Liberty Cycler User's Guide

Caution*: US Federal law restricts this device to sale only by or on the order of a physician. Frequency, duration, and parameters of treatment are to be determined by the prescribing physician.*

Indications for Use*: The Fresenius Medical Care Liberty cycler is intended for acute and chronic peritoneal dialysis.*

This document is for software version 2.8.5.

My Treatment Parameters

Use this page for your treatment values as prescribed by your doctor. Use only one of these prescription cards for your treatment.

therapy	CCPD	☒ Treatment Based

cycles/pauses ——— volumes ——— times

	total volume	total sleep time
	fill volume	
	last fill volume	

therapy	CCPD	☒ Cycle Based

cycles/pauses ——— volumes ——— times

# fills	fill volume	dwell time
		fill time
	last fill volume	drain time

therapy — IPD ☒ Treatment Based

cycles/pauses — **volumes** — **times**

	total volume	**total sleep time**
	fill volume	
# pauses	**pause volume**	

therapy — IPD ☒ Cycle Based

cycles/pauses — **volumes** — **times**

cycles/pauses	volumes	times
# fills	**fill volume**	**dwell time**
# pauses	**pause volume**	**fill time**
		drain time

therapy PD+ ☒ Treatment Based

cycles/pauses — **volumes** — **times**

cycles/pauses	volumes	times
	total volume	total sleep time
	fill volume	
# pauses	pause volume	
	last fill volume	

therapy PD+ ☒ Cycle Based

cycles/pauses — **volumes** — **times**

cycles/pauses	volumes	times
# fills	fill volume	dwell time
# pauses	pause volume	fill time
	last fill volume	drain time

therapy TIDAL ☒ Treatment Based

cycles/pauses — **volumes** — **times**

cycles/pauses	volumes	times
	total volume	**total sleep time**
# pauses	**pause volume**	
	first fill volume	
	tidal fill volume	
	tidal drain vol.	
	last fill volume	

therapy TIDAL ☒ Cycle Based

cycles/pauses — **volumes** — **times**

cycles/pauses	volumes	times
# pauses	**pause volume**	**dwell time**
	first fill volume	**fill time**
# fills	**tidal fill volume**	**drain time**
	tidal drain vol.	
	last fill volume	

patient

your ID	weight

options

add diurnal UF	last bag option	

language	SI units	personal data

USB enabled

Notes: _____

_____

_____

_____

_____

_____

_____

_____

How to Use this User's Guide

This User's Guide is a reference for you to look up information about the Liberty Cycler. Start with the topic you are interested in, and look for it in the Table of Contents (see page 9) or in the Index (see page 238). The Table of Contents is detailed enough that you should be able to find most topics. If not, refer to the Index for further details.

Please note that the Contents Quick Search (see page 8), Glossary (see page 234), and Error Messages Tables (see page 197 and 204) also contain similar information, but presented in a slightly different way. The User's Guide's goal is to create many different ways for you to quickly and easily get the information.

Contents Quick Search

This page is a quick reminder where to find certain procedures or further instructions:

Events
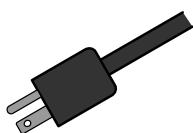
Power Failure: 214

Troubleshooting Error Messages: 196

Incomplete Treatment: 16

Alarms (with no sound): 185

Defective cassette/tubing set: 97

Moisture in pump module: 149

Drain Complication: 204

Patient Line is Blocked: 207

Liberty Cycler Settings

How to set weight (SI) units: 84

How to change the time/date: 86

How to set screen blanking: 86

How to adjust the alarm/key volume: 86

Treatment Setup
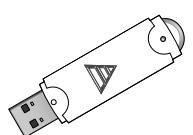
How to use the IQdrive: 172

How to set your parameters: 50

Pre-Treatment checklist: 90

How to insert stay•safe PIN connector into stay•safe organizer: 98

Exchanges
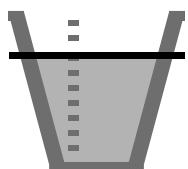
How to bypass: 166

How to do a STAT drain: 164

Drain times based on Fill volume: 212

Technical Support Number: 1 800 227-2572

Table of Contents

Introduction & Overview

Introduction

Enjoy the freedom of the new Fresenius Medical Care Liberty cycler. We at Fresenius Medical Care know that life on peritoneal dialysis may be complicated, but we have worked hard to make it simpler. Your Liberty is light, portable, and easy to operate. It has an easy to load cassette and simple touch screen menus to guide you through setup and treatment procedures. Carefully following your doctor's instructions, you have the convenience and freedom of peritoneal dialysis at your fingertips. Be sure to read and follow all instructions and warnings listed in the manual.

Requirements

Operators of your Liberty cycler machine must be trained to perform peritoneal dialysis under the direction of a physician. In addition, each operator should be:

- Knowledgeable of peritoneal dialysis procedures and how they affect the body
- Well-practiced in aseptic techniques and other peritoneal dialysis procedures
- Very familiar with the contents of this manual as well as fully trained and qualified to operate this machine. You and any other user must be able to tell between normal and abnormal operation.

Indications for Use (Purpose of the Liberty cycler)

The Fresenius Medical Care Liberty cycler is indicated for short term (acute) and long term (chronic) peritoneal dialysis.

The Liberty cycler can provide the following therapies: continuous cycling peritoneal dialysis (CCPD), intermittent peritoneal dialysis (IPD), peritoneal dialysis plus (PD+), and tidal peritoneal dialysis (TPD).

Contraindications (When this machine should not be used)

CAPD and CCPD are effective and attractive choices for many ESRD patients; however, no one dialysis therapy is right for all patients. The following health problems likely prevent or impair you from using the Liberty cycler:

- Leaks across the inside of your body's lining (Transdiaphramatic leakage)
- A destructive metabolism (hypercatabolism)
- Too little peritoneal membrane surface area
- Multiple abdominal surgeries

This is a guideline only. Your doctor must make the final decision whether or not any medical device is appropriate for you.

MR Unsafe: Liberty Cycler must not to be used in an MR environment. Liberty Cycler may pose unacceptable risks to the patient, medical staff or other persons within the MR environment.

Peritoneal Dialysis Precautions

Your doctor has prescribed peritoneal dialysis (PD) for you. There are risks to PD, but your doctor feels it is better to perform PD than not. Here are some things your doctor should consider:

You must perform PD treatments according to the prescription given to you by your physician and the manufacturer's instructions. Not doing so can sometimes result in harm. Abdominal pain, bleeding, infected peritoneal membrane (peritonitis), and a blocked catheter extension set can cause problems with your treatment. Some dialysate solutions are stronger (higher percentage of dextrose) than others at removing fluids. It is important to use the right dialysate solution for your needs: the wrong dialysate solution may pull too much fluid (hypovolemia/ dehydration) out of your body and cause low blood pressure (hypotension) or muscle cramping. Or it may pull too little

fluid (hypervolemia) and cause high blood pressure (hypertension) or swelling (edema). You must continue to correctly remove fluid from your body.

You and your PD nurse must work together to monitor your weight and blood chemistry levels. You must pay close attention to how you feel and report any changes to your PD nurse. This will help prevent such complications as congestive heart failure, volume depletion, overfill of solution, shock, and inadequate therapy. Follow your doctor's prescription and instructions to reduce the risk of these problems that could result in serious complications.

Caregivers should carefully monitor patients for the above signs and symptoms.

About This User's Guide

This user's guide is a reference for properly trained home users of the Fresenius Medical Care Liberty cycler—it cannot replace formal training by your healthcare staff. It cannot provide or replace clinical advice.

This manual is specially designed for easy readability and understanding. It has illustrated procedures and step-by-step instructions.

Follow your machine's on-screen instructions. Use this manual only as a guide for your machine's screens. You should read the entire user's guide before beginning your treatment. Take note of attention boxes, explained below:

Attention Boxes

	Warning: This symbol warns against an action or situation that could hurt you. If you do not follow these instructions, it can lead to serious injury or death.
	Shock Hazard: This symbol means you could get a severe electrical shock if you use the equipment wrong.
	Caution: This symbol means you will damage your machine if you do not follow instructions.

	Note: This symbol means there is extra information about machine features. Notes have helpful information. They may also show instructions for unique cases.

Other Important Symbols

	Degree of protection against electric shock: Type BF
	ON: This symbol, at the top of the switch on the back of your machine, means the switch is in the ON position.
	OFF: This symbol, at the bottom of the switch on the back of your machine, means the switch is in the OFF position.
	MR unsafe: This symbol, on the back of your machine, means the machine must not be placed in an MR environment**.**

Related Reading

These documents have more information about your Fresenius Medical Care Liberty cycler:

- Liberty Cycler Initiation of Treatment Procedure Card (P/N 480070)
- Liberty Cycler Handi-Guide (P/N 480089)
- Liberty Cycler Field Service Bulletins may be obtained from the Fresenius Medical Care website: www.FMCNA.com or contact your healthcare professional for more information.
- Preventative Maintenance Requirements (09-PD-001)
- Contact Fresenius Medical Care Quality Systems for information on test procedures to verify sterile items

Questions? Call Technical Support

If you have any questions, please call Fresenius Medical Care Technical Support anytime at **1 800 227-2572**.

General Warnings

Read all the warnings before beginning your treatment. Additional warning statements for each topic are found throughout the manual.

Warning: Read this entire user's guide before beginning your treatment. You must be familiar with how to use your machine and with the features of this manual. If you do not follow these instructions to install and maintain this equipment, it may cause serious injury or death.

Warning: Your doctor must prescribe your entire treatment. If you use incorrect values, it may cause serious injury or death. Do not use example values shown in machine pictures.

Warning: In the event of an **incomplete treatment**, call your doctor or PD nurse.

Warning: Check for proper functioning of your machine before beginning your treatment. Alarm failure or unidentified problems could lead to serious health risks.

Warning: Keep fingers clear of moving parts.

Warning: The Liberty cycler is not sterile equipment. Only the interior of the tubing sets are sterilized. You must use aseptic technique (masking and hand washing) as directed by your PD nurse to prevent infection. Infections may cause serious injury or death.

Warning: Check the heater tray to be sure it is free of obstructions and does not touch the top of your cycler cabinet. Interference with the heater tray may result in inaccurate dialysate weighing and possibly result in patient injury.

Warning: Explosion Hazard. Do not use in the presence of flammable substances like anesthetics.

Warning: Check that all tubing is free from kinks or damage (scratches, loose tubings, small holes) before beginning treatment.

Warning: Do not use damaged cassettes for your treatment or allow any liquid to drip in or on your machine. Spills from your treatment can lead to serious injury or death. If spills occur, you must contact Technical Support immediately at 1 800 227-2572. Do not attempt to clean or disinfect leaks inside your cycler.

Warning: You must clean your machine to prevent contamination and infection.

Warning: Do not use devices emitting strong electromagnetic radiation such as portable phones, radio equipment (walkie-talkies, etc.), radio transmitters, and like equipment near your machine. Improper operation may result. Digital phones may be conditionally allowed. Discontinue use of any device if any interference is noted, such as false pressure readings that disappear when the external signal is removed.

Warning: Increased Intraperitoneal Volume (IIPV), commonly known as Overfill, is when you have too much fluid in your abdomen. IIPV/overfill may result in serious injury or death from conditions such as: abdominal wall and/or diaphragmatic hernias, hydrothorax, heart problems including chest pain and heart failure, high blood pressure, pulmonary edema, decreased pulmonary function and pericardial effusion.

Patients and caregivers should watch for the potential signs of IIPV. These include: difficulty breathing; vomiting or spitting up; feeling full, bloated, or overfilled after treatment; abdominal pain or discomfort; expanded or tense abdomen; chest pain, increased blood pressure, change in mental status, and leakage of fluid from the PD catheter extension exit site.

If you experience any of these symptoms or feel a large, painful build-up of pressure during your fill, do not finish your fill cycle. Press the **STOP** key and immediately initiate a STAT Drain or perform a manual drain as instructed by your PD nurse. See page 164 for more information on how to use the STAT Drain feature. Once the fluid is completely drained from your abdomen, call your doctor or PD nurse.

⚠️ **Warning**: If you have no Last Fill programmed on your cycler and you did a manual Fill during the day, your cycler does not know that you must drain additional fluid. If your catheter extension set line then gets kinked during Drain 0 and the draining stops, your cycler may advance to Fill 1 before you have finished draining. This may cause an overfill situation which may lead to serious injury or death. Always make sure that you have drained enough during Drain 0 when your cycler starts Fill 1.

Drain 0 may be bypassed under certain circumstances. If using a daytime dwell, please consult your health professional before bypassing Drain 0 since bypassing after a daytime dwell may result in reduced dialysis adequacy.

⚠️ **Warning**: Shock hazard. Do not remove Heater Tray. Refer servicing to qualified personnel. The electrical source must be single phase, three-conductor type at 120/250 VAC 50/60Hz. Your cycler needs a protective earth electrical ground connection. The outlet you use for your cycler must be checked and maintained for a good ground connection to protect you from risk of electrical shock.

⚠️ **Warning**: Shock hazard. The machine must be plugged directly into an electrical outlet; do not use extension cords or power strips. Do not use power cords other than those provided with your cycler. If you must connect your cycler to a 240V power source, contact Technical Support at 1 800 227-2572 for a power cord rated for 240V.

⊗ **Caution**: Do not place your cycler near external heating or cooling sources like heaters or air conditioners.

⊗ **Caution**: Your Liberty cycler contains an internal battery. This battery requires no periodic maintenance by the user and should not be replaced by the user.

⊗ **Caution**: Your Liberty cycler is a computer controlled electro-mechanical medical device. It should be installed in an appropriate environment (indoors) free from extremes of temperature and humidity and reasonably protected from dust and dirt contamination or liquid splashes. Failure to install your Liberty cycler according to these guidelines may result in improper operation or early failure of the device or its parts.

⊗ **Caution**: The maximum total weight on your cycler's scale is 15 kg (33 lbs.) or three 5000 mL solution bags. Overloading the scale can cause damage to your cycler.

