

Peritoneal Dialysis

# PD-Paed Plus

Training Manual



**FRESENIUS  
MEDICAL CARE**

THE RENAL COMPANY

A LIFELONG COMMITMENT

# PD-Paed Plus is part of P<sup>3</sup>



P<sup>3</sup> is a comprehensive Peritoneal Dialysis programme

**Protect**

**Preserve**

**P<sup>3</sup>**

**Prolong**

P<sup>3</sup> allows you to prescribe individual therapy programmes, monitor patient conditions, and precisely adjust therapy when needed – in an efficient and optimised way.

- **Protect:** unique and easy-to-understand PD systems
- **Preserve:** ultra-low GDP fluids
- **Prolong:** individual state-of-the-art therapies for fluid balance control and guided prescription modelling

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# Introduction



The recommended handling procedures for PD-Paed Plus produced by Fresenius Medical Care are intended to support the clinical personnel. They are not intended to replace a proper training on the system by a corporate clinical specialist or specific instructions for use of medical devices or medicinal products. Furthermore, they are not intended to replace the judgement or experience of the attending physician and nurse. The peritoneal dialysis treatment is the sole responsibility of the attending physician and nurse.

The PD-Paed Plus is an ideal system to start peritoneal dialysis treatment in small children. It is suitable for a fill volume of up to 200ml per exchange and/or for children below 10kg. **It is intended for clinical use only.** The PD-Paed Plus is DEHP-free and contains no natural latex. The present clinical procedures explain the use of the PD-Paed Plus together with a *stay•safe*<sup>®</sup>/Luer-Lock catheter extension. If, for newborns, the *stay•safe*<sup>®</sup> catheter adapter is used instead of the catheter extension please contact your local Fresenius Medical Care representative who will demonstrate the procedure.

The PD-Paed Plus is intended to be used only with *stay•safe*<sup>®</sup> *balance* or *stay•safe*<sup>®</sup> CAPD/DPCA

peritoneal dialysis fluid from Fresenius Medical Care. The availability of the PD fluids mentioned in this manual depends on the pharmaceutical product registration in the individual countries.

**The PD-Paed Plus is intended for maximal 24 hours use and for single use only.** Usage for periods longer than 24 hours and reuse may be hazardous to the patient. Cleansing solutions and disinfectants may damage materials employed for the PD-Paed Plus. Safety and performance of use can no longer be assured and the manufacturer assumes no liability. The PD-Paed Plus must only be used in conjunction with the peritoneal dialysis fluids listed above by healthcare professionals with the appropriate training, knowledge and experience and for whom proof of instruction can be shown.

**The mixed *stay•safe*<sup>®</sup> *balance* fluid is stable for 24 hours in the PD fluid bag, but once in the PD-Paed Plus system it should be discarded after six hours.**

We reserve the right to perform technical modifications without special prior notice.

