay karaniwang ginagawa sa gabi habang ikaw ay natutulog.
- Pagkatapos ng APD sa umaga, tinatanggal ang *cycler* mula sa iyong PD *catheter* at malaya kang gumalaw sa buong maghapon at magtrabaho.
- Depende sa iyong reseta, pwedeng may nakababad na PD *solution* sa loob ng iyong tiyan, o pwede ring gumawa ng isa o dalawa pang *manual exchange* sa buong maghapon, hanggang sa susunod na APD mo sa gabi.



CONTINUOUS
AMBULATORY
PERITONEAL
DIALYSIS

AUTOMATED
PERITONEAL
DIALYSIS





CAPD

CONTINUOUS
AMBULATORY
PERITONEAL
DIALYSIS

APD

AUTOMATED
PERITONEAL
DIALYSIS

Ano ang pagkakaiba ng CAPD at APD?

KATANGIAN	CAPD	APD
Schedule ng exchange	Nakaayos ang <i>schedule</i> ng paggawa ng <i>exchange</i> ayon sa iyong gawain, trabaho o pagpasok sa eskwelahan	Sa gabi habang natutulog
Kailangan ng makina	Hindi	Oo
Tagal ng pag-setup	20 - 30 minuto bawat <i>exchange</i>	30 minuto

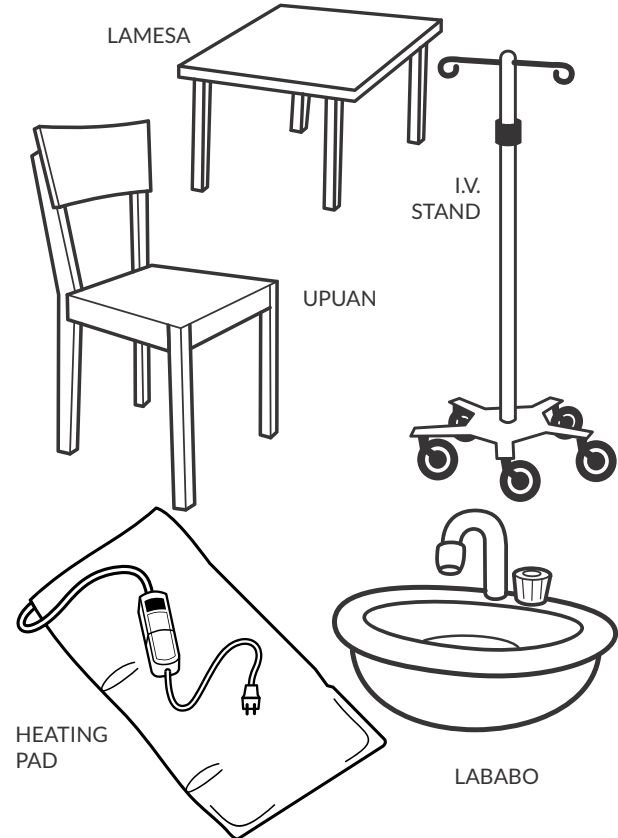
Paano ako magsisimulang mag-PD?

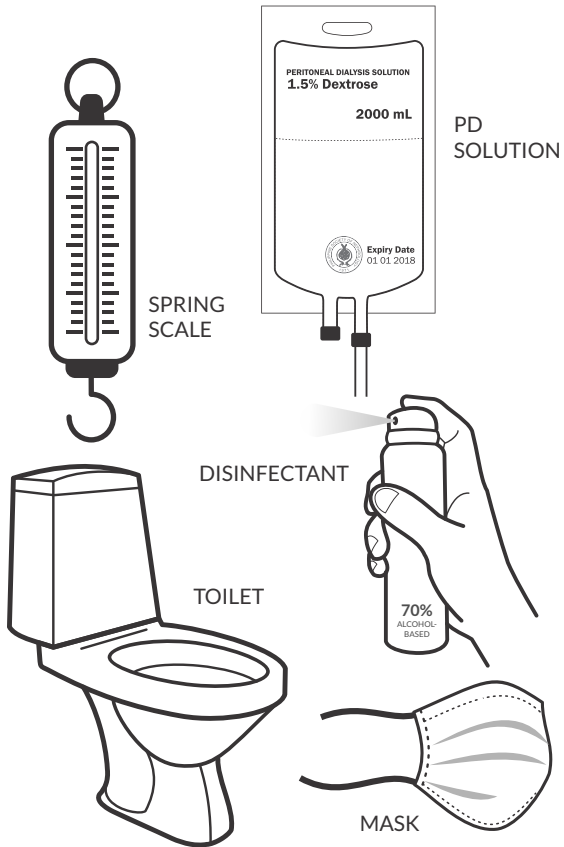
Ang PD ay kailangang gawin sa isang kuwarto o lugar na malinis, tuyo at may tamang laki. Sa tuwing nagsasagawa ng *exchange*, laging tandaan ang mga sumusunod:

- Walang pwedeng dumaan sa lugar. Laging isara ang pinto.
- Isara ang lahat ng mga bintana.
- Patayin ang bentilador o *aircon*.

Ano ang mga kailangan ko para sa PD?

- **Upuan o higaan:** dito mo ginagawa ang *exchange*
- **Lamesa:** dito mo nilalagay ang mga gagamitin sa *exchange*; kailangan itong malinis
- **I.V. pole o sabitan:** dito mo isasabit ang PD *solution* para mas madali itong dumaloy papasok sa iyong tiyan sa pamamagitan ng *gravity*
- **Heating pad o drop light:** ginagamit ito para mapainit ang PD *solution* sa temperaturang katulad ng sa iyong katawan bago mo ito ipasok sa loob ng iyong tiyan
- **Lababo:** lugar kung saan ka maghuhugas ng iyong kamay bago at pagkatapos mong gawin ang *exchange*





Ano ang mga kailangan ko para sa PD?