Caution: Use only cycler tubing sets intended for the Fresenius Medical Care Liberty cycler.

Caution: Use only your fingertips on the Touch Screen and cycler keys. Use of other objects, such as pens, may result in damage or premature failure.

Caution: The cassette door is pressurized. Do not attempt to open the cassette door until your machine instructs you to do so.

Caution: In order to prevent potentially hazardous conditions and ensure the safe operation of the Liberty Cycler, Radio Frequency Identification (RFID) Equipment must be kept at least 3 meters from the system while in operation.

Note: Your machine's operation involves fluids: accidental spills can occur. Spills can cause damage to carpeting and other surfaces. To contain such spills, your machine should be on a spill-tolerant surface. Clean up spills immediately.

Note: This manual shows tubing set model 050-87212 which has two stay•safe patient connectors on the patient line. If you use a different tubing set, your healthcare staff is responsible for providing alternate instructions.

Fresenius Medical Care manufactures tubing sets for use with the model Liberty cycler. The performance of tubing sets not manufactured by Fresenius Medical Care cannot be guaranteed by Fresenius Medical Care and are therefore the responsibility of the prescribing physician.

Meet Your Liberty Cycler
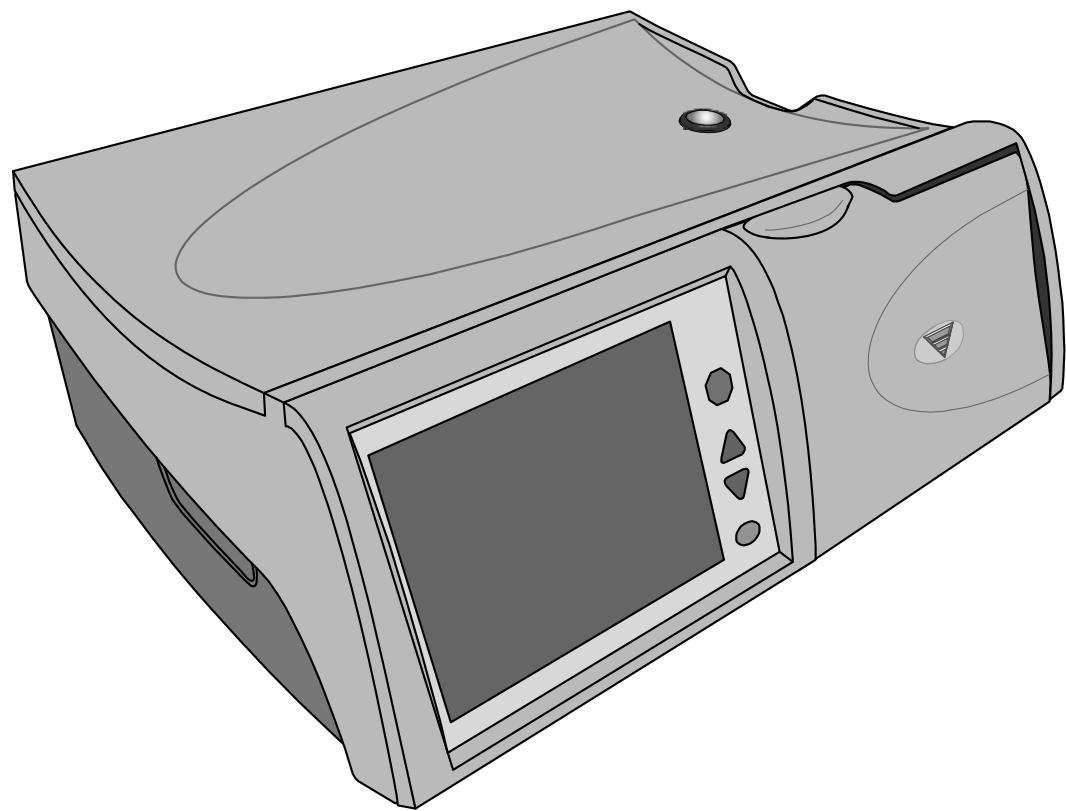
Liberty Cycler Features

Your Liberty cycler helps your body to do the work of your kidneys. Your cycler pumps dialysate (a cleansing solution used to draw waste products and extra fluids out of your blood) into your empty peritoneal cavity. There it absorbs waste through your body's natural membrane over a set amount of time. When that time has expired, your cycler drains the waste from your body. Your machine repeats this as often as your doctor prescribes. All dialysate and waste pass through a disposable sterile tubing set that is discarded after each treatment.

Your Liberty cycler offers four different types of therapy. They fit into two groups: *Continuous Therapy* and *Intermittent Therapy*.

In *Continuous Therapy* you continually have dialysate dwelling your peritoneal cavity. CCPD and PD+ are both continuous therapies.

In *Intermittent Therapy* you may either be empty or have only a small amount of dialysate in your peritoneal cavity at certain times. Tidal and IPD are usually intermittent therapies.

For more information about these therapies, see page 124.

This manual features treatment walkthroughs for each type of dialysis therapy. Please read the entire manual to learn about the features of your Liberty cycler before beginning your treatment.

Touch
Screen

Heater
Tray

Control
Panel

Pump
Module

Door
Latch

Cabinet
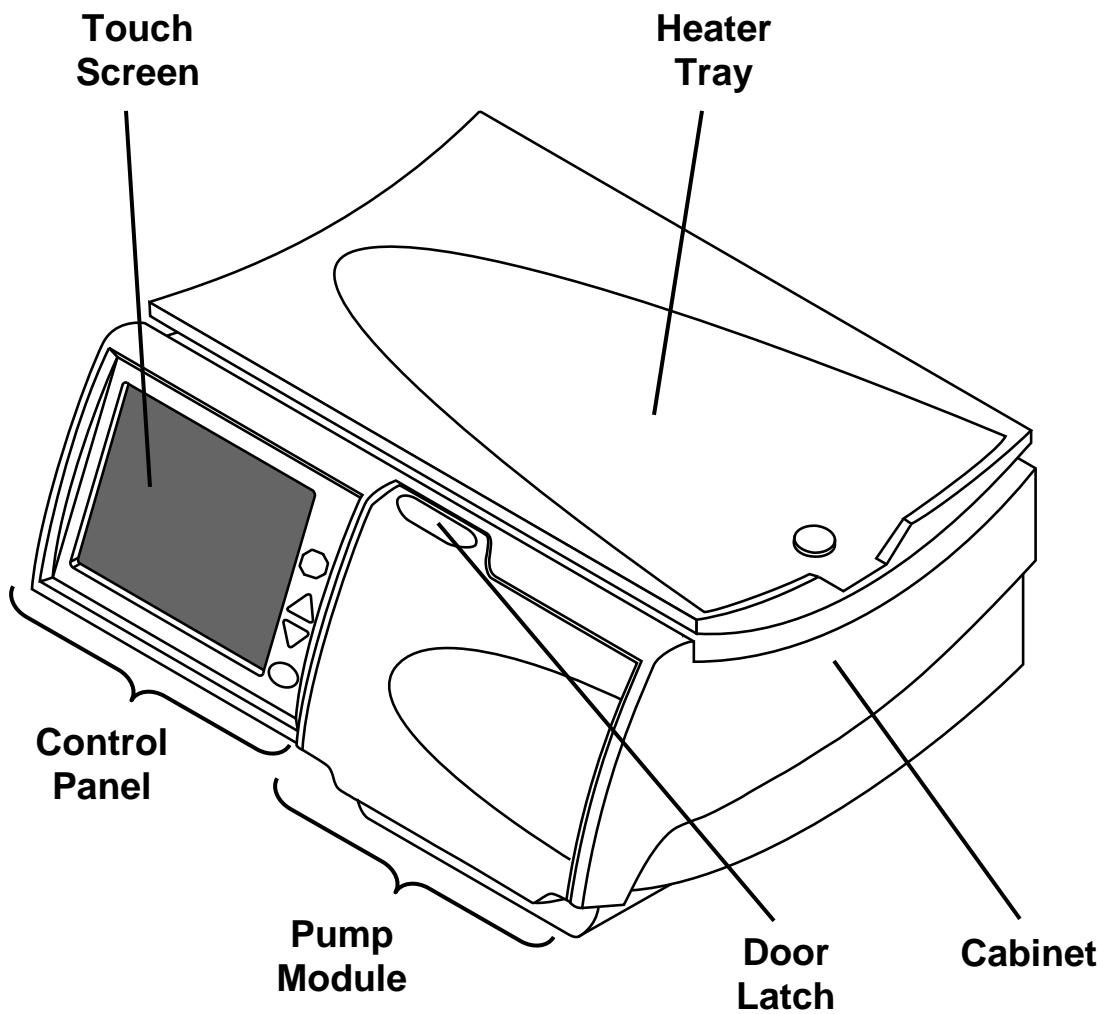
Your Liberty Cycler - Front View

**Fan
Vent**

**Power
Switch**

**IQdrive
Slot**

On

Off

**Power
Cord**

**Power Cord
Socket**
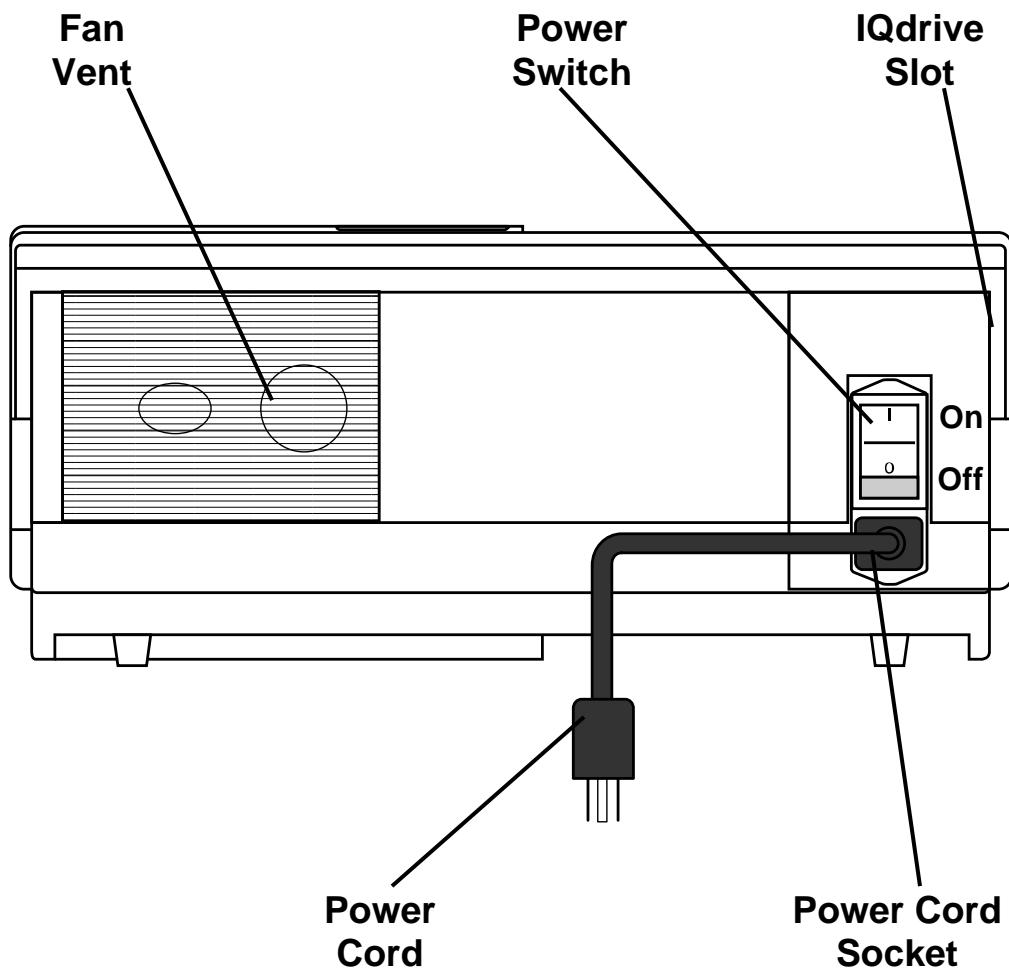
Your Liberty Cycler - Rear View

The Control Panel

Title

My Treatment   My Settings   My Records

LIBERTY®

3/18/2009   1:43 PM

Main Area Title

◀ Back

Details

Next ▶

Touch Screen

Status Bar   **Main Area**   **Button Area**   **Up/Down Arrow Keys**   **OK Key**   **STOP Key**
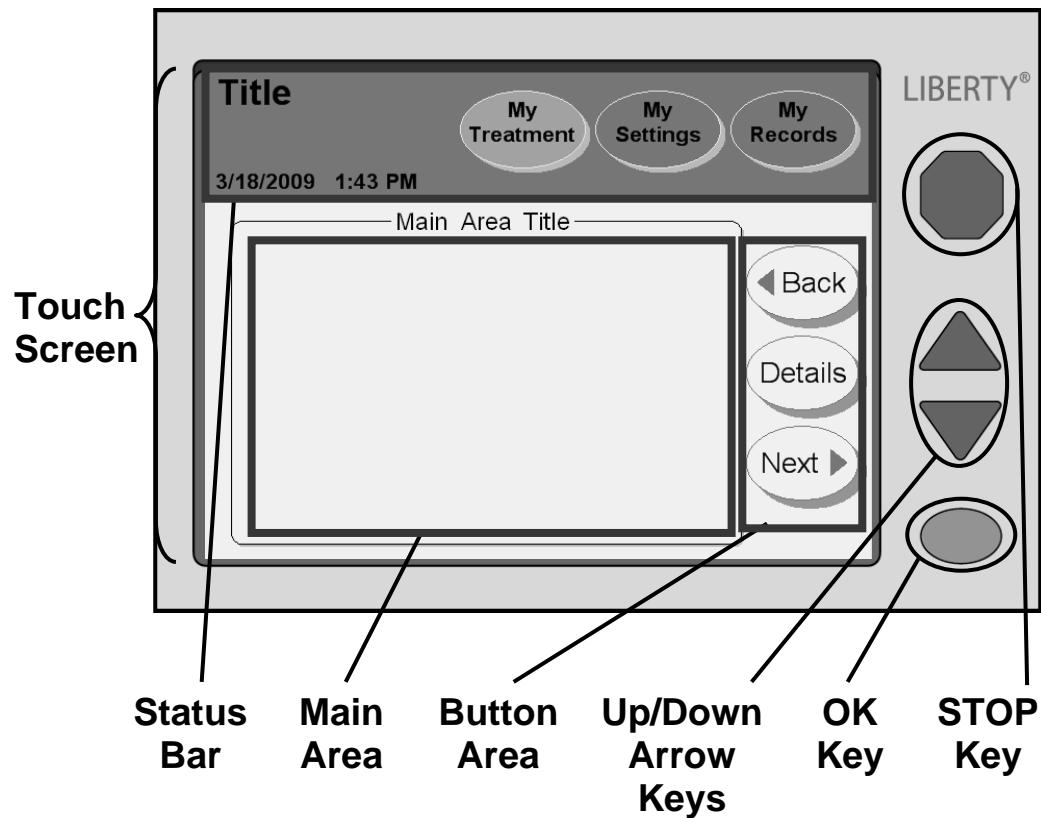
Control Panel

The Control Panel contains all the keys and buttons you need to set up and run your treatment.