# Material needed

## PD-Paed Plus



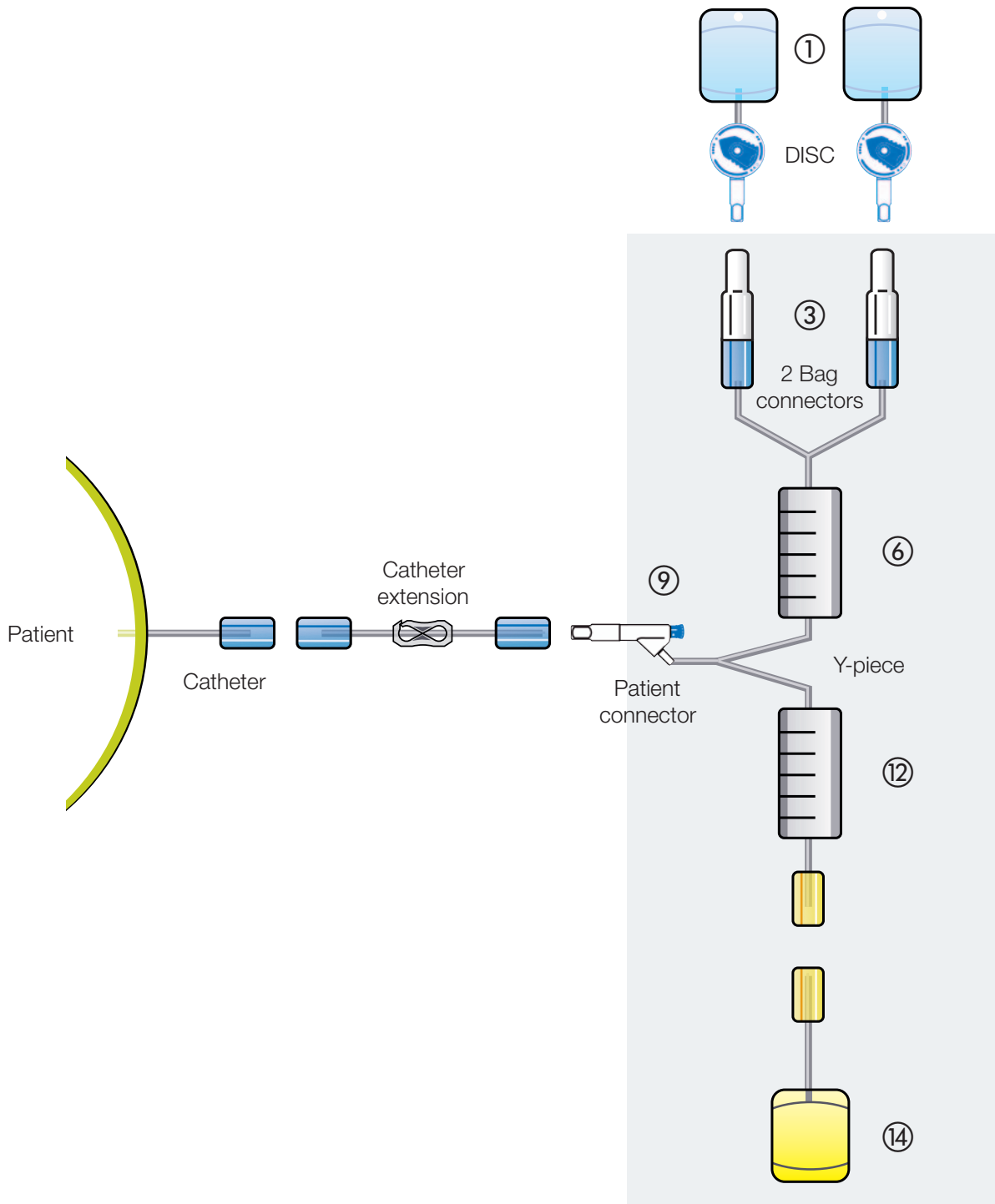
### Material needed:

- Infusion pole
- Warming appliance<sup>1</sup>
- PD-Paed Plus
- Burette holder(s) – depending on type of warming appliance
- Drainage bag holder
- 1 holder for organizer
- 2 organizers
- CLIP for organizer
- Wrapped *stay•safe*<sup>®</sup> disinfection cap
- 1 scissor clamp
- PD fluid bags
- Face mask (according to your hospital procedure)
- Hand disinfectant/gloves (according to your hospital procedure)

<sup>1</sup> Fresenius Medical Care recommends the Barkey Warming System XPT for PD-Paed Plus by Barkey GmbH & Co.KG, Germany, compliant with ISO EN 60601-2-16. For company, product and contact details please visit the Barkey website: [www.barkey.de](http://www.barkey.de).

[Please note the following: The website [www.barkey.de](http://www.barkey.de) is a third party website (“external link”). As the content of such website is not under our control, we cannot assume any liability for such external content. In all cases, the provider of information of the linked websites is liable for the content and accuracy of the information provided. At the point in time when the links were placed, no infringements of the law were recognisable to us. As soon as an infringement of the law becomes known to us, we will immediately remove the link in question.]