- **Spring scale:** tinitimbang nito ang PD solution bago at matapos ang isang exchange para malaman kung gaano kadami ang solution o dialysate na nailabas (tinatawag itong ultrafiltration o UF)
- **Disinfectant:** panglinis ito ng iyong kamay at ng lamesa para maiwasan ang impeksyon (70% alcohol-based na disinfectant)
- **Mask:** kailangan mo itong isuot at ng kasama mo sa paggawa ng exchange para maiwasan ang pagkalat ng impeksyon
- **PD solution:** ang klase (concentration/strength) at dami nito ay ayon sa inireseta sa iyo
- **Clamp:** ginagamit na pang-ipit ng tubong nakakabit sa PD solution bag para maipasok at mailabas ang PD solution sa tiyan
- **Sterile cap:** ito ang pantakip sa extension catheter matapos maipasok sa iyong tiyan ang PD solution
- **Toilet:** lugar kung saan dapat i-flush ang dialysate o ang solution na lumabas mula sa iyong tiyan matapos itong maibabad
- **Cycler machine:** makinang ikinakabit sa PD catheter na gumagawa ng exchange kung ikaw ay naka APD

Ano ang PD solution?

Ang PD solution ay isang *sterile* (malinis at walang mikrobyo) na solusyon na naglalaman ng asukal na tinatawag na *glucose* at ilang mga mineral na matatagpuan sa iyong dugo.

Bago magsimula ng isang *exchange*, suriin nang mabuti ang gagamiting PD solution ayon sa pamantayang **S. C. A. L. E.**:

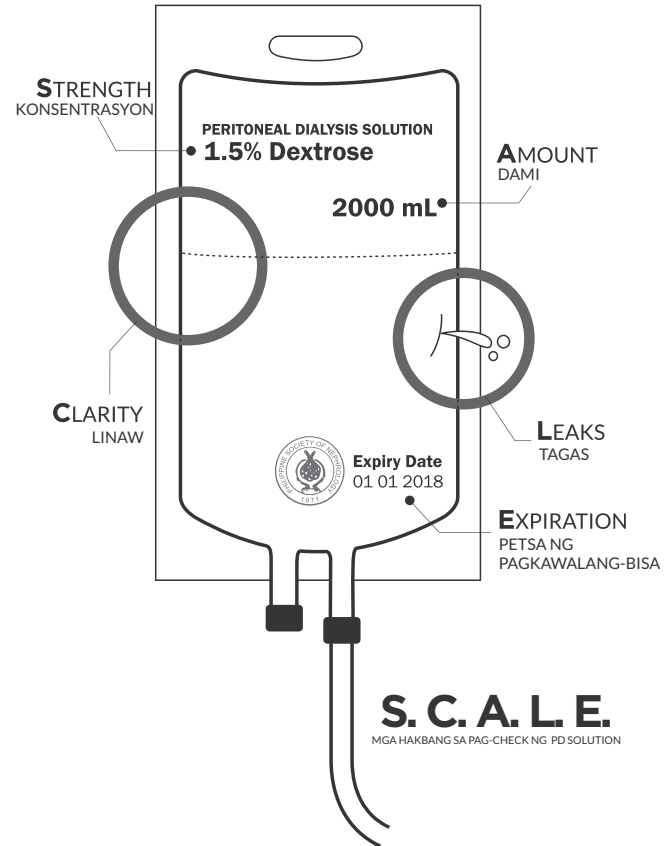
STRENGTH o Konsentrasyon: Ang PD solution ay may iba't ibang preparasyon, ayon sa konsentrasyon ng asukal (1.5%, 2.5% o 2.3%, 4.25%); siguraduhing tama ang konsentrasyon na gagamitin ayon sa inireseta sa iyo.

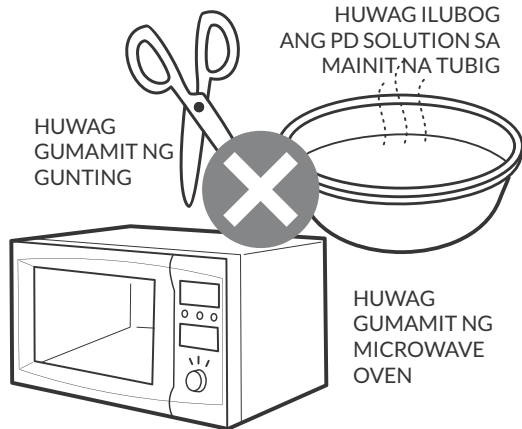
CLARITY o Linaw: Maglagay ng anumang babasahin tulad ng dyaryo o magasin sa likod ng PD solution bag. Malinaw ang PD solution kung maayos mong nabasa ang dyaryo o magasin.

AMOUNT o Dami: Ang dami ng PD solution (*milliliter* o *liter*) ay ayon sa iyong reseta.

LEAKS o Tagas: Diinan ang PD bag sa ibabaw ng lamesa at tingnan kung tatagas ang laman nito. Kung may tagas, itapon ito at magpainit ng panibagong PD solution.

EXPIRATION o Petsa ng Pagkawalang-bisa: Tingnan kung kailan ang petsa ng pagkawalang-bisa (*expiration date*) ng PD solution. Kung *expired* na, itapon na ito at huwag mo nang gamitin pa.





Paano ko ihahanda ang PD solution?