Touch Screen

The Touch Screen is a viewing screen that reacts to fingertip pressure. Using the Touch Screen, you may monitor your treatment and select treatment options with Touch Screen Buttons. The different types of Touch Screen Buttons are described on page 28. The Touch Screen may be set to automatically blank the screen after ten minutes to darken the room for sleep (see "Hardware Settings" on page 86). Touch anywhere on the screen to restore the display when desired.

Status Bar

See page 26 for a description of the Status Bar.

Main Area

The Touch Screen Main Area shows information and procedures. You may also make treatment selections there.

Button Area

The Button Area contains movement-buttons like **Next**, **Back**, and **Details**.

Up/Down Arrow keys

The **Up/Down Arrow** (▼/▲) keys are used to raise or lower button values.

OK key

The **OK** key confirms Touch Screen selections. In treatment procedures, the **OK** key also moves you to the next step. During certain actions like Drain and Fill, you may use the **OK** key to bypass that action. Press and hold the **OK** key for about four seconds to display the "Bypass" screen. There you may choose to bypass a phase of your treatment or not (see page 171 for instructions on how to perform bypass).

STOP key

The **STOP** key stops functions on your machine. Pressing the **STOP** key during an audible alarm will silence the alarm for ten minutes.

The Status Bar

Ready

My Treatment   My Settings   My Records

3/18/2009   2:12 PM

Flushing

My Treatment   My Settings   My Records

3/18/2009   9:35 AM

Priming Stopped

My Treatment   My Settings   My Records

3/18/2009   3:16 PM

Scale Warning

My Treatment   My Settings   My Records

3/18/2009   4:24 PM

Heater Alarm

My Treatment   My Settings   My Records

3/18/2009   4:18 PM
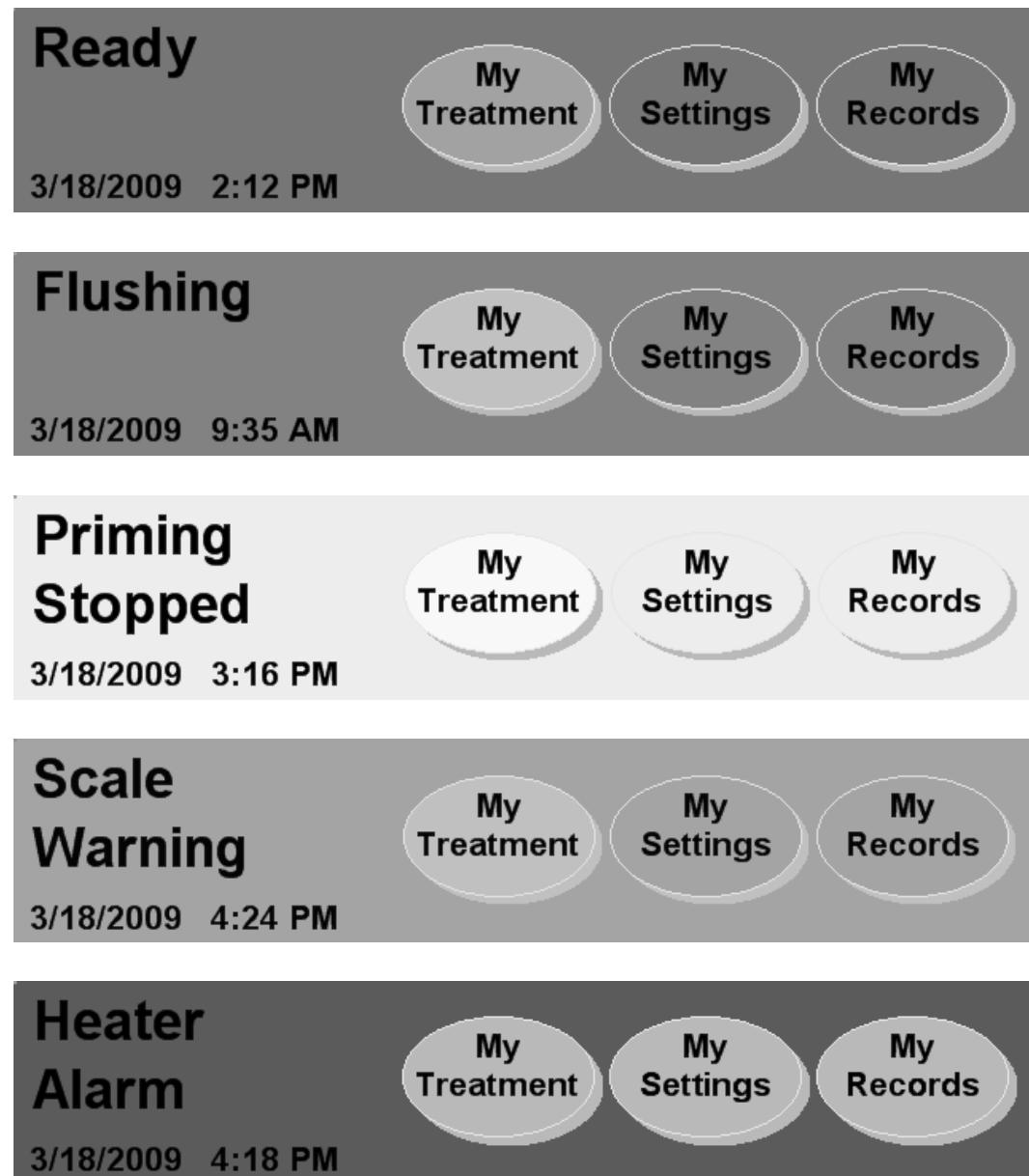
Status Bar

> The Status Bar is located at the top of the Touch Screen. It displays various modes, warnings, alarms, and the date and time. The Status Bar background changes between five different colors to display your machine's conditions (as shown to the left):

Blue

> During normal operation, when no problems have been detected or when no actions (see Green) occur, the Status Bar background is blue.

Green

> When your machine is performing an action such as fill, flush, prime, pause, dwell, or drain, the background changes to green.

Yellow

> The background changes to yellow whenever you press the **STOP** key during an action (see Green). See "Using the STOP key" on page 162.

Orange

> Orange warnings need your immediate attention. During a warning, the Status Bar background changes to orange, the screen-buttons are unavailable, all actions stop, and an audible alarm sounds. Press the **STOP** key to silence the alarm.

Red

> Red background alarms are critical faults in your machine. All actions stop, the screen-buttons are unavailable, and an audible alarm sounds. If the Status Bar changes to red, stop your treatment immediately and call Fresenius Medical Care Technical Support at **1 800 227-2572**. For more information on alarms, see "Warnings and Alarms," on page 184.

Touch Screen Buttons

	Normal Bright color or background color	**Selected** Darker color or lighter background color	**Unavailable or Display Only** Gray or light blue
Screen-Buttons	My Treatment therapy	My Treatment therapy	My Treatment
Movement-Buttons	Details Next ▶		
Parameter-Buttons	CCPD dwell time 1 hr 30 min	CCPD dwell time 1 hr 30 min	CCPD dwell time 1 hr 30 min

(i) **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

Buttons Overview

Buttons are shapes with text in them on the Touch Screen. Buttons perform certain actions when touched.

Screen-Buttons

Screen-buttons are oval shaped. They are usually located along the top of the Touch Screen in the Status Bar. Screen-buttons act as a 'doorway' to another set of screens. When you touch a screen-button, it turns to a lighter color and its screen is displayed. Screen-buttons are the same color as the Status Bar's background. Grayed-out screen-buttons are unavailable. Screen-buttons also appear in the "Settings" screen as tabs along the top of the Main Area. See the next page for more information about each of the Status Bar screen-buttons.

Movement-Buttons

Movement-buttons are light-blue, oval shaped buttons. They are usually located in the button area of the Touch Screen. Movement-buttons move you from a screen to its sub-screen and back. For example, in a "Treatment" screen, the Details movement-button will move you to a screen showing the "Treatment" screen's details.

Parameter-Buttons

Parameter-buttons are light yellow rectangles that display treatment values. When you touch a parameter-button, it turns orange, allowing you to edit the parameter it displays. Depending on the button, you may edit that parameter either directly or through another screen using other keys and buttons. Grayed-out parameter-buttons are unavailable options. Blue parameter-buttons are not editable, they display parameters affected by other active parameter-buttons.

Navigating With Screen-Buttons
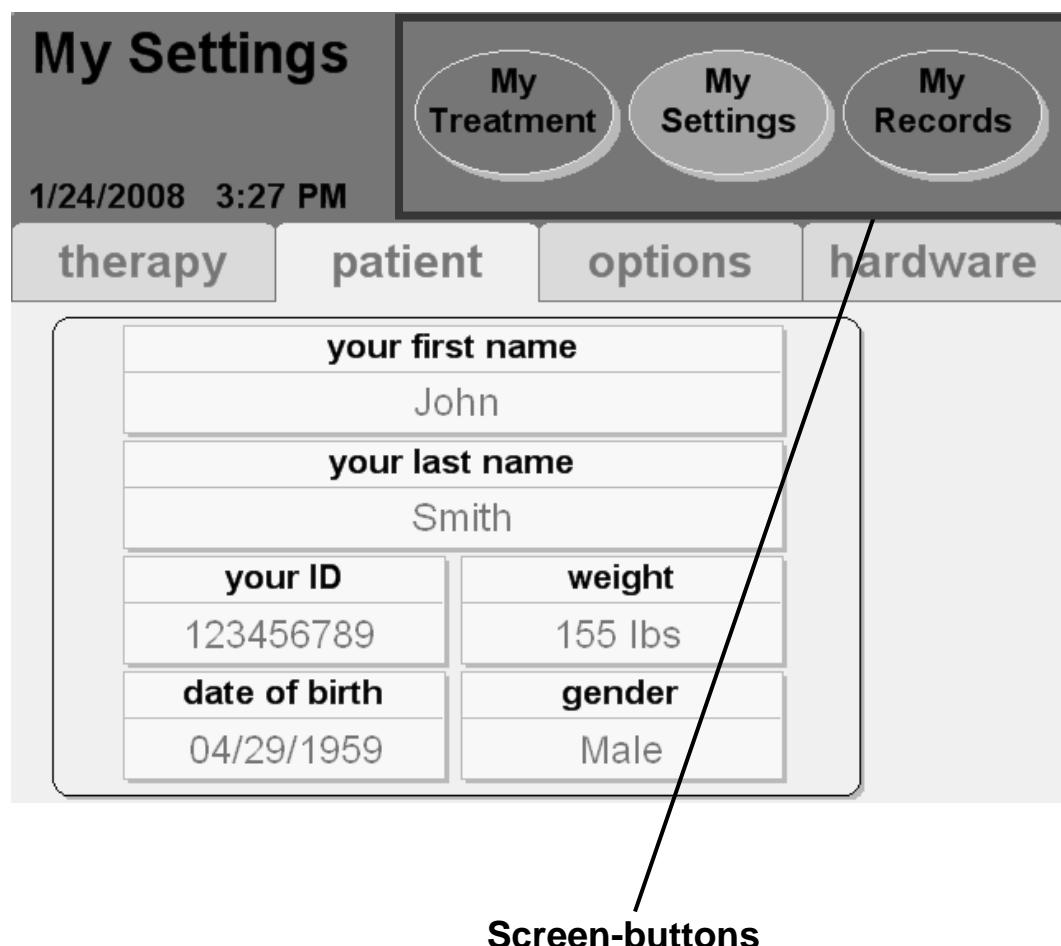
Screen-buttons

Note: The values shown here are for example only. You must use the values prescribed by your doctor.

My Treatment

The **My Treatment** screen-button runs your selected treatment procedure. See "Starting Your Treatment," on page 92, for more information.

My Settings

The **My Settings** screen-button allows you to edit various settings. In the "Settings" screens, you may enter treatment parameters, patient information, and software and hardware options. See "Setting Your Treatment Parameters," on page 47-87 , for instructions on entering your treatment parameters.

My Records

The **My Records** screen-button allows you to view your current treatment data and treatment data from past treatments. For more information, see "The My Records Screen-Button," on page 156.