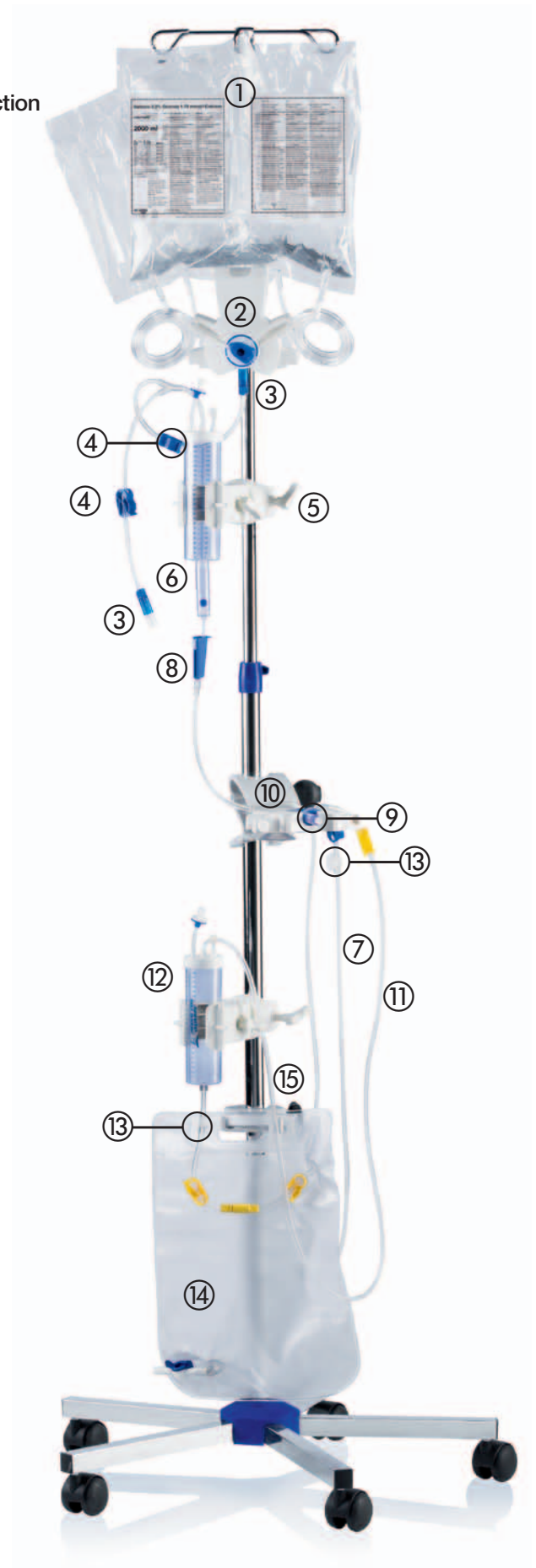
# PD-Paed Plus schematic overview



# System overview

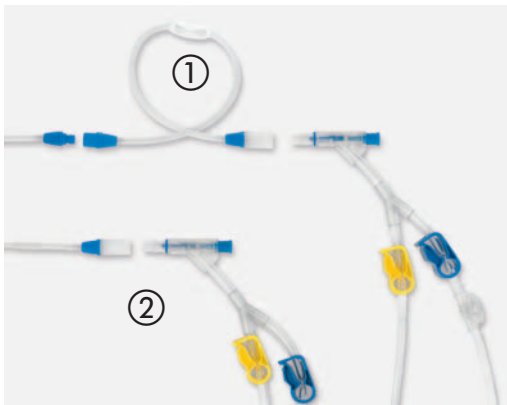
Complete PD-Paed Plus set-up

- ① PD fluid
- ② Organizer without CLIP to fix DISC during bag connection
- ③ 2 Bag connectors
- ④ Clamps to fill burette
- ⑤ Burette holder
- ⑥ Inflow burette with safety valve
- ⑦ Inflow line
- ⑧ Roller clamp to adjust inflow speed
- ⑨ Patient connector
- ⑩ Organizer with holder and CLIP
- ⑪ Outflow line
- ⑫ Outflow burette
- ⑬ Sample/injection port
- ⑭ Drainage bag
- ⑮ Drainage bag holder



# Recommended handling procedures

## PD-Paed Plus



### Two options for patient connection

In this manual we are describing the use of the PD-Paed Plus system together with a *stay•safe*® catheter extension (option ①). In order to decrease recirculation volume, for example in the treatment of neonates, it is possible to do a shortcut between catheter and PD-Paed Plus system by using the *stay•safe*® catheter adapter (option ②). Handling space however is limited in this case.

①

Catheter

+ catheter adapter Luer-Lock

+ *stay•safe*® catheter extension

+ Patient connector

②

Catheter

+ *stay•safe*® catheter adapter

+ Patient connector



### 1. Preparation

- Place the infusion pole into position
- Attach 2 burette holders to the infusion pole and adjust to height of bed or incubator (option described in this manual) or:
- In case a warming appliance is used: set up the warming appliance according to the manufacturer's requirements
- Attach holder for organizer to the infusion pole **above the lower** burette holder. Insert CLIP into the organizer and insert the organizer into the holder
- Attach drainage bag holder to the infusion pole
- Clean the work surface
- Check glucose concentration, expiry date and volume of the PD fluid as well as the bag and the outer wrapper for possible damage