- Maghugas mabuti ng kamay bago ihanda ang PD solution.
- Initin ang PD solution ayon sa temperatura ng iyong katawan gamit ang *drop light* o *heating pad*. Huwag mo itong ilulubog sa mainit na tubig o ilalagay sa *microwave oven*.
- Matapos painitin, ilagay ang PD solution sa lamesa at ilabas ito mula sa balot na *plastic*. Huwag gumamit ng gunting o anumang matalas o matulis na bagay.
- Siguraduhin na walang nakapilipit na tubo.
- Isabit ang *bag* ng PD solution sa *spring scale* na nakakabit sa IV pole, at ilagay ang *drain bag* sa isang malinis na palanggana na nasa sahih. Ilista ang timbang ng PD solution.

Ano ang PD exchange?

Ang isang *exchange* ay binubuo ng 3 hakbang: **DRAIN**, **FILL** at **DWELL**. Ang bilang ng mga *exchange* na gagawin bawat araw ay ayon sa iyong reseta.

1. DRAIN o Pagpapalabas

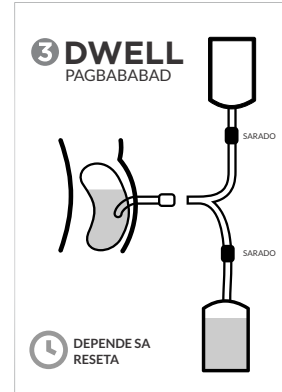
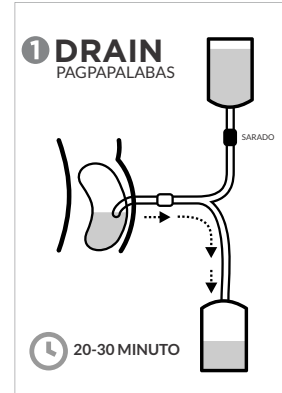
- Nagsisimula ang isang *exchange* sa pagpapadaloy palabas ng *dialysate* mula sa naunang *exchange*. Umaabot ng 20-30 minuto para mailabas ito mula sa tiyan. Ang *dialysate* ay dapat madilaw ang kulay at malinaw.

2. FILL o Pagpupuno

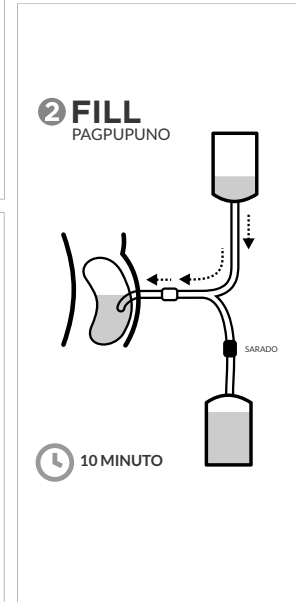
- Matapos mailabas ang *dialysate* at bago magpasok ng bagong PD *solution* sa tiyan, hugasan muna ang loob ng PD *catheter* sa pamamagitan ng pagpapadaloy ng bagong PD *solution* sa loob ng 5 segundo (“*flush before fill*”).
- Matapos mahugasan ang tubo, padaluyin ang bagong PD *solution* sa loob ng tiyan. Tumatagal ng mga 10 minuto lamang para maipasok ang PD *solution* sa loob ng tiyan.

3. DWELL o Pagbababad

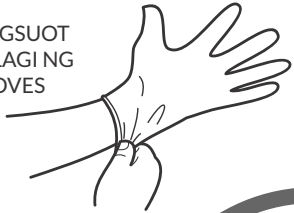
- Ang PD *solution* ay hinahayaang manatili sa loob ng tiyan. Habang ito ay nakababad, nililinis at tinatanggal nito ang mga lason, sobrang tubig at iba pang dumi mula sa iyong dugo. Ang tagal ang pagbababad ay ayon sa iyong reseta.



3 HAKBANG SA PERITONEAL DIALYSIS EXCHANGE



MAGSUOT
PALAGI NG
GLOVES



TAMANG
PAGTATAPON NG
DIALYSATE

IWASANG
MATILAMSIKAN
NG DIALYSATE



BASURAHAN



Ano ang mararamdaman ko habang naka-PD?

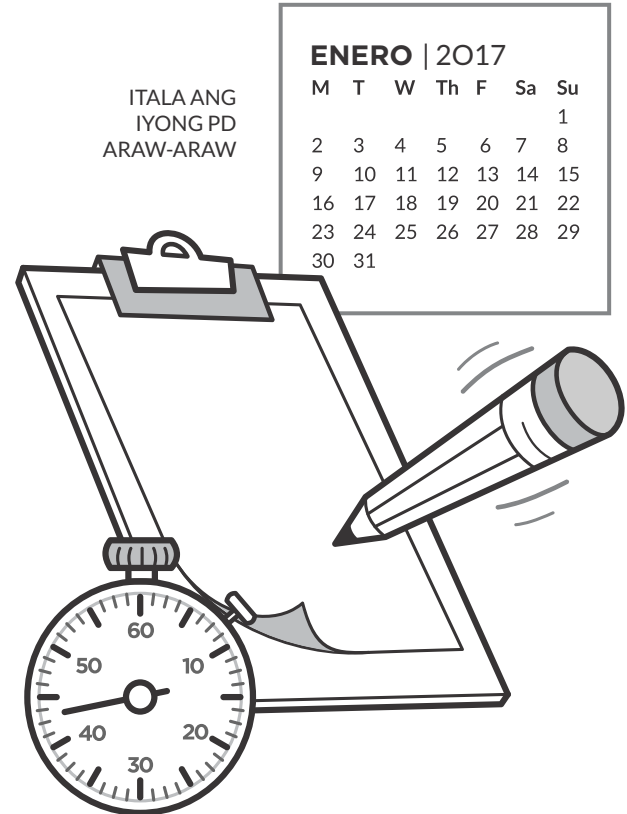
- Kung kasisimula mo pa lamang mag-PD, normal lang na makaramdam na para kang maihi o madudumi habang dumadaloy ang PD *fluid* sa loob ng iyong tiyan.
- Habang nakababad ang PD *fluid* sa iyong tiyan, pwede mong maramdaman na para kang busog. Pero, kung **nahihirapan kang huminga** o **hindi ka makakain** dahil dito, dapat mo itong *i-report* agad sa iyong *nephrologist*.