The Pump Module

Door Sensor **Cassette Guide Pins** **Cassette Pump Plate** **Door Latch**

Safety Clamp **Pressure Sensor** **Valves** **Cassette Catch** **Pump Heads** **Cassette Door**
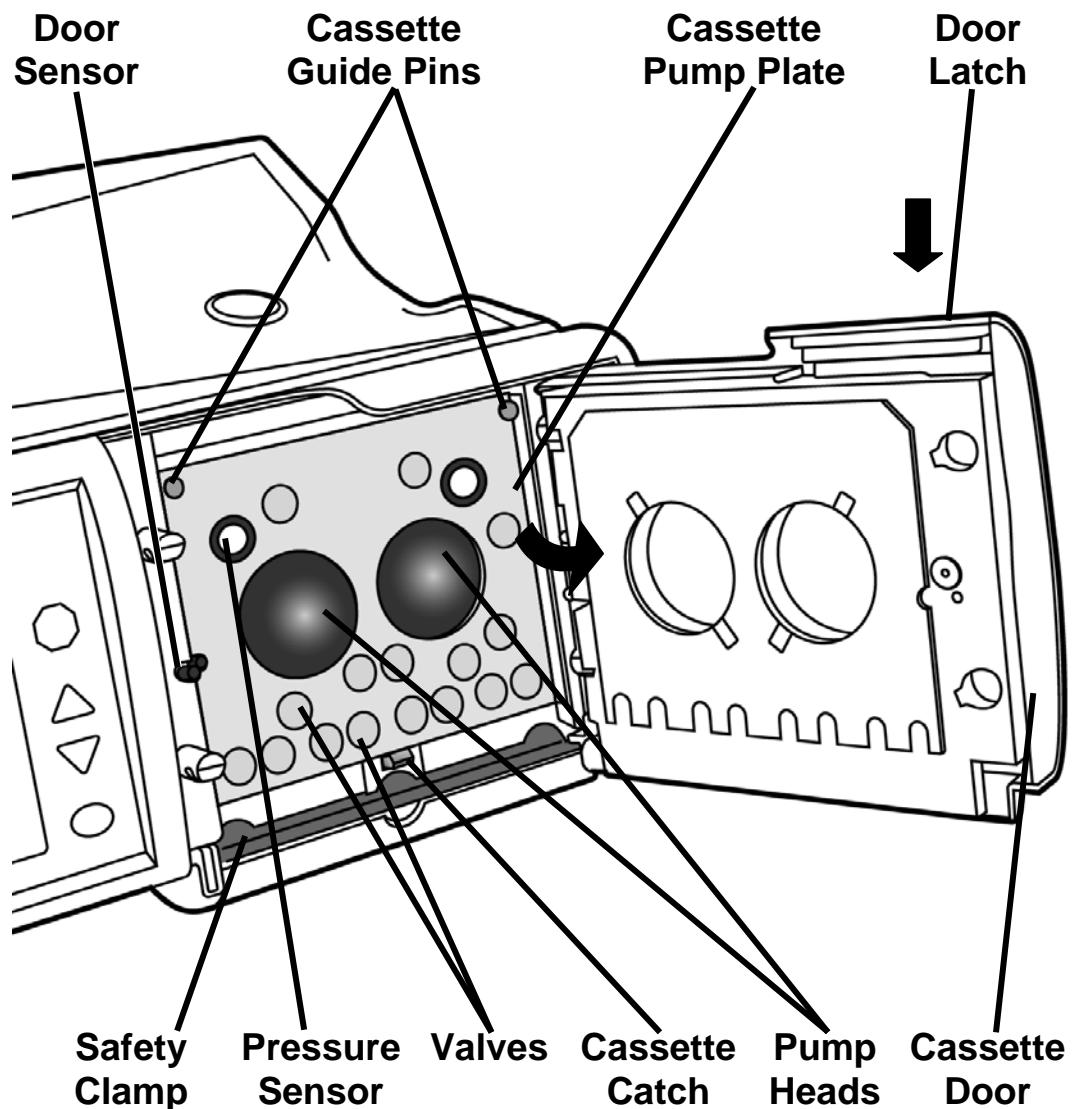
Pump Module

The Pump Module is responsible for moving dialysate solution to and from your body. It controls the valves and pumping chambers in the cassette.

Door Sensor

The Door Sensor tells the machine when the door is open or closed.

Caution: Do not touch the door sensor. Doing so will cause your machine to sense a closed door, pressurizing the cassette door.

Safety Clamp

The Safety Clamp is a metal bar that instantly clamps all the cassette tubing during an alarm. If the Safety Clamp is sticking out, you will not be able to insert the cassette properly. Turn the machine off. Wait 10 seconds and turn it back on. This will retract the Safety Clamp, and you can now insert the cassette.

Pressure Sensors

The Cassette Pump Plate also features two white pressure sensors to monitor you during treatment.

Caution: Do not touch the white pressure sensors in the Pump Module. Pressing on the pressure sensors may cause serious damage to them.

Cassette Guide Pins and Cassette Catch

When the cassette is inserted during set up it fits up and under the metal pins at the top of the Cassette Pump Plate. At the bottom of the Cassette Pump Plate, the Cassette Catch holds the bottom of the cassette in place. The cassette should hang freely from the edge of the Liberty cycler.

Cassette Pump Plate

The Cassette Pump Plate is a thick metal partition. The pumps and valves are located behind the plate and they push through the holes in it to compress the cassette.

Caution: When the cassette is properly inserted in your machine, the domes will face outward. If you insert the cassette in your machine the wrong way, it may damage your machine.

Cassette Door

The Cassette Door holds the cassette in place against the Cassette Pump Plate when locked.

Door Latch

The Door Latch locks the Pump Door. During treatment, do not attempt to unlatch the Pump Door unless instructed to do so.

⚠	**Warning**: **Keep fingers clear of moving parts**.

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The Cassette and Tubing Set

stay•safe PIN connector 1

stay•safe PIN connector 2

| stay•safe PIN Connector | Patient Line (Blue Clamp) | Last Bag (Green Clamp) | Solution Bags (White Clamp) | Heater Bag (Red Clamp) | Drain (Yellow Clamp) |
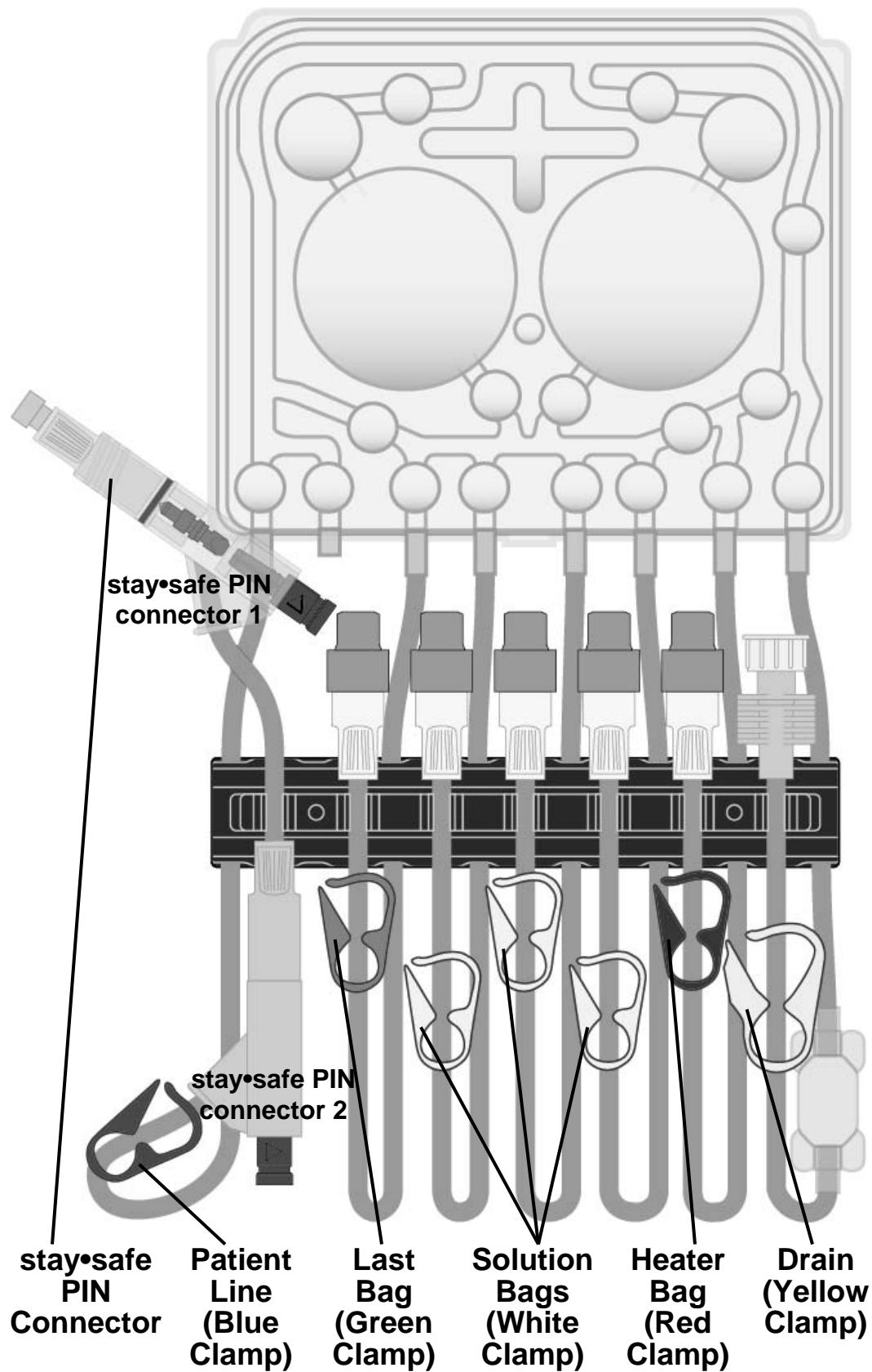
Cassette

All clean dialysate and cleared waste pass through a disposable sterile tubing set that is discarded after each treatment. The hard plastic piece that is inserted into your cycler is called a cassette. The cassette has two large, plastic domes. When the cycler pushes in on the membrane behind them, fluid moves through the lines. The cassette also has smaller domes or valves that, when compressed, open or close a fluid path-way.

Below the cassette is an attached tubing set that varies by model number. A dark blue tubing organizer holds each of the following lines in place while you connect:

stay•safe PIN Connector

The stay•safe PIN connector is on the Patient Line (blue clamp). There is a blue PIN at the end and a blue PIN inside the connector. When you press the blue PIN, the PIN inside closes the line without you having to touch it. Do not push in the PIN until instructed to do so. When it is time to do so, you will turn the PIN on the patient connector clockwise ¼ turn and firmly push in the blue button. The PIN will be released and introduced into the catheter extension set automatically.

Patient Line (blue clamp)

The Patient Line has a blue clamp. It connects to your catheter extension set. **The blue clamp must remain open throughout the cycler setup and treatment.**

Green Last Bag Line

The Bag 4 Line has a green clamp. It connects to your last bag if needed. The last bag may be used for more solution or a different solution for your last fill.

White Solution Bag Line 3

The Bag 3 Line has a white clamp. It connects to your third bag if needed.

White Solution Bag Line 2

The Bag 2 Line has a white clamp. It connects to your second bag if needed.

White Solution Bag Line 1

The Bag 1 Line has a white clamp. It connects to your first bag if needed.

Red Heater Bag Line

The Heater Bag Line has a red clamp. It connects to the dialysate solution bag on the Heater Tray.

Yellow Drain line

The Drain Line has a yellow clamp. It connects to your drain line or, if desired, the drain bag set. The drain line also has a clear 'pillow' that allows you to check the fluid for clarity or fibrin as it is pumped to the drain.

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The stay•safe Organizer

Insert below
Control Panel

stay•safe®

New Cap

Extension

| New Cap Holder | stay•safe Organizer Clip | Tubing Channel | Extension Cap Holder |
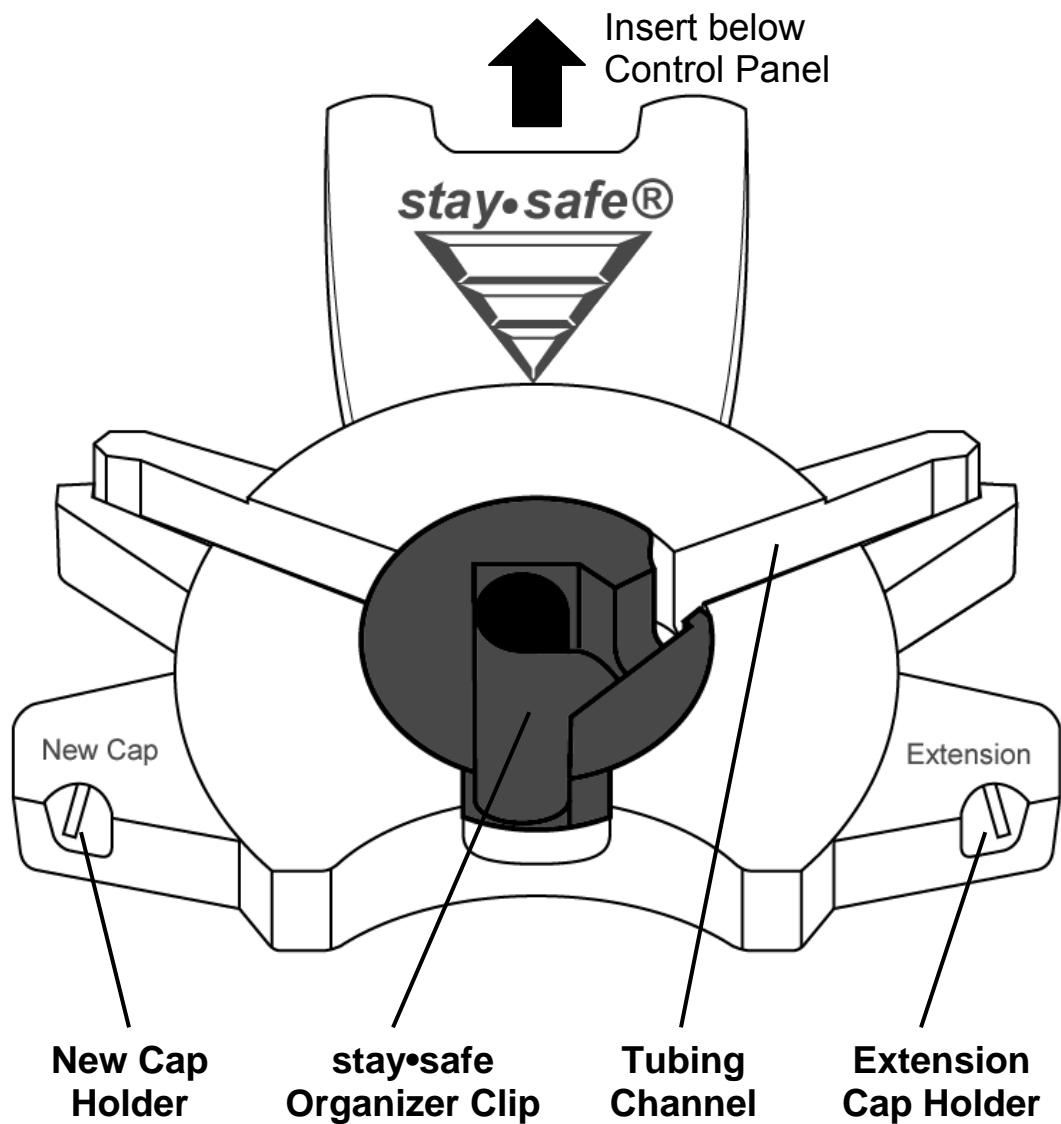
The stay•safe Organizer

When you use aseptic technique in your treatment, you reduce the risk of infections. The Liberty Cycler set includes stay•safe PIN connectors that encourage aseptic technique. Insert the stay•safe PIN connector onto the mounting tab on your cycler below the Control Panel. Your Liberty Cycler set will be ready to hold your stay•safe PIN connector during your treatment setup. For more information about the stay•safe PIN connector, see page 36.