# Recommended handling procedures

## PD-Paed Plus

### 2. Opening the outer wrapper

- Put on face mask (according to your hospital procedure)
- Check the expiry date and the packaging of the PD-Paed Plus for possible damage
- Open the PD-Paed Plus packaging
- Open the outer wrapper of the PD fluid bag without touching the inner part, and leave the bag in the inner wrapping foil



### 3. Hand disinfection

- Disinfect your hands/put on gloves – according to your hospital procedure



### 4. Preparing the system

- Pull the drainage bag out of the pouch, remove the protective paper and connect it to the yellow connector of the drainage system
- Close all six clamps of the PD-Paed Plus. Leave the roller clamp open as it is only used for altering the flow speed
- Locate the patient connector and place it into the organizer located above the lower burette holder
- Place the inflow burette in the upper burette holder



# Recommended handling procedures

## PD-Paed Plus



- Place the burette of the drainage system in the lower burette holder

### Note:

- The cap on the vent of each burette should not be loosened or removed. This kind of cap allows air passage even it is screwed on completely



- Attach drainage bag to the drainage bag holder. Stop cock is already in closed position.



## 5. Preparing the PD fluid bag

- Disinfect your hands thoroughly/change gloves – according to your hospital procedure



Mixing the PD fluid when using a double-chamber PD fluid:

- Check that the Lambda seam is intact before opening it
- Apply pressure by rolling up the bag from the upper ends until the middle seam opens

- Roll up the bag from the upper edge, until the Lambda seam of the lower triangle is completely opened



- Hang the PD fluid bag together with its drainage bag on the infusion pole
- Do not unroll the tubing



- To safely connect the bag connector to the DISC place the DISC in an organizer
- Place the bag connector into the organizer:
  - On the right-hand side if you are right-handed
  - On the left-hand side if you are left-handed



- Disinfect your hands/change gloves and put on face mask for bag connection – according to your hospital procedure



# Recommended handling procedures

## PD-Paed Plus



- Unscrew the protection cap of the DISC and discard it



- Unscrew the protection cap from the system's bag connector and screw the bag connector onto the DISC
- Repeat these steps to connect the second bag, if required



### 6. Priming the system

- Turn the control switch of the DISC clockwise to the last of the 3 dots ○●●
- Leave the control switch in this position



- Arrange the position of the burettes in the holders so that the measurement gradients you want to use are visible:
- Inflow burette:  
left measurement gradient for exchange volumes >10 ml;  
right measurement gradient for inflow by drops
- Outflow burette:  
right measurement gradient is recommended

- To prime the line open the blue clamp between the DISC and the inflow burette; fill the inflow burette to min. 150 ml. Then close this blue clamp.
- Fill the drip chamber completely by squeezing it. (The drip chamber contains exactly 10 ml if fully filled)
- Ensure that the ball of the safety valve is floating

**Note:**

- **If you want to perform inflow by drops do not fill the drip chamber completely**

- Open blue clamp near the Y-piece to prime the patient connector completely
- Clamp the patient connector with a scissor clamp
- Place the patient connector back into the lower organizer

- Open the yellow clamp after the Y-piece to prime the whole system and to check the functionality of the safety valve by emptying the inflow burette and the drip chamber with the safety valve completely

Make sure that the roller clamp is open. Make sure the scissor clamp is still closed to avoid air in the outflow system. The ball closes the safety valve as soon as the drip chamber is empty

- Close the blue and yellow clamp near the Y-piece
- Remove the scissor clamp
- To empty the outflow burette open the yellow clamp on the drain line. Drain the burette completely. Then close the clamp



# Recommended handling procedures

## PD-Paed Plus



- Fill the inflow burette to prescribed inflow volume for the first cycle
- In case a warming appliance is used, make sure that it is properly assembled onto the infusion pole and that the PD-Paed Plus is properly inserted  
(For the operation of the warming appliance please refer to the manufacturer's instructions for use)



### 7. Connecting the patient

- Close the clamp on the catheter extension for the connection
- Place the catheter extension into the organizer
  - On the right-hand side if you are right-handed
  - On the left-hand side if you are left-handed



- Disinfect your hands/change gloves and put on face mask, if required by your hospital procedure



- Unscrew the protection cap of the patient connector and discard it

- Unscrew the catheter extension from the disinfection cap and screw onto the patient connector
- Open the clamp on the catheter extension
- Remove the patient connector from the organizer, if needed
- **Ready to start the treatment!**