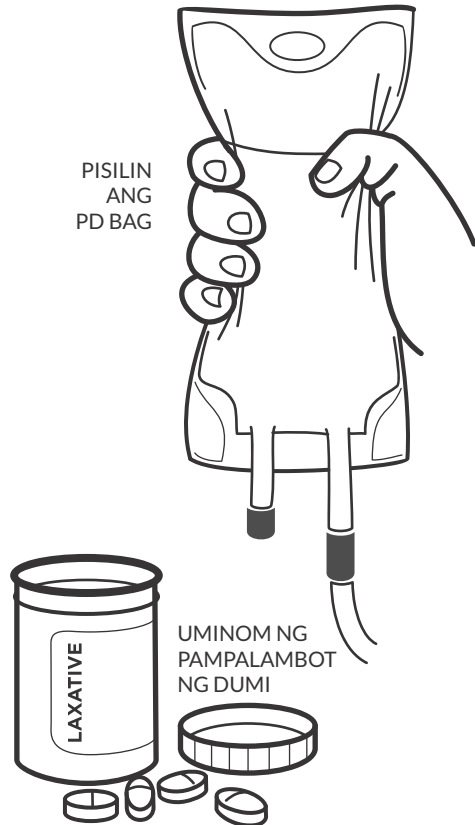
Paano ko dapat itapon ang PD *solution* pagkatapos ng *exchange*?

- Magsuot ng *gloves* palagi.
- Siguraduhing naka-*clamp* o nakaipit ang mga tubo bago tanggalin mula sa *extension tubing*.
- Tanggalin ang *dialysate bag* mula sa *extension tubing*.
- Ibuhos ang *dialysate* sa inidoro. Iwasang matalsikan ka ng *dialysate* lalo na sa mata at bibig.
- I-*flush* o buhusan ng tubig ang inidoro nang dalawang beses.
- Itapon ang nagamit na PD *bag* sa basurahan na may dilaw or *yellow bag* (kung saan itinatapon ang mga basura na may nakakahawang bagay).

Paano ko imo-monitor ang aking PD?

- Araw-araw mong itatala sa PD *chart* ang mga nagawang *exchange*.
- Isulat ang tamang dami ng *dialysate* na nailabas sa bawat *exchange*.
- Isulat din ang itsura ng *dialysate* sa bawat *exchange*: malabo ba ito, may bahid ng dugo, may namuong dugo o may parang hibla ng sinulid o *fibrin*?
- Isulat din kung gaano katagal (minuto) ang pagpasok at paglabas sa tiyan ng PD *fluid*.
- Ipagbigay-alam sa iyong *nephrologist*:
 - Kung mas matagal ang pagpasok ng PD *solution* sa iyong tiyan (higit sa 10 minuto)
 - Kung mas matagal mailabas ang *dialysate* (higit sa 30 minuto)
 - Kung mas kaunti ang dami ng *dialysate* na lumabas o may PD *fluid* na hindi lumalabas
 - Kung may pagbabago sa itsura ng *dialysate*
- Dalhin ang iyong **Treatment Record** sa iyong regular na *check-up*. Makakatulong ito para matiyak ng iyong *nephrologist* kung sapat at tama ang ginagawa mong PD.





Ano ang mga karaniwang problema sa PD?

1. Hindi dumadaloy ang PD fluid sa loob ng tiyan

- Isabit ang PD *bag* nang mas mataas kaysa sa iyong tiyan.
- Tingnan at luwagan ang:
 - naka-clamp o nakaipit na *catheter*
 - nakapilipit na *catheter*
 - mahigpit na pagkakabalot ng gasa sa *catheter*
- Tanggalaan ng bara ang *catheter* sa pamamagitan ng pagpisil sa PD *bag* para magkaroon ng positibong presyon sa *catheter* at:
 - matanggal ang nakabarang *fibrin*
 - matanggal ang bumabarang *omentum* o bituka
- Uminom ng *laxative* (pampadumi) para di makasagabal sa pagdaloy ng PD *fluid* sa loob ng tiyan.
- Kung may nakitang *fibrin* sa *dialysate*, lagyan ng *heparin* ang mga susunod na PD *fluid* na gagamitin ayon sa reseta ng iyong *nephrologist*.
- Kung ang pagpasok ng PD *fluid* ay tumagal ng higit sa 10 minuto, ipalam ito sa iyong *nephrologist*.

Ano ang mga karaniwang problema sa PD?