New Cap Holder

Insert a new stay•safe cap into this holder to keep it clean while using both hands to set up your lines. This is a reminder to help you remember to always use a new stay•safe cap every treatment.

stay•safe Organizer Clip

The stay•safe PIN connector on the patient line (blue clamp) fits into this holder. The organizer clip keeps it in place so you can connect yourself to it when your cycler instructs you to. Do not depress the PIN connector when placing it into the stay•safe organizer clip during set up.

Tubing Channel

The tubing that leads to the cassette goes here. When you place the tubing in the Tubing Channel, it helps hold the line in place. Be sure to press the tubing in firmly to prevent it from popping out of the tubing channel.

Extension Cap Holder

The Extension Cap Holder holds a used cap in place as you remove it from the end of your extension line. Insert the used cap while connected, untwist it, and connect the line to a new stay•safe patient connector.

The Heater Tray

**Heater
Tray/Scale**

**Bag
Sensor**
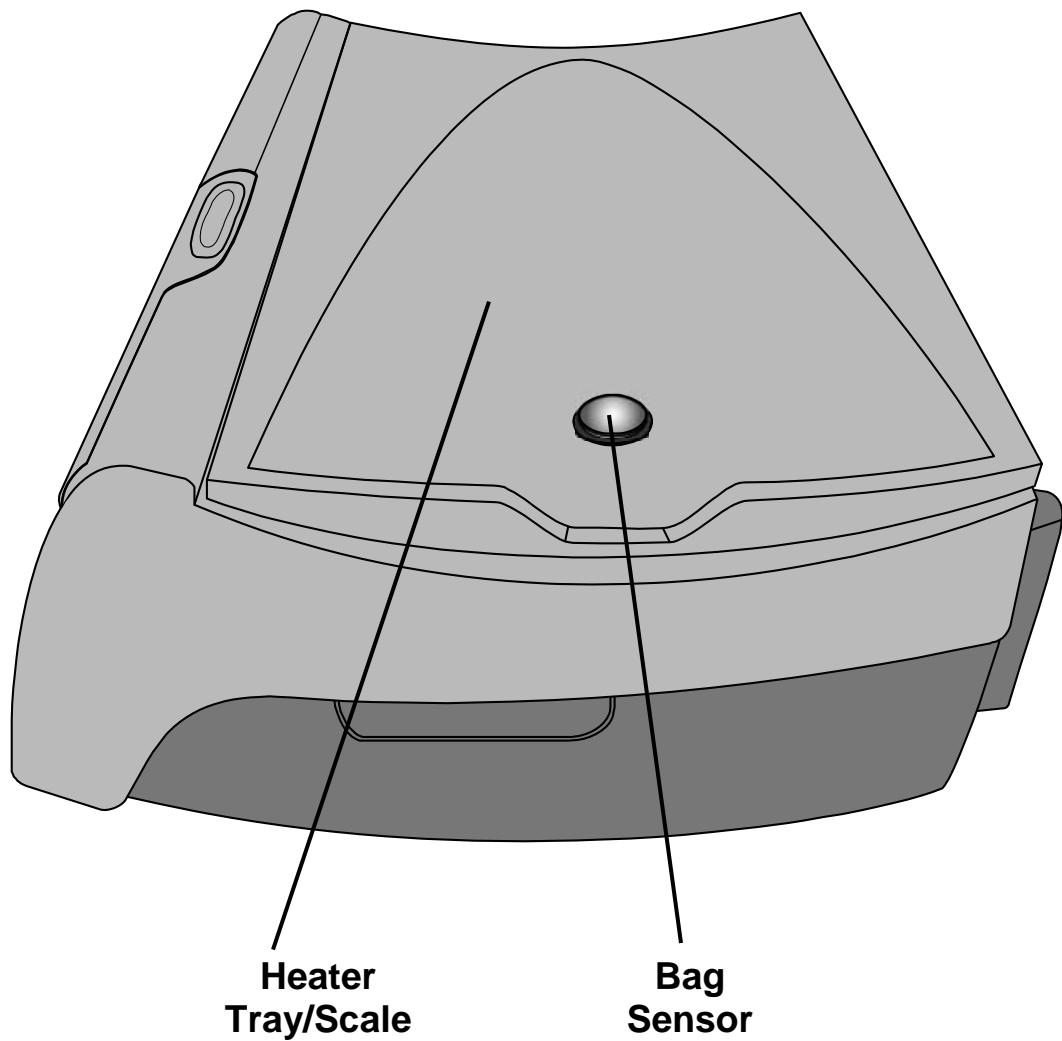
Heater Tray/Scale

The Heater Tray warms the dialysate solution-filled heater bag to a set temperature in about 20 minutes (6 L bag may take up to 30 minutes). The Heater Tray also operates as a scale, weighing the heater bag.

Warning: Make certain that the Heater Tray is free of obstructions and does not touch the top of your cycler's cabinet (there should be an even gap all the way around the Heater Tray). Interference with the Heater Tray may result in inaccurate dialysate weighing and possible patient injury.

Warning: During the heating process, the Heater Tray can get as hot as 50 °C (122 °F). Do not come into contact with the Heater Tray as it may cause injury.

Caution: Do not lift your machine by the heater tray/scale. Doing this may damage the scale.

Caution: Do not place items other than solution bags on the Heater Tray.

Caution: Do not overload the scale. Weight greater than 15 kg (33 lbs.) or three 5000 mL solution bags may damage your machine.

Bag Sensor

The Bag Sensor measures the temperature of the dialysate solution heater bag.

Setting up Your Liberty Cycler

3

4

2

1

Lift by handles
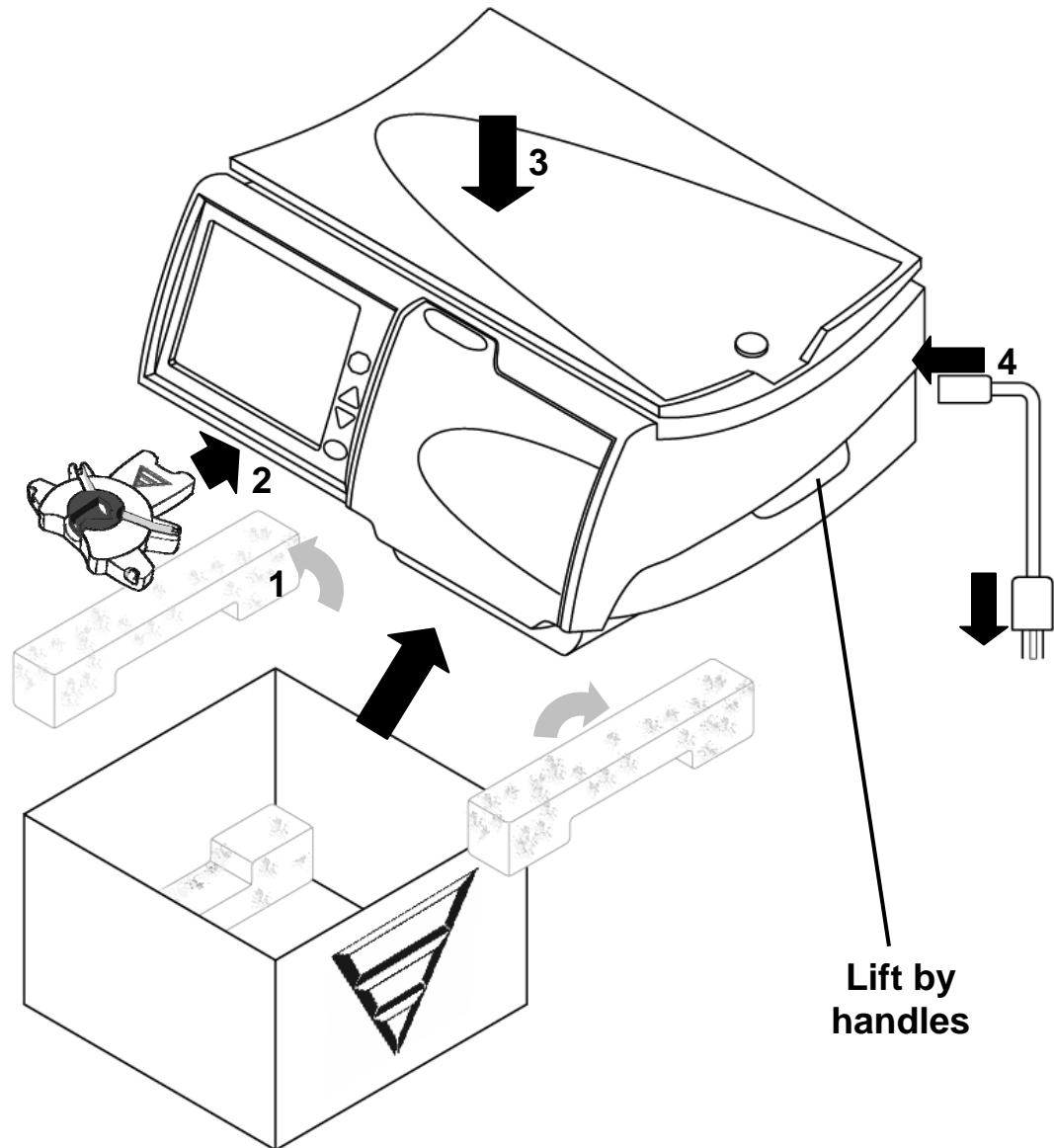
Setting up your Liberty Cycler

Your Liberty cycler is easy to set up. Follow the instructions below:

1 Remove your Liberty cycler from box
- Pull out the blue foam.
- Pull dust cover aside.
- Pick up your cycler by both handles on either side.
- Carefully lift your cycler out of its shipping box. Set it on a stable, level surface such as a table with the screen facing you.
- Keep all foam and packaging in case your cycler needs to be repacked.
- Position your cycler near the edge of the table or cart so the tubing from the cassette will be able to hang down without kinking.
- Make sure that the top of the cycler is no more than 12 inches higher or lower than your bed.

Warning: Use proper lifting techniques: lift with your knees and not your back.

Caution: Do not lift your machine by the heater tray/scale. Doing this may damage the scale.

Caution: Make certain the vent on the back of your machine is free of obstructions.

2 Connect stay•safe Organizer

Push the stay•safe Organizer onto the mounting tab below the Control Panel.

3 Check heater tray on cycler cabinet

Warning: Make certain that the Heater Tray is free of obstructions and does not touch the top of your cycler's cabinet (i.e. there is a level gap between the tray and the cabinet all the way around the cycler; see page 22 for a picture identifying the cabinet and Heater Tray). Interference with the Heater Tray may result in inaccurate dialysate weighing and possible patient injury.

4 Plug in machine

Plug the machine end of the power cord firmly into the power socket on the back of your machine. Plug the outlet end of the cord into a 120V three-prong power outlet. See page 48 for a picture of the back of your machine.

Warning: If you are unable to insert the plug in its socket and an outlet, contact Technical Support at 1 800 227-2572. Do not alter the power cord. Your machine must be plugged directly into the electrical outlet; do not use extension cords or power strips.