## 8. Outflow

- Open the yellow clamp between the patient connector and outflow burette
- Observe the fluid for clarity and fibrin
- When drain is completed close this yellow clamp
- **Measure and record the amount of dialysate drained**
- To empty the outflow burette, open the yellow clamp between the outflow burette and the drainage bag
- Close this yellow clamp when drain is completed



### Note:

- If you are using a warming appliance refer to the user's manual for the recommended pre-warming time of the PD fluid
- Storing the PD fluid at room temperature (22°C) will reduce pre-warming time
- If you are using the recommended warming appliance Barkey Warming System XPT for PD-Paed Plus, discard 15–20 ml of PD fluid before each inflow by adding the discarded amount into the inflow burette
- If you are not using the recommended warming appliance Barkey Warming System XPT for PD-Paed Plus, flush the system before each inflow with pre-warmed PD fluid by adding the flush amount into the inflow burette

# Recommended handling procedures

## PD-Paed Plus



### 9. Inflow

To avoid the risk of overfilling always make sure that the outflow is completed.

It is strongly recommended that PD fluid is warmed to body temperature before infusion into the child!<sup>1</sup>

- Fill the inflow burette: open the blue clamp between the DISC and the inflow burette and fill to the prescribed volume; then close this clamp
- Open the blue clamp on the inflow line to infuse the PD fluid. Use the roller clamp to adjust inflow speed
- **Closely observe the level in the burette during inflow!**
- Close the blue clamp when the prescribed volume has been infused

<sup>1</sup> "Pediatric Nephrology", Ellis D. Avner et al., 5. edition, p. 1381



### 10. Dwell

- Dwell time according to the physician's orders
- Refill the inflow burette with prescribed PD fluid for the next cycle and use the dwell time to pre-warm the PD fluid appropriately

Repeat the above procedure steps 8–10 for next cycle



## 11. Disconnecting the patient

- Remove the patient connector from the organizer if it was placed there.
- Turn the blue button on the patient connector clockwise



- Then firmly push the blue button all the way into the patient connector. The PIN will be released and introduced into the catheter extension automatically
- Open outer wrapper of the disinfection cap and leave it in the packaging



- Put on face mask and disinfect your hands/put on gloves – according to your hospital procedure



- Close the clamp on the catheter extension
- Place the patient connector into the CLIP of the organizer



# Recommended handling procedures

## PD-Paed Plus



- Insert the disinfection cap into the left-hand side of the organizer (right-hand side if you are left-handed)



- Unscrew the protection cap from the new disinfection cap and discard



- Unscrew the catheter extension from the patient connector



- Screw the catheter extension which now has the PIN inside securely onto the new disinfection cap and pull the catheter extension from the organizer (the PIN is visible through the transparent cap)
- Remove face mask, if applicable

## 12. Option: Pause the treatment

### a) Disconnecting with PIN Reload device

- Use the PIN Reload device to disconnect the patient from the PD-Paed Plus during the dwell phase of the treatment. Before preparing to disconnect from the PD-Paed Plus have the following ready:
  - Disinfection cap
  - PIN Reload device
  - Face mask (according to your hospital procedure)
  - Hand disinfectant/gloves (according to your hospital procedure)
- Turn the blue button on the patient connector clockwise. Firmly push the blue button all the way into the patient connector. Close the clamp on the catheter extension
- Place the patient connector into the organizer
- Place a new disinfection cap into the left-hand side of the organizer (right-hand side if you are left-handed)
- Place a PIN Reload device into the right hand side of the organizer (left-hand side if you are left-handed)
- Use a face mask for the next steps, if required by hospital procedure
- Disinfect your hands/put on gloves – according to your hospital procedure
- Unscrew the protection cap from the new disinfection cap
- Unscrew the catheter extension from the patient connector of the set. Screw the catheter extension with PIN securely onto the new disinfection cap



# Recommended handling procedures

## PD-Paed Plus



- Unscrew PIN Reload device and screw on the patient connector



- Remove catheter extension from the organizer



### b) Reconnecting to PD-Paed Plus

- Ensure that the patient connector is still secured in the organizer and the PIN Reload device is still screwed to the patient connector. Remove the catheter extension from where it was secured on the patient.
- Place the catheter extension into the right-hand side of the organizer (left-hand side if you are left-handed)



- Use a face mask for the next steps, if required by hospital procedure
- Disinfect your hands/put on gloves – according to your hospital procedure

- Press the plunger of the PIN Reload device firmly to the end to release the PIN into the patient connector