2. Masakit kapag dumadaloy ang PD fluid sa tiyan

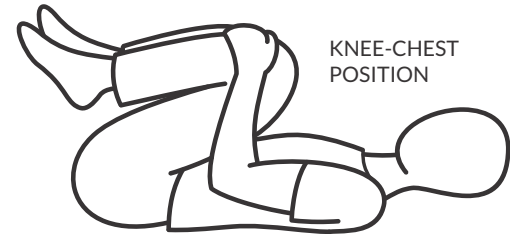
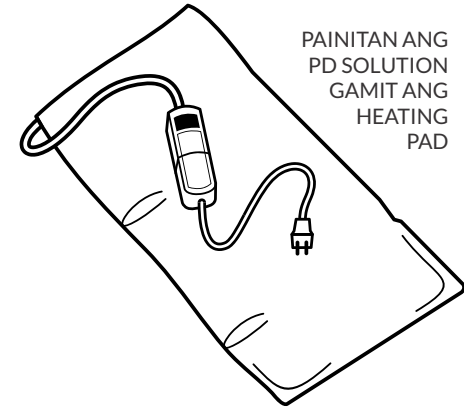
- Bagalan ang pagpasok ng PD *fluid* sa iyong tiyan.
- Initin ang PD *fluid* ayon sa temperatura ng iyong katawan.

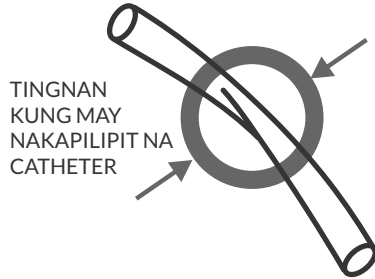
3. Masakit kapag lumalabas ang dialysate

- Ibaluktot ang binti at idikit ang iyong tuhod sa dibdib habang inilalabas ang *dialysate* mula sa tiyan (*knee-chest position* ang tawag dito)
- I-report ito sa iyong *nephrologist* para sa posibilidad na pagbago ng iyong gamutan sa **Tidal PD**.

4. Pananakit ng tiyan

- Maaaring sintomas ito ng *peritonitis* (impeksyon ng *peritoneal membrane*) at kailangan mo itong i-report agad sa iyong *nephrologist* o PD Center.





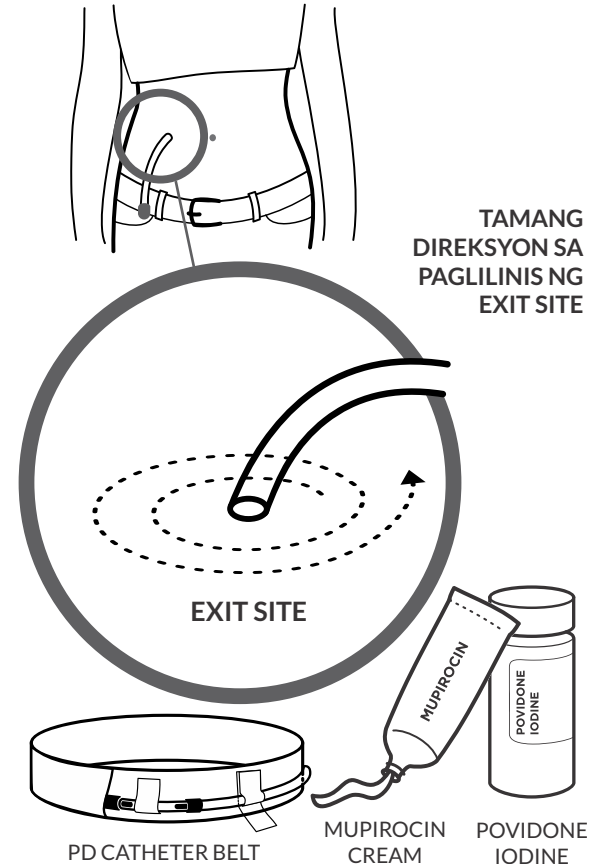
Ano ang mga karaniwang problema sa PD?

5. Kaunti ang lumalabas na dialysate

- Ilagay ang *drain bag* sa lugar na mas mababa kaysa sa iyong tiyan.
- Tingnan at luwagan ang:
 - naka-clamp o nakaipit na *catheter*
 - nakapilipit na *catheter*
 - mahigpit na pagkakabalot ng gasa sa *catheter*
- Tingnan kung basa ang gasang nakabalot sa *catheter*, may pamamaga ang balat sa paligid ng PD *catheter* o may PD *fluid* na tumatagas sa gilid ng *catheter* at i-report agad ito sa iyong *nephrologist*.
- Uminom ng pampurga para lumambot ang dumi at maiwasang magtibi o *constipation*.
- Kung ang *dialysate* mula sa nakaraang *exchange* ay may *fibrin*, lagyan ng *heparin* ang mga susunod na PD *fluid* ayon sa reseta ng iyong *nephrologist*.
- Kung malabo ang *dialysate* o kaya'y may bahid ng dugo, i-report ito sa iyong PD Center o *nephrologist*.
- Kung bumabagal ang paglabas ng *dialysate* mula sa tiyan nang mahigit sa 30 minuto, i-report ito sa iyong *nephrologist*.

Paano ko dapat alagaan ang aking PD *catheter*?

- Dahan-dahang linisin ang *exit site* (ito ang balat sa paligid ng iyong PD *catheter*) gamit ang *povidone iodine* at *sterile* na gasa.
- Linisin ang *exit site* mula sa pinakapuno nito, sa direksyong paikot at papalabas mula dito.
- Banlawang mabuti ang *exit site* ng *saline solution* at patuyuin gamit ang *sterile* na gasa.
- Pahiran ng *mupirocin cream* ang paligid ng *exit site* at takpan ng maliit na *sterile* na gasa at dikitan ng malinaw na plaster o *tape*. Iwasang malagyan ng *mupirocin cream* ang PD *catheter*.
- Para hindi nakalaylay at maiwasang mahatak ang PD *catheter*, idikit ito sa tiyan gamit ang *tape* o PD *catheter belt*.
- Iwasang ilubog ang iyong PD *catheter* sa tubig tulad ng *bath tub*, *swimming pool*, ilog o dagat.
- Palitan ang *extension tubing* kada anim na buwan para maiwasan ang impeksyon.