This Page is Intentionally Blank

My Settings

Entering Your Prescription

On

Off

1
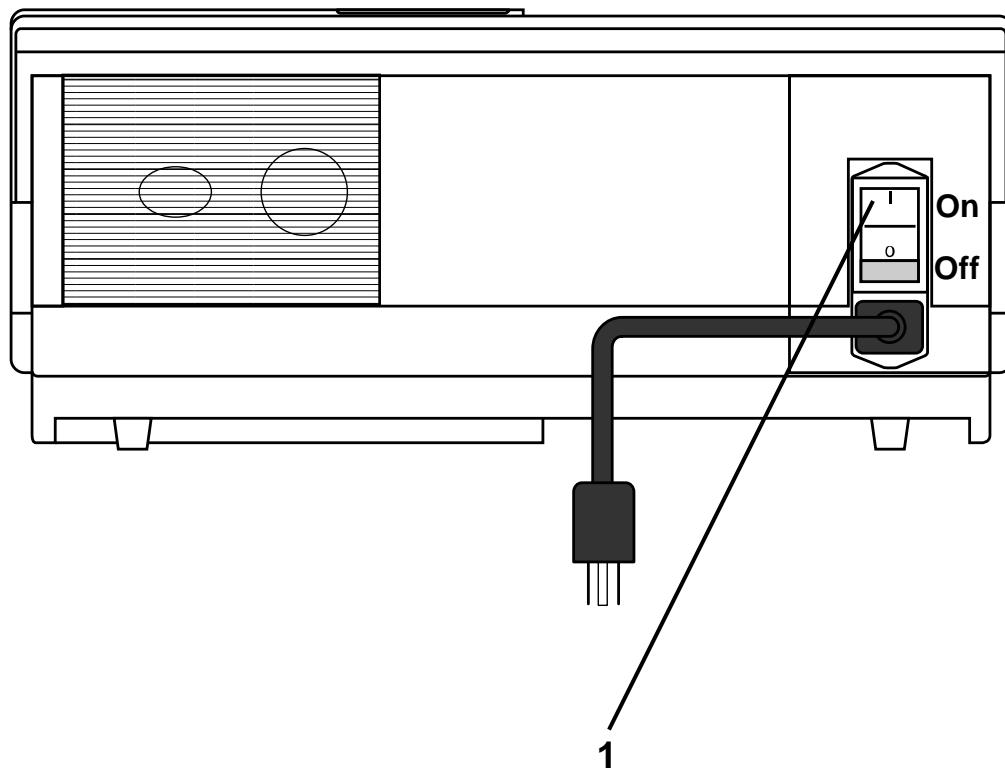
Entering your prescription

Before you start your first treatment, you will need to enter the treatment parameters that your doctor has prescribed. You do not need to do this again unless your prescription changes.

If your healthcare staff has provided an IQdrive and the USB option is set to YES (see "Options Settings," on page 84), you may insert the IQdrive into the back of your machine at this time. See "Using the IQdrive," on page 172 for more information on inserting the IQdrive.

The numbered items in the picture on the left match the numbered steps listed on this page. Do each step in order and pay close attention to Note, Caution, and Warning statements.

1 Flip power switch to ON

Locate the white power switch on the back of your machine and set it to the ON position. The "Ready" screen will appear on the Touch Screen shortly.

Setting Your Treatment Parameters
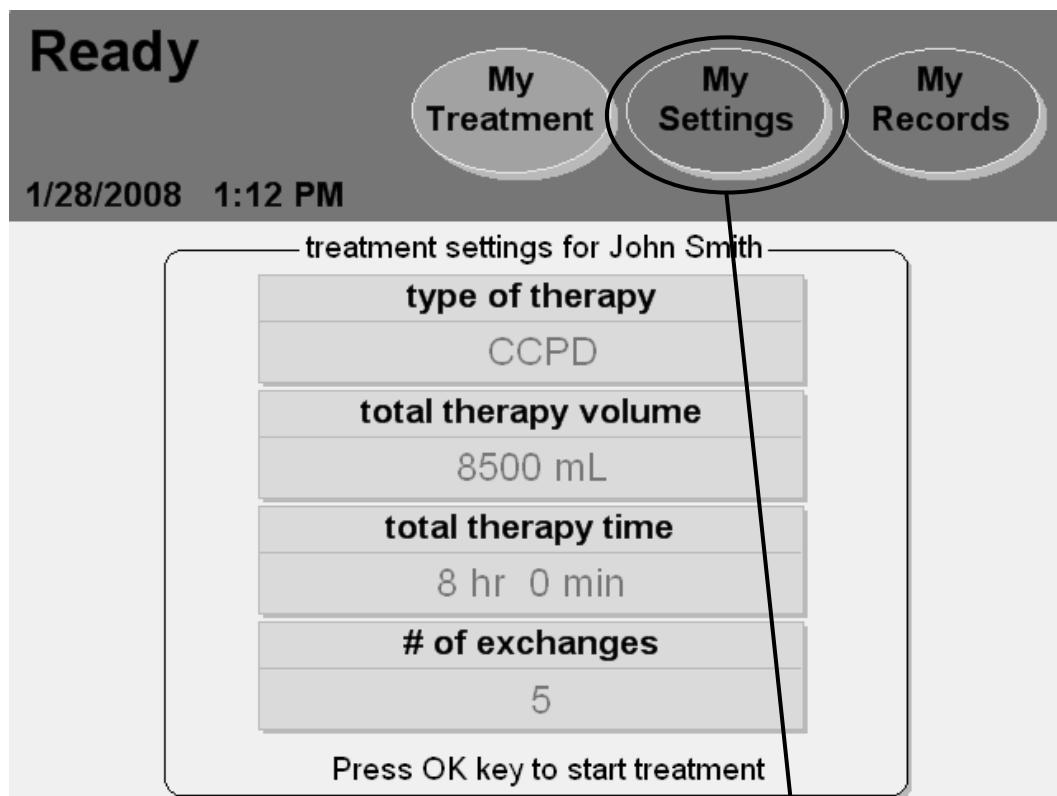
Ready   My Treatment   My Settings   My Records

1/28/2008   1:12 PM

treatment settings for John Smith

type of therapy
CCPD

total therapy volume
8500 mL

total therapy time
8 hr 0 min

# of exchanges
5

Press OK key to start treatment

2

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

(i) **Note**: If your name and treatment parameters are already displayed on this screen, you do not need to enter them yourself. You may begin your treatment by turning to page 90.

2 Touch (My Settings)

The first time you start your machine, the "Ready" screen will display default treatment values for an "Unknown" patient.

Before you start your first treatment, you must enter your own prescribed treatment parameters if they have not been programmed with the IQdrive. Use the parameters from the "My Treatment Parameters" sheet on page 2, or follow your healthcare staff's instructions.

To begin entering your treatment settings, touch the **My Settings** screen-button. You will then go to the "My Settings" screen.

(i) **Note**: If the 'USB enabled' option under "My Settings: Options" is set to YES and an IQdrive is correctly inserted into the IQdrive slot on your cycler, this screen might not be immediately displayed. See "Using the IQdrive," on page 172 for more information.

(i) **Note**: If the USB enabled option is set to YES but an IQdrive is not inserted into the IQdrive slot on your cycler, your treatment data will be saved only to your cycler and not the IQdrive.

(i) **Note**: If you are using the IQdrive to program your treatment, you do not need to enter your therapy information. Turn to page 74 to enter your patient, options, and hardware settings.

Select Therapy Tab

3   **4**
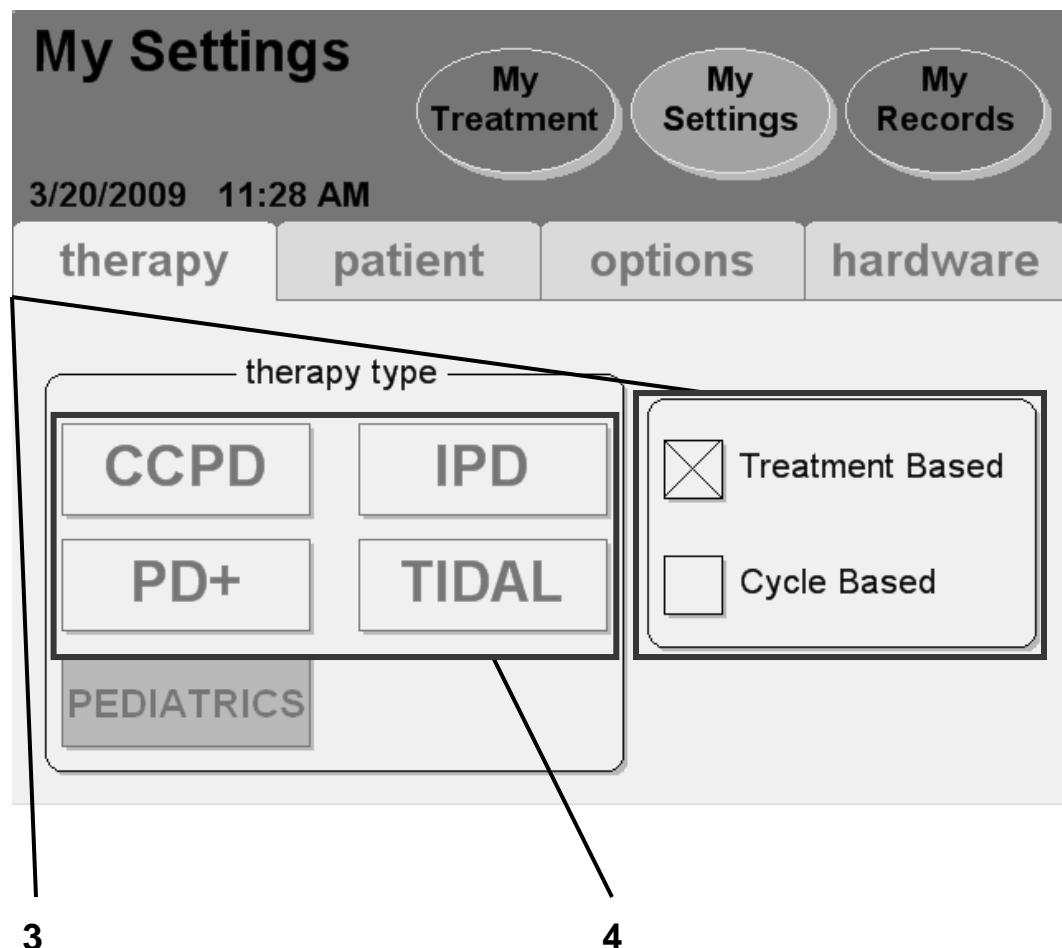
3 Select program mode

The "My Settings" screen displays your available therapy options.

Touch the program mode your prescription is based upon: Cycle based or Treatment based. A large 'X' will indicate the selected program mode.

Treatment Based means that you set your total treatment time. Your cycler will deliver your treatment in the specified amount of time. This mode is useful for people that need to finish treatment by a certain time in order to meet other obligations such as going to work.

Cycle Based means that your cycler will always dwell for the amount of time you set. This is used to make sure you receive the specific amount of dwell time to allow adequate removal of filter waste products and excess fluid. Your total treatment time may vary depending on how you drain and fill or if you have any alarms.

Patients may experience fewer drain complication alarms using Treatment Based than Cycle Based therapy. If you are in Cycle Based therapy and experiencing drain complications you may want to discuss switching therapy types with your doctor or PD nurse.

4 Select therapy type

Touch the button matching your prescribed treatment. You will then move to the corresponding screen. Turn to the corresponding page listed below:

- **CCPD: Treatment Based**—Turn to page 54
- **CCPD: Cycle Based**—Turn to page 56
- **IPD: Treatment Based**—Turn to page 58
- **IPD: Cycle Based**—Turn to page 60
- **PD+: Treatment Based**—Turn to page 62
- **PD+: Cycle Based**—Turn to page 64
- **TIDAL: Treatment Based**—Turn to page 66
- **TIDAL: Cycle Based**—Turn to page 70
- **PEDIATRICS**—Not available at this time

See page 124 for information on the different therapy types.

⚠ **Warning**: The values and selections shown in pictures here are for example only. You must enter the values prescribed by your doctor; see "My Treatment Parameters," page 2.

CCPD: Treatment-Based Settings
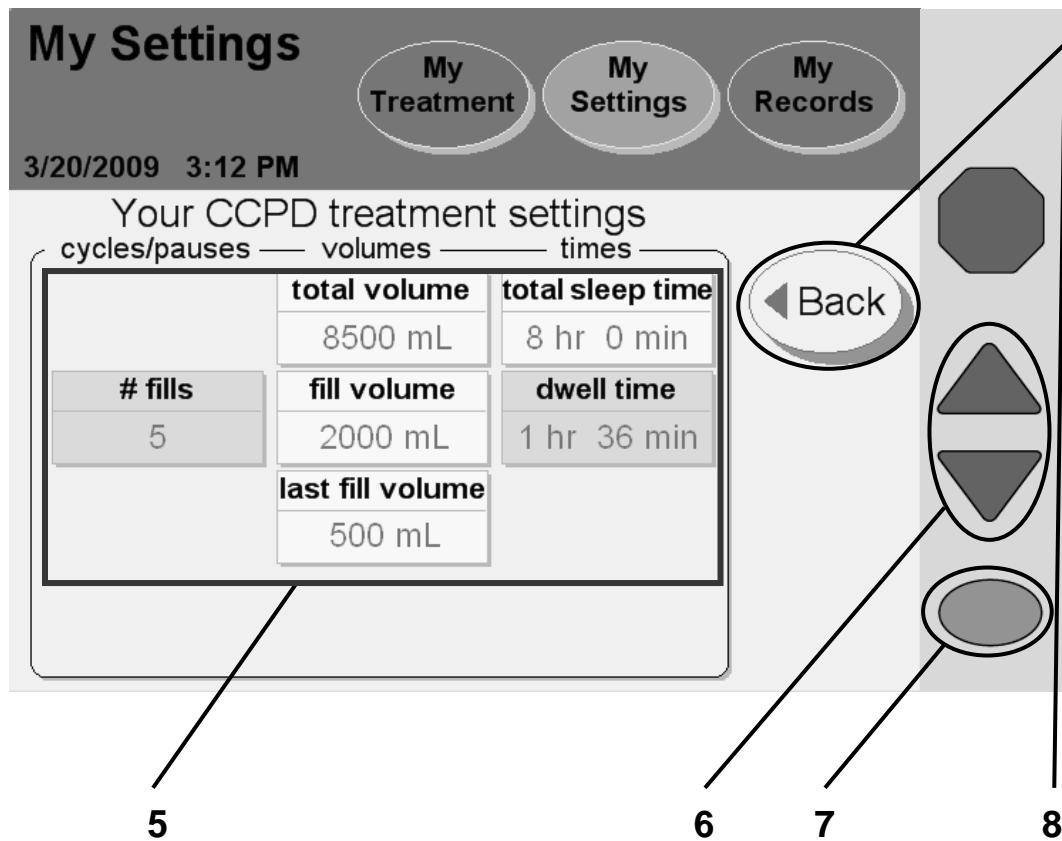
My Settings

My Treatment | My Settings | My Records

3/20/2009   3:12 PM

Your CCPD treatment settings

cycles/pauses —— volumes —————— times

	total volume	total sleep time
	8500 mL	8 hr 0 min
# fills	**fill volume**	**dwell time**
5	2000 mL	1 hr 36 min
	last fill volume	
	500 mL	

◀ Back

5   6   7   8

(i) **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

> **(i)** **Note**: If your prescription is for cycle-based therapy, this screen will display different options. Turn to page 56 for cycle-based CCPD.