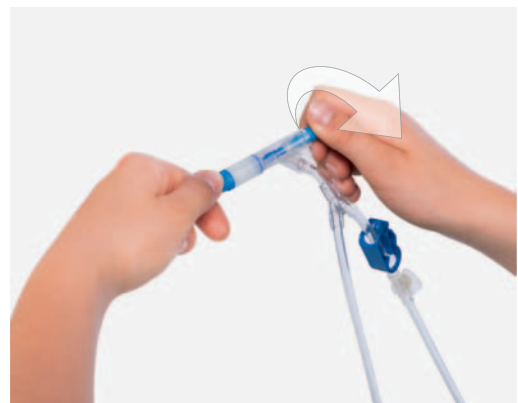
- Unscrew the empty PIN Reload device from the patient connector and discard it
- Check if PIN was reloaded into PIN connector, if not repeat with new PIN Reload device



- Unscrew the catheter extension from the old disinfection cap
- Screw catheter extension onto the patient connector
- Open the clamp on the catheter extension



- Remove the patient connector from the organizer
- Turn the push button anti-clockwise to protect against an unintended release of the PIN
- Continue treatment



# Recommended material

## PD-Paed Plus

Please choose between option 1a) and 1b)

	Recommended material	Quantity needed	Units per box	Art. No.
1. Set-up	a) without catheter extension			
	Fresenius Medical Care PD catheter for paediatrics	1	1	as per product list
	stay•safe® Catheter Adapter	1	5	284 321 1
or	b) with catheter extension			
	Fresenius Medical Care PD catheter for paediatrics	1	1	various
	stay•safe® Catheter Extension	1	5	various
	Catheter Adapter Luer-Lock with Closure Cap (only required if <b>no</b> Fresenius Medical Care catheter is used)	1	5	284 267 1
and	stay•safe® Organizer	2	1	284 256 1N
	stay•safe® Holder for Organizer	1	1	284 257 1N
	Clip for stay•safe® Organizer	1	1	M20 048 1
	Burette holder for PD-Paed Plus	2*	1	F00 000 286
	Infusion pole	1	1	284 508 1
	Drainage bag holder	1	1	567 144 1
	Scissor Clamp	1	5	284 524 1
2. Disposables	PD-Paed Plus	single use	10	F00 005052
	stay•safe® Disinfection Cap	1 per disconnection	40	284 509 1
	stay•safe® PD fluid	according to needs	4	various
3. Accessories (optional)	stay•safe® Closure Cap (similar to stay•safe® Disinfection Cap but without iodine)	1 per disconnection	40	284 601 1
	PIN Reload	1 per reconnection	10	501 700 1

\* If the Barkey warming system is used only one burette holder for the outflow burette is required