TAMANG PARAAN SA
PAGLILINIS NG
MGA KAMAY



PANATILIHING MALINIS
ANG LUGAR PARA SA PD



BAWAL ANG
ALAGANG HAYOP



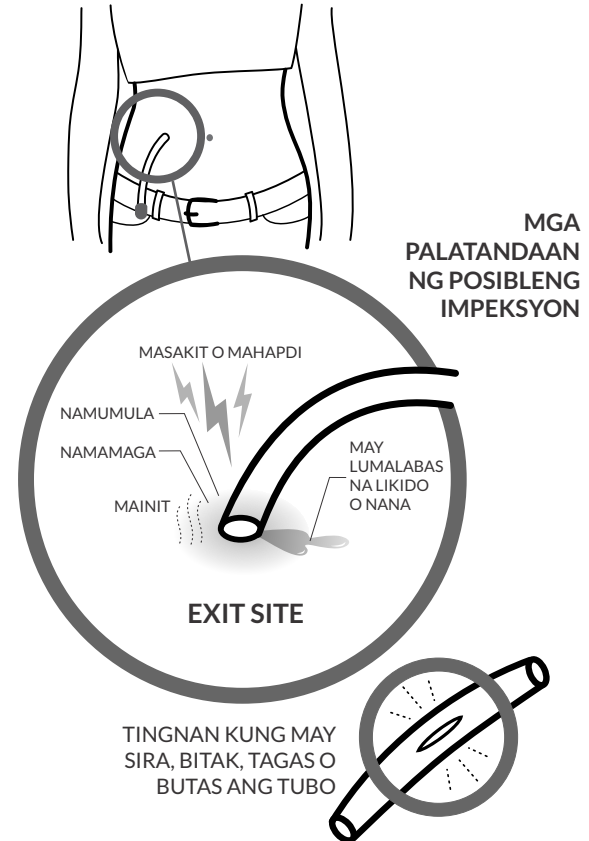
BAWAL DUMAAN
ANG IBANG TAO

Paano mapananatiling malinis ang aking katawan?

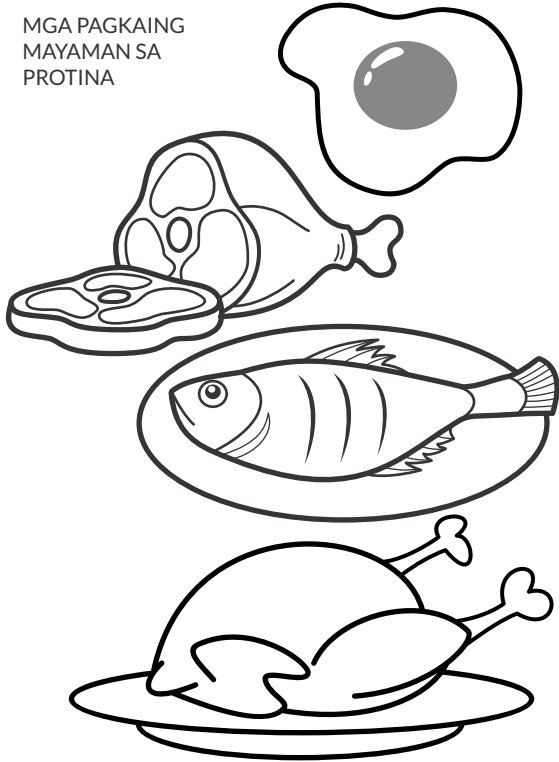
- Sa paglilinis ng kamay:
 - Maglagay ng sapat na dami ng *alcohol* (70%) sa iyong tuyong palad at kuskusin ang iyong mga kamay ng 15 segundo.
 - Gumamit ng *liquid soap* at kuskusin nang mabuti ang iyong mga kamay. Pabulain sa loob ng 15 segundo, banlawang mabuti at patuyuin gamit ang isang malinis na tuwalya.
- Maligo araw-araw.
- Panatiliing malinis ang lugar kung saan mo ginagawa ang iyong PD.
- Itapon ang lahat ng ginamit mong materyales sa tamang basurahan.
- Kapag gumagawa ng *exchange*, iwasang makapasok ang mga alagang hayop at ibang tao sa loob ng kuwarto.
- Para maiwasang marumi ang iyong PD *catheter* at magdulot ng impeksyon:
 - Huwag hawakan ang dulo ng *extension tubing*.
 - Huwag tanggalin ang *adapter* mula sa *extension tubing*.
 - Lagyan ng *clamp* at itigil ang iyong PD kung may tumatagas sa iyong PD *catheter* o *extension tubing*.

Paano malalaman kung ako ay may impeksyon?

- Tingnan ang balat sa paligid ng iyong PD *catheter* at alamin kung:
 - namumula
 - mainit
 - masakit o mahapdi
 - namamaga
 - may lumalabas na likido (tubig) o nana
- Suriin ang PD *catheter* kung may sira, bitak o tagas at butas.
- Tingnan kung ang PD *solution* ay malabo.
- Obserbahan kung may:
 - pagkahilo o pagsusuka
 - pagsakit ng tiyan
 - pagtatae (*diarrhea*)
 - lagnat
- I-report agad sa iyong PD *nurse* o *nephrologist* kung meron ka ng alinman sa mga sintomas na nabanggit.