5 Select values

Touch the yellow button to select the value it displays:

- **Total volume**—The amount of dialysate used for your entire treatment
- **Fill volume**—The amount of every Fill (except last)
- **Last fill volume**—The amount of your last Fill
- **Total sleep time**—Estimated sum of all Drain, Fill, and Dwell time during the treatment

> **(i)** **Note**: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

> **(i)** **Note**: If the 'last bag option' was set to YES, the last fill volume button will instead be last bag fill volume. If you need to set the last bag option, see "Options Settings," on page 84.

6 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

7 Press (OK)

Press the **OK** key to confirm and save your settings.

8 Touch (Back)

Touch the **Back** button to return to the "My Settings" main screen.

Skip to page 74 to enter your personal Patient Settings.

CCPD: Cycle-Based Settings
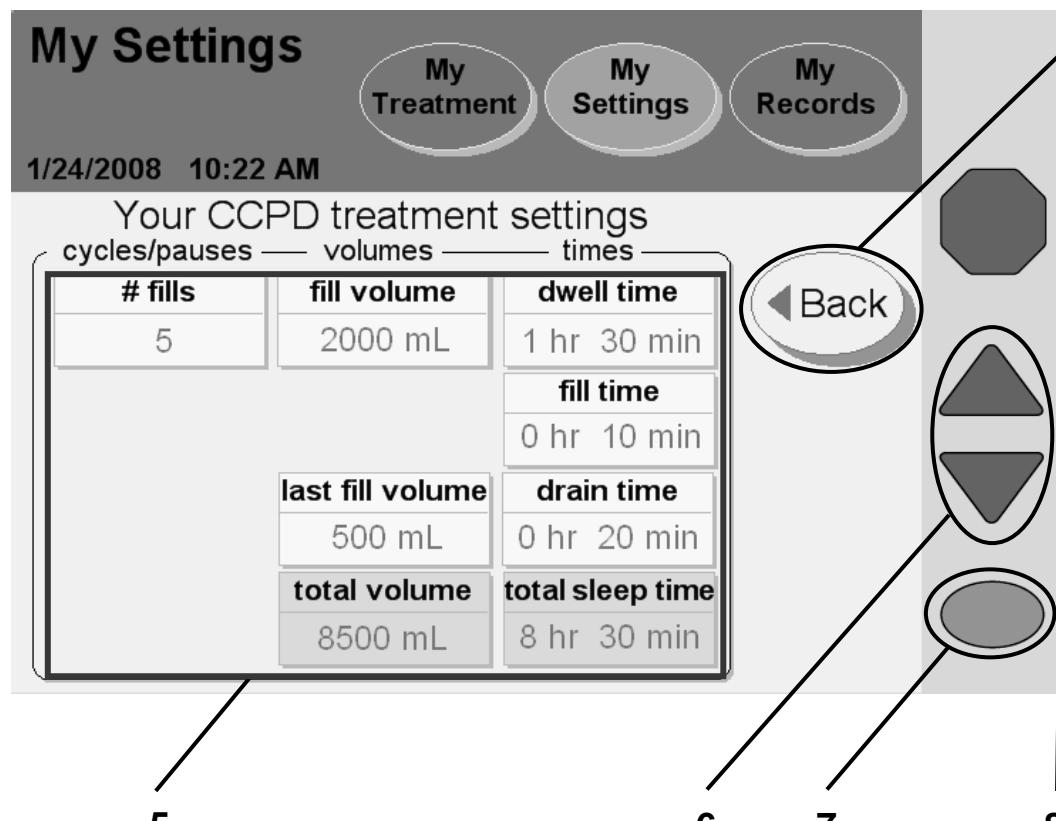
My Settings

My Treatment | My Settings | My Records

1/24/2008 10:22 AM

Your CCPD treatment settings

cycles/pauses —— volumes —— times

# fills	fill volume	dwell time
5	2000 mL	1 hr 30 min

		fill time
		0 hr 10 min

last fill volume	drain time
500 mL	0 hr 20 min

total volume	total sleep time
8500 mL	8 hr 30 min

◀ Back

5   6   7   8

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

> **(i)** **Note**: If your prescription is for treatment-based therapy, this screen will display different options. Turn to page 54 for treatment-based CCPD.

5 Select values

Touch the yellow button to select the value it displays:
- **# fills**—Number of Fills during treatment
- **Fill volume**—The amount of every Fill (except last)
- **Last fill volume**—The amount of your last Fill
- **Dwell time**—The amount of time the dialysate Dwells in you
- **Fill time**—The amount of time available to Fill you
- **Drain time**—The amount of time available to Drain you after a Dwell

> **(i)** **Note**: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

> **(i)** **Note**: If the 'last bag option' was set to YES, the **last fill volume** button will instead be **last bag fill volume**. If you need to set the last bag option, see "Options Settings," on page 84.

6 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

7 Press (OK)

Press the **OK** key to confirm and save your settings.

8 Touch (Back)

Touch the **Back** button to return to the "My Settings" main screen.

Skip to page 74 to enter your personal Patient Settings.

IPD: Treatment-Based Settings
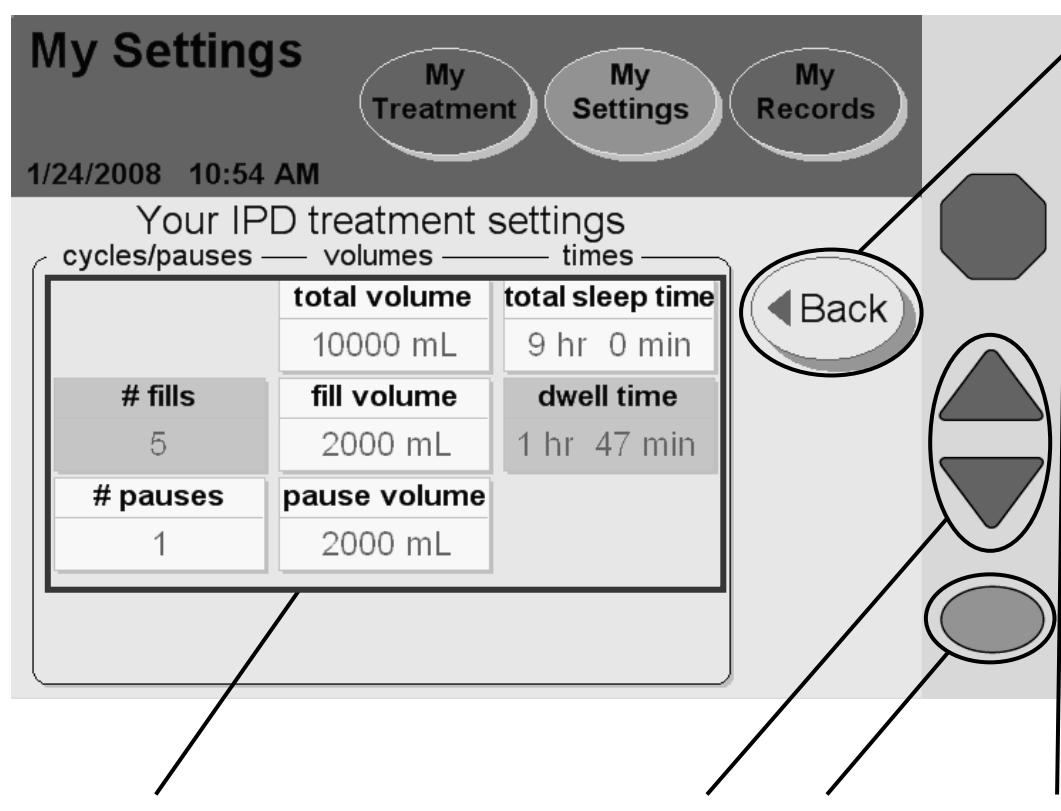
My Settings

| My Treatment | My Settings | My Records |

1/24/2008   10:54 AM

Your IPD treatment settings

cycles/pauses	volumes	times
	total volume	total sleep time
	10000 mL	9 hr 0 min
# fills	fill volume	dwell time
5	2000 mL	1 hr 47 min
# pauses	pause volume	
1	2000 mL	

◀ Back

5   **6**   **7**   **8**

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

Note: If your prescription is for cycle-based therapy, this screen will display different options. Turn to page 60 for cycle-based IPD.

5 Select values

Touch the yellow button to select the value it displays:

- **# pauses**—Number of Pauses during treatment
- **Total volume**—The amount of dialysate used for your entire treatment
- **Fill volume**—The amount of every Fill
- **Pause volume**—How much you are to be Filled with each Pause
- **Total sleep time**—Estimated sum of all Drain, Fill, and Dwell time during your treatment

Note: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

Note: If the 'last bag option' was set to YES, the last **fill volume** button will instead be **last bag fill volume**. If you need to set the last bag option, see "Options Settings," on page 84.

6 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

7 Press ⓞⓚ

Press the **OK** key to confirm and save your settings.

8 Touch ⓑⓐⓒⓚ

Touch the **Back** button to return to the "My Settings" main screen.

Skip to page 74 to enter your personal Patient Settings.

IPD: Cycle-Based Settings
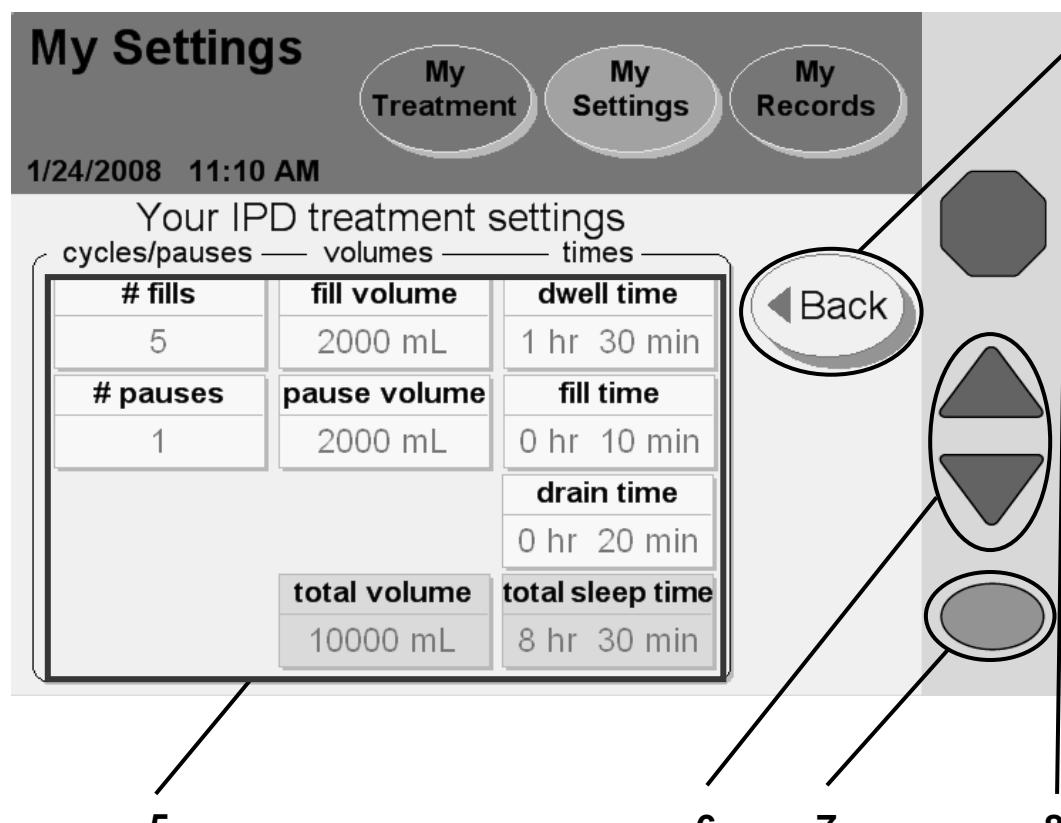
My Settings

My Treatment | My Settings | My Records

1/24/2008   11:10 AM

Your IPD treatment settings

cycles/pauses ——— volumes ——— times

# fills	fill volume	dwell time
5	2000 mL	1 hr 30 min

# pauses	pause volume	fill time
1	2000 mL	0 hr 10 min

		drain time
		0 hr 20 min

	total volume	total sleep time
	10000 mL	8 hr 30 min

◀ Back

5   6   7   8

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

> ⓘ **Note**: If your prescription is for treatment-based therapy, this screen will display different options. Turn to page 58 for treatment-based IPD.

5 Select values

Touch the yellow button to select the value it displays:
- **# fills**—Number of Fills during treatment
- **# pauses**—Number of Pauses during treatment
- **Fill volume**—The amount of every Fill
- **Pause volume**—How much you are to be Filled with each Pause
- **Dwell time**—The amount of time the dialysate Dwells in you
- **Fill time**—The amount of time available to Fill you
- **Drain time**—The amount of time available to Drain you after a Dwell

> ⓘ **Note**: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

6 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

7 Press OK

Press the **OK** key to confirm and save your settings.

8 Touch Back

Touch the **Back** button to return to the "My Settings" main screen.

PD+: Treatment-Based Settings

My Settings

My Treatment   My Settings   My Records

1/24/2008   11:21 AM

Your PD+ treatment settings

cycles/pauses ——— volumes ——— times

	total volume	total sleep time
	10500 mL	8 hr 00 min
# fills	**fill volume**	
6	2000 mL	
# pauses	**pause volume**	**dwell time**
1	2000 mL	1 hr 31 min
	last fill volume	
	500 mL	

◀ Back

5   6   7   8

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

> (i) **Note**: If your prescription is for cycle-based therapy, this screen will display different options. Turn to page 64 for cycle-based PD+.

5 Select values

Touch the yellow button to select the value it displays:

- **# pauses**—Number of Pauses during treatment
- **Total volume**—The amount of dialysate used for your entire treatment
- **Fill volume**—The amount of every Fill (except last)
- **Pause volume**—How much you are to be Filled with each Pause
- **Last fill volume**—The amount of your last Fill
- **Total sleep time**—Estimated sum of all Drain, Fill, and Dwell time during your treatment

> (i) **Note**: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

> (i) **Note**: If the 'last bag option' was set to YES, the last fill volume button will instead be last bag fill volume. If you need to set the last bag option, see "Options Settings," on page 84.

6 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

7 Press OK

Press the **OK** key to confirm and save your settings.

8 Touch Back

Touch the **Back** button to return to the "My Settings" main screen.

Skip to page 74 to enter your personal Patient Settings.

PD+: Cycle-Based Settings
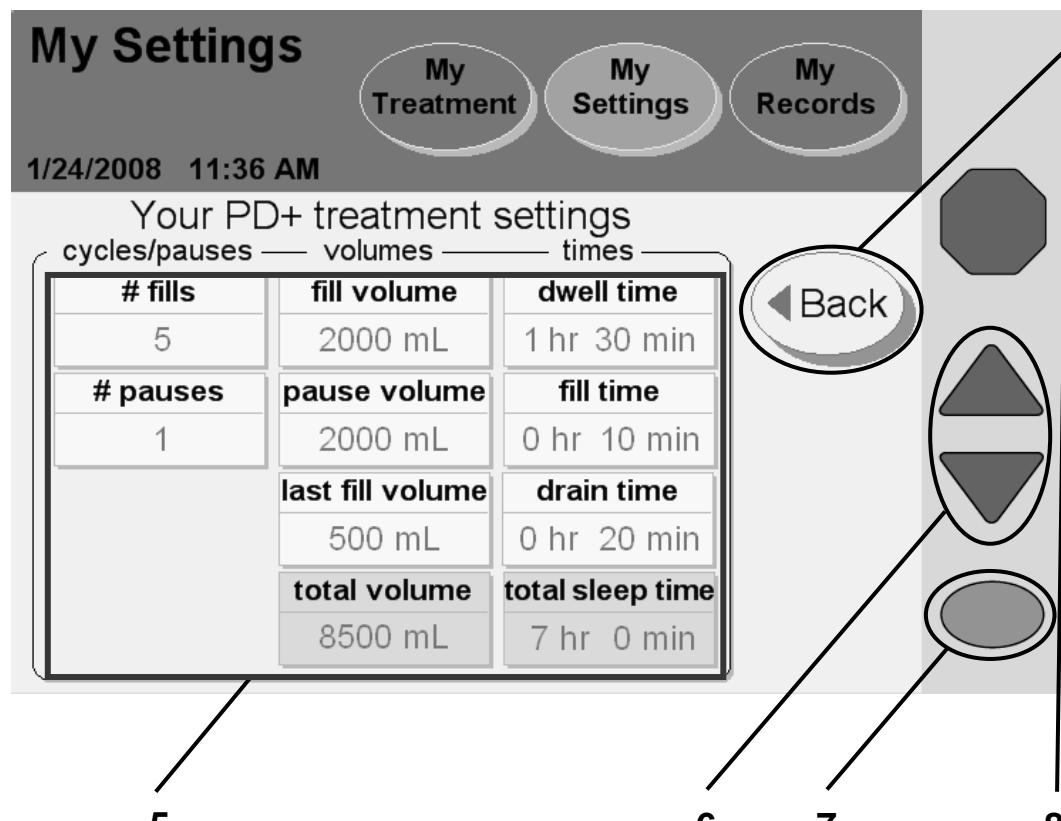
My Settings

My Treatment | My Settings | My Records

1/24/2008   11:36 AM

Your PD+ treatment settings

cycles/pauses	volumes	times
# fills	**fill volume**	**dwell time**
5	2000 mL	1 hr 30 min
# pauses	**pause volume**	**fill time**
1	2000 mL	0 hr 10 min
	last fill volume	**drain time**
	500 mL	0 hr 20 min
	total volume	**total sleep time**
	8500 mL	7 hr 0 min

◀ Back

5   6   7   8

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

Note: If your prescription is for treatment-based therapy, this screen will display different options. Turn to page 62 for treatment-based PD+.

5 Select values

Touch the yellow button to select the value it displays:
- **# fills**—Number of Fills during treatment
- **# pauses**—Number of Pauses during treatment
- **Fill volume**—The amount of every Fill (except last)
- **Pause volume**—How much you are to be Filled with each Pause
- **Last fill volume**—The amount of your last Fill
- **Dwell time**—The amount of time the dialysate Dwells in you
- **Fill time**—The amount of time available to Fill you
- **Drain time**—The amount of time available to Drain you after a Dwell

Note: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

Note: If the 'last bag option' was set to YES, the **last fill volume** button will instead be **last bag fill volume**. If you need to set the last bag option, see "Options Settings," on page 84.

6 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

7 Press OK

Press the **OK** key to confirm and save your settings.

8 Touch Back

Touch the **Back** button to return to the "My Settings" main screen.

Skip to page 74 to enter your personal Patient Settings.

Tidal: Treatment-Based Settings
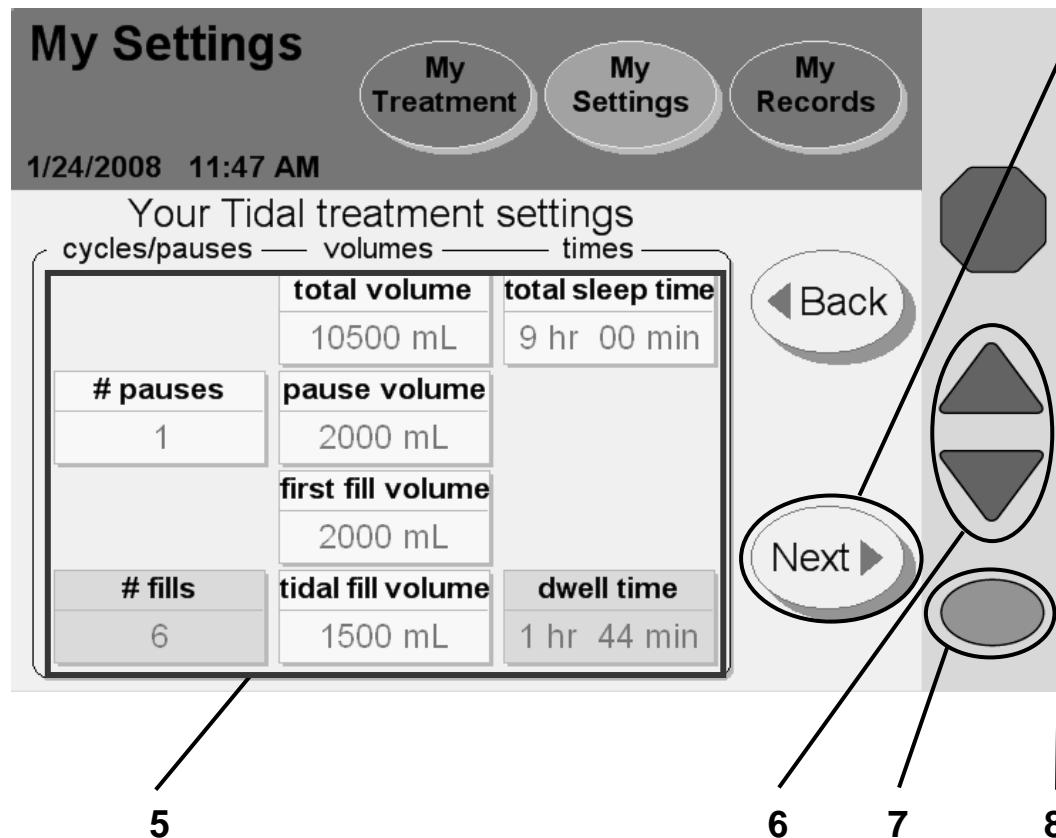
My Settings

My Treatment | My Settings | My Records

1/24/2008   11:47 AM

Your Tidal treatment settings

cycles/pauses	volumes	times
	total volume	**total sleep time**
	10500 mL	9 hr 00 min
# pauses	**pause volume**	
1	2000 mL	
	first fill volume	
	2000 mL	
# fills	**tidal fill volume**	**dwell time**
6	1500 mL	1 hr 44 min

◀ Back

Next ▶

5   6   7   8

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

Note: If your prescription is for cycle-based therapy, this screen will display different options. Turn to page 70 for cycle-based TIDAL.

5 Select values

Touch the yellow button to select the value it displays:

- **# pauses**—Number of Pauses during treatment
- **Total volume**—The amount of dialysate used for your entire treatment
- **Pause volume**—How much you are to be Filled with each Pause
- **First fill volume**—The amount of your first Fill
- **Tidal fill volume**—How much you are to be Filled each exchange
- **Total sleep time**—Estimated sum of all Drain, Fill, and Dwell time during your treatment

Note: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

6 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

7 Press OK

Press the **OK** key to confirm and save your settings.

8 Touch Next

Touch the **Next** button to continue to the next screen.

Tidal: Treatment-Based Settings continued
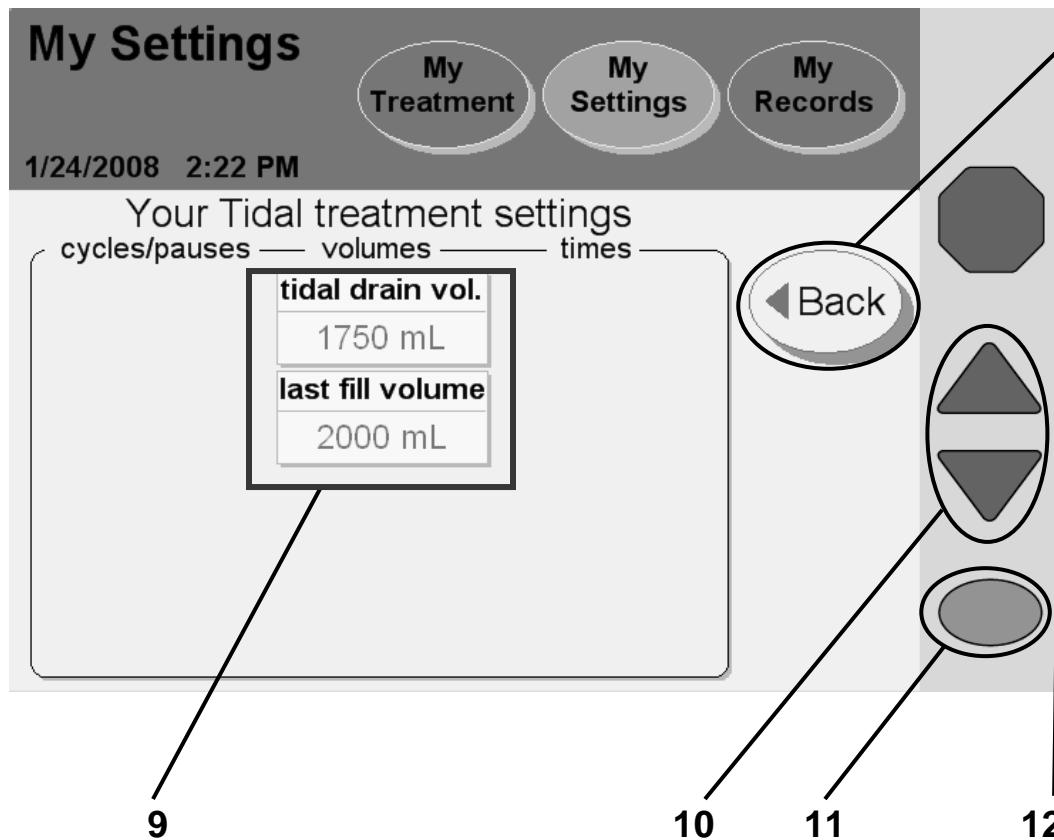
> **ℹ** Note: The values shown here are for example only. You must use the values prescribed by your doctor.

9 Select values

Touch the yellow button to select the value it displays:

- **Tidal drain volume**—How much you are to be drained each exchange
- **Last fill volume**—The amount of your last Fill

> ⚠ **Warning**: Your Tidal Drain Volume must include your Tidal Fill Volume plus your expected UF from the Tidal Dwell in order to prevent an overfill situation. Overfilling can cause serious injury or death. For more information on overfilling, see page 171.

> ⓘ **Note**: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

> ⓘ **Note**: If the 'last bag option' was set to YES, the **last fill volume** button will instead be **last bag fill volume**. If you need to set the last bag option, see "Options Settings," on page 84.

10 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

11 Press ⓞⓚ

Press the **OK** key to confirm and save your settings.

12 Touch (Back)

Touch the **Back** button to return to the previous screen, then touch the **Back** button again to reach the "My Settings" main screen.

Skip to page 74 to enter your personal Patient Settings.

Tidal: Cycle-Based Settings

My Settings

My Treatment | My Settings | My Records

1/24/2008   3:09 PM

Your Tidal treatment settings

cycles/pauses —— volumes —————— times

# pauses	pause volume	dwell time
1	2000 mL	1 hr 30 min
	first fill volume	fill time
	2000 mL	0 hr 10 min
# fills	tidal fill volume	drain time
6	1500 mL	0 hr 20 min
	total volume	total sleep time
	10500 mL	9 hr 00 min

◀ Back

Next ▶

5   6   7   8

(i) **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

> **Note**: If your prescription is for treatment-based therapy, this screen will display different options. Turn to page 66 for treatment-based Tidal.

5 Select values

Touch the yellow button to select the value it displays:
- **# pauses**—Number of Pauses during treatment
- **# fills**—Number of Fills during treatment
- **Pause volume**—How much you are to be Filled with each Pause
- **First fill volume**—The amount of your first Fill
- **Tidal fill volume**—How much you are to be Filled each exchange
- **Dwell time**—The amount of time the dialysate