**balance 1.5% glucose, 1.75 mmol/l calcium, solution for peritoneal dialysis, balance 2.3% glucose, 1.75 mmol/l calcium, solution for peritoneal dialysis, balance 4.25% glucose, 1.75 mmol/l calcium, solution for peritoneal dialysis, balance 1.5% glucose, 1.25 mmol/l calcium, solution for peritoneal dialysis, balance 2.3% glucose, 1.25 mmol/l calcium, solution for peritoneal dialysis, balance 4.25% glucose, 1.25 mmol/l calcium, solution for peritoneal dialysis.** These solutions are delivered in a double chamber bag. One chamber contains the alkaline lactate solution, the other chamber contains the acidic glucose-based electrolyte solution. Mixing of both solutions by opening the middle seam between the two chambers results in the neutral ready-to-use solution. **Composition: 1 litre of the neutral ready-to-use solution contains:** balance 1.5% glucose, 1.75 mmol/l calcium: sodium chloride 5.640 g, sodium lactate (as sodium lactate solution) 3.925 g, calcium chloride dihydrate 0.2573 g, magnesium chloride hexahydrate 0.1017 g, glucose, anhydrous (as glucose monohydrate) 15 g. balance 2.3% glucose, 1.75 mmol/l calcium: sodium chloride 5.640 g, sodium lactate (as sodium lactate solution) 3.925 g, calcium chloride dihydrate 0.2573 g, magnesium chloride hexahydrate 0.1017 g, glucose, anhydrous (as glucose monohydrate) 22.73 g. balance 4.25% glucose, 1.75 mmol/l calcium: sodium chloride 5.640 g, sodium lactate (as sodium lactate solution) 3.925 g, calcium chloride dihydrate 0.2573 g, magnesium chloride hexahydrate 0.1017 g, glucose, anhydrous (as glucose monohydrate) 42.5 g. balance 1.5% glucose, 1.25 mmol/l calcium: sodium chloride 5.640 g, sodium lactate (as sodium lactate solution) 3.925 g, calcium chloride dihydrate 0.1838 g, magnesium chloride hexahydrate 0.1017 g, glucose, anhydrous (as glucose monohydrate) 15 g. balance 2.3% glucose, 1.25 mmol/l calcium: sodium chloride 5.640 g, sodium lactate (as sodium lactate solution) 3.925 g, calcium chloride dihydrate 0.1838 g, magnesium chloride hexahydrate 0.1017 g, glucose, anhydrous (as glucose monohydrate) 22.73 g. balance 4.25% glucose, 1.25 mmol/l calcium: sodium chloride 5.640 g, sodium lactate (as sodium lactate solution) 3.925 g, calcium chloride dihydrate 0.1838 g, magnesium chloride hexahydrate 0.1017 g, glucose, anhydrous (as glucose monohydrate) 42.5 g. **Excipients:** Water for injections, hydrochloric acid, sodium hydroxide, sodium hydrogen carbonate. **Indications:** End-stage (decompensated) chronic renal failure of any origin treated with peritoneal dialysis. **Contraindications: Solution related:** Solutions with 1.5%/2.3%/4.25% glucose, 1.75 mmol/l calcium: Severe hypokalaemia and severe hypercalcaemia. Solutions with 1.5%/2.3%/4.25% glucose, 1.25 mmol/l calcium: Severe hypokalaemia and severe hypocalcaemia. Solutions with 4.25% glucose: Additionally hypovolaemia and arterial hypotension. **Treatment related:** Recent abdominal surgery or injury, burns, hernia, inflammatory abdominal skin reaction (dermatitis), inflammatory bowel diseases (Crohn's disease, ulcerative colitis, diverticulitis), peritonitis, non-healing weeping wounds (abdominal fistulae), intra-abdominal tumours, intestinal obstruction (ileus), lung diseases (especially pneumonia), metabolic disorders (lactic acidosis), generalised blood poisoning (sepsis), extreme weight loss (cachexia), particularly when adequate nutrition is impossible, in cases of accumulation of uraemic toxins in the blood (uraemia) the elimination of which can not be managed by peritoneal dialysis, very high levels of fat in the blood (hyperlipidaemia). **Undesirable effects: Infections:** Peritonitis (very common); skin exit site and tunnel infections (very common); in very rare cases sepsis. Disorders of the hormone balance for solutions containing 1.25 mmol/l calcium. Overactivity of the parathyroid gland with potential disorders of the bone metabolism. Metabolism and Precautions: Increased blood sugar and fat levels; increase in body weight due to the continuous uptake of glucose from the peritoneal dialysis solution. **Cardiac and vascular disorders:** Frequent pulse; decreased or increased blood pressure. **Respiratory disorders:** Shortness of breath due to elevation of the diaphragm, shoulder pain. **Gastrointestinal disorders:** Diarrhoea; constipation; hernia (very common); abdominal distension and sensation of fullness. **Renal disorders:** Electrolyte disturbances, e.g. decreased potassium levels (very common), increased calcium levels in combination with an increased calcium uptake, e.g. by the administration of calcium containing phosphate binders or decreased calcium levels for solutions containing 1.25 mmol/l calcium. **General disorders and administration/catheter site conditions:** General malaise; redness, swellings, exudations, crusts and pain at the catheter exit site; dizziness; oedema; disturbances in hydration indicated either by a rapid decrease (dehydration) or increase (overhydration) in body weight. Severe dehydration might occur when using solutions of higher glucose concentration. **Peritoneal dialysis procedure related disorders:** Cloudy effluent; in- and outflow disturbances of the dialysis solution. **Warnings and Precautions:** Do not use unless solution is clear and container undamaged. For single use only. Any unused portion of the solution is to be discarded. Do not use before mixing both solutions. The ready-to-use solution must be used within 24 hours after mixing. Do not store below 4°C. **Date:** December 2010. **Fresenius Medical Care Deutschland GmbH**, 61346 Bad Homburg v.d.H., Germany.