MGA PAGKAINING
MAYAMAN SA
PROTINA



Ano ang pwede kong kainin?

Sa oras na magsimula kang mag-PD, kailangan mong sundin ang isang espesyal na listahan ng mga pagkain dahil hindi na kaya ng iyong *kidney* na mailabas ang sobrang tubig at toxin sa iyong dugo na pwedeng makalason sa iyong katawan. Kailangan mo ring kumonsulta sa isang **renal dietitian**, na eksperto sa mga wastong pagkain para sa mga may sakit sa *kidney*, para mabalanse mo ang mga sumusunod:

1. Protina

- Bago ka nagsimulang mag-PD, pinayuhan ka ng iyong *nephrologist* na bawasan ang pagkain ng protina para mabawasan din ang pagdami at pagkaipon ng mga *toxin*.
- Pero, sa oras na magsimula kang mag-PD, pwede kang mawalan ng protina habang nagpi-PD at mauwi ito sa *protein energy malnutrition*.
- Para maiwasan ito, kailangan mong palitan ang mga nawawalang protina sa iyong katawan dahil sa PD ng protinang may “*high biologic value*” na nagmumula sa mga hayop (*animal protein*).

2. Energy

- Ang *energy* ay pwedeng magmula sa iyong pagkain o sa *glucose* na nasa iyong PD *solution*.
- Kung di ka masyadong makakain, pwede ka ding uminom ng mga “*supplement*” (likido o pulbos) na sadyang ginawa para sa mga tulad mong naka-*dialysis* para matugunan ang kinakailangan mong *energy* sa bawat araw.

Ano ang pwede kong kainin?

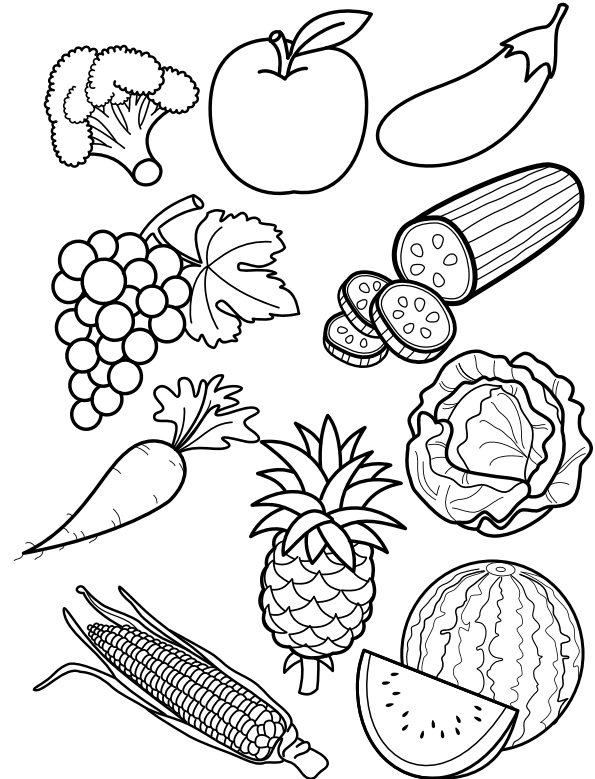
3. Potassium

- Ang sobra o kakulangan ng *potassium* sa katawan ay delikado para sa'yong puso dahil pwede itong mag-resulta sa di normal na pagtibok ng puso (*palpitations*) o ng paghinto ng pagtibok nito (*cardiac arrest*).
- Iwasan ang mga pagkain na mayaman sa *potassium* tulad ng mga tinuyong prutas, *beans*, *nuts* at mga *salt substitute*.

4. Tubig at Asin

- Ang pagkain ng sobrang asin ay nagdudulot ng pagtaas ng presyon at pagmamanas.
- Kung ikaw ay umihi pa, pwede kang uminom ng tubig na katumbas ng dami ng iyong inihi at ng iyong *ultrafiltrate* sa buong araw. Pero, kung di ka na umihi, dapat mong limitahan ang dami ng iyong iinumina sa 800 ml hanggang 1 litro sa buong maghapon.
- Hindi dapat hihigit sa 2 gramo ng asin ang nasa pagkain mo sa bawat araw (katumbas lamang ito ng isang kutsaritang asin). Mas mainam na gumamit ng mga *spices* bilang pampalasa sa iyong pagkain.
- Iwasan ang mga pagkaing maaalat, *fast food*, de lata at may *preservative*.
- Ugaliing basahin ang mga *label* ng kinakain para malaman kung gaano kadami ang laman nitong asin.

MGA PRUTAS AT GULAY NA
MABABA ANG POTASSIUM



MGA PAGKAIN AT
INUMING MATAAS
ANG PHOSPHORUS



Ano ang pwede kong kainin?

5. Phosphorus

- Ang sobrang *phosphorus* ay nakapagpaparupok sa iyong mga buto at pwede rin nitong patigasin ang iyong ugat (*blood vessel*) at puso.
- Iwasan ang mga pagkaing mayaman sa *phosphorus* tulad na *dark cola*, *cocoa*, *dairy product*, de lata at mga pagkaing *processed*.

6. Bitamina at Mineral

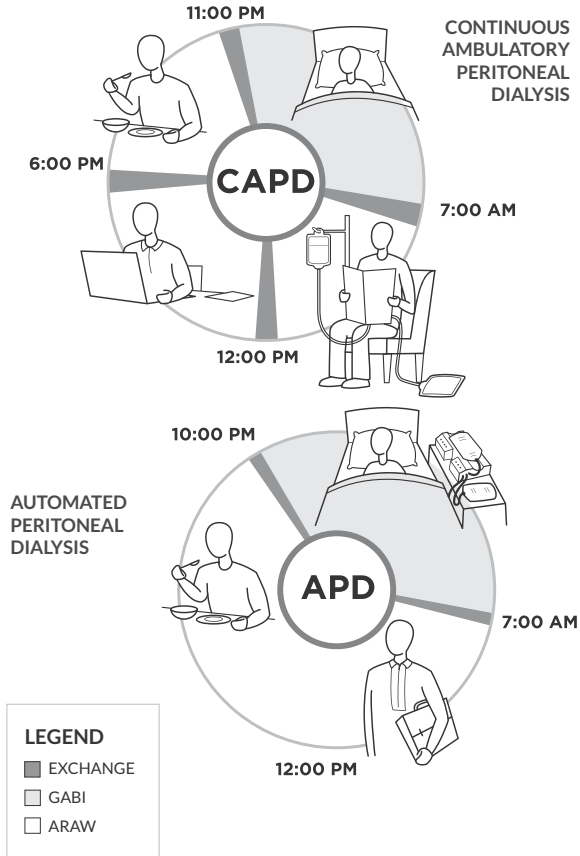
- Ang ilan sa mga mahalagang sustansya ay nawawala habang naka-PD tulad ng *vitamin B, C, D, calcium* at *iron*. Pwedeng mapalitan ang mga ito ng mga *supplement* na irereseta sa iyo ng iyong *nephrologist*.
- Hindi mainam na uminom ng mga **herbal supplement** dahil hindi ito ginawa para sa mga tulad mong may-sakit sa *kidney*. Pwede ring maraming laman na *potassium* ang mga ito.

Para makatiyak, laging kumonsulta sa isang renal dietitian tungkol sa iyong diet plan.

Paano magiging matagumpay ang aking PD?

- Tanggapin ang PD bilang bahagi ng iyong buhay.
- Panatilihin malinis ang lugar kung saan isinasagawa ang iyong PD.
- Panatilihin malinis palagi ang iyong katawan.
- Panatilihin malinis at tuyo ang *exit site* (balat sa paligid ng iyong PD *catheter*). Agad i-report sa iyong *nephrologist* kung ito ay namumula, o may lumalabas na likido (tubig) o nana.
- Palaging maghugas ng iyong mga kamay sa tuwing isinasagawa ang PD.
- Inatang mabuti ang iyong PD *catheter*. Huwag gumamit ng gunting o anumang matatalas na bagay para tanggalin ang gasang nakatakip dito.
- Sundin nang mabuti ang iniresetang PD sa iyo. Iwasan ang mga *shortcut* na pwedeng magdulot ng kakulangan sa gamutan at impeksyon.
- Magpatingin nang regular sa iyong *nephrologist*, isa hanggang dalawang beses kada buwan.





Maayos na Pamumuhay sa PD

- Ang PD ay pwedeng gawin sa bahay, opisina o eskwelahan. Pumupunta ka lang sa iyong *dialysis center* isa o dalawang beses kada buwan para sa iyong *check-up*.
- Ito ay simple at pwede mong itaon ang paggawa ng iyong mga *exchange* ayon sa pang araw-araw mong gawain.
- Pwede ka pa ring magtrabaho o pumasok sa eskwelahan at may panahon ka pa rin para sa iba pang mga gawain at libangan.
- Pwede kang mag-byahe at magpatuloy pa rin sa iyong PD. Kailangan mo lang kausapin ang iyong *supplier* na *i-deliver* ang iyong PD *solution* sa lugar na iyong pupuntahan.
- Dahil araw-araw natatanggal ng PD ang iyong mga *toxins*, mas marami kang pwedeng kainin at inumin. Kumonsulta sa iyong *renal dietitian* para sa mga hilig mong pagkain na akma sa iyong kalagayan.
- Hindi kailangan ng karayom para makapag-PD. Kaya mas bagay ito sa mga bata at sa mga taong takot sa karayom.
- Mas malaki ang matitipid mo sa PD dahil mas kaunti ang iyong pang araw-araw na gamot at *erythropoietin*. Mas kaunti din ang iyong gastos sa pamasaha dahil sa minsan ka lang dadalaw sa iyong *dialysis center* at mas mura ang mga kagamitan sa iyong PD.
- Kahit malaya kang gumagawa ng iyong PD sa labas ng *dialysis center*,

If you are not sure of what you are doing,
your PD nurse and nephrologist are always ready to help you.

*Kung hindi ka sigurado sa ginagawa mo o kung may iba ka pang katanungan,
laging handa ang iyong PD nurse at nephrologist na tulungan ka.*

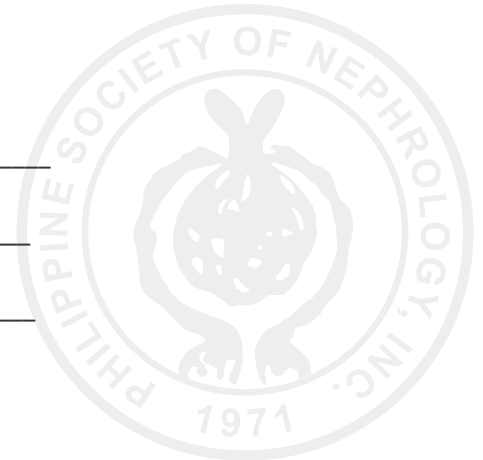


Please call:
Tumawag sa:

PD CENTER: _____

HOSPITAL: _____

OTHERS: _____





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