# Prescribing information

**CAPD/DPCA 2, 3, 4 / 17, 18, 19, Solution for peritoneal dialysis. Excipients:** Hydrochloric acid, sodium hydroxide, water for injections **Indications:** End-stage chronic kidney failure of any origin requiring treatment with peritoneal dialysis. **Contraindications: Solution related:** Solutions containing 1.75 mmol/l calcium: severe hypokalaemia, severe hypercalcaemia. Solutions containing 1.25 mmol/l calcium: severe hypokalaemia, severe hypocalcaemia. Solutions containing 2.3% or 4.25% glucose additionally: hypovolaemia and arterial hypotension. Fructose metabolism disorders (hereditary fructose intolerance) and other disorders of metabolism (lactic acidosis). **Treatment related:** Recent abdominal surgery or injury; a history of abdominal operations with fibrous adhesions; abdominal burns; perforation of the bowel (gut); inflammation of the skin of the abdomen, for example dermatitis; inflammation of the bowel, for example Crohn's disease, ulcerative colitis, diverticulitis; peritonitis (inflammation in the abdomen); abdominal fistulae (non-healing weeping wounds); hernias; tumours in the abdomen or bowel; obstruction in the bowel (ileus); lung disease (particularly pneumonia); blood poisoning (sepsis); extreme weight loss (cachexia) and particularly when adequate protein intake is not possible; uraemia (the accumulation of toxins in the blood caused by kidney failure) where it is known that peritoneal dialysis is not useful and is not an appropriate treatment; very high levels of fat in the blood (hyperlipidaemia). **Side effects: Treatment related:** Frequently peritonitis - inflammation of the peritoneum characterised by the presence of a cloudy dialysate (solution) seen during drain out, abdominal pain, general malaise/generally feeling unwell, fever and, if untreated, generalised blood poisoning - and inflammation around the catheter which can be recognised by redness, swelling, weeping, crusts and pain at the catheter exit site. In addition the peritoneal dialysis treatment can cause abdominal swelling and a feeling of fullness, hernia, shoulder pain, shortness of breath due to the diaphragm being pushed upwards, diarrhoea and constipation. Disturbance or restriction of the in flow and out flow of dialysis solution into and out of the peritoneal cavity may also occur. **Solution related:** Fluid and electrolyte imbalance, which might include decreased calcium levels (for solutions containing 1.25 mmol/l calcium), decreased potassium levels, or increased calcium levels in combination with an increased calcium intake, e.g. through administration of calcium-containing phosphate binders (for solutions containing 1.75 mmol/l calcium), an overactive parathyroid gland leading to possible bone disorders (for solutions containing 1.25 mmol/l calcium), symptoms of fluid build up (e.g. swelling, shortness of breath), dehydration (e.g. dizziness, muscle cramps), increased blood sugar levels, increased weight due to the continuous glucose (sugar) uptake and disorders of lipid (fat) metabolism. Increased heart beat (tachycardia), low blood pressure and high blood pressure have been reported. **Warnings and precautions:** Do not use unless the solution is clear and the container undamaged. For single use only. Any unused portion of the solution is to be discarded. Do not store above 25°C. Do not refrigerate or freeze. Contains fructose. **Date:** November 2012. **Fresenius Medical Care Deutschland GmbH**, 61346 Bad Homburg v.d.H., Germany.

## Composition: 1 litre solution contains:

Active substances (g/l)	CAPD/ DPCA 2	CAPD/ DPCA 3	CAPD/ DPCA 4	CAPD/ DPCA 17	CAPD/ DPCA 18	CAPD/ DPCA 19
Sodium chloride	5.786	5.786	5.786	5.786	5.786	5.786
Sodium-(S)-lactate (as sodium-(S)-lactate solution)	3.925	3.925	3.925	3.925	3.925	3.925
Calcium chloride dihydrate	0.2573	0.2573	0.2573	0.1838	0.1838	0.1838
Magnesium chloride hexahydrate	0.1017	0.1017	0.1017	0.1017	0.1017	0.1017
Glucose anhydrous (as glucose monohydrate)	15	42.5	22.73	15	42.5	22.73
Active substances (mmol/l)						
Na+	134	134	134	134	134	134
Ca2+	1.75	1.75	1.75	1.25	1.25	1.25
Mg2+	0.5	0.5	0.5	0.5	0.5	0.5
Cl-	103.5	103.5	103.5	102.5	102.5	102.5
(S)-lactate	35	35	35	35	35	35
Theoretical osmolarity (mosm/l)	358	511	401	356	509	399



**FRESENIUS  
MEDICAL CARE**

THE RENAL COMPANY

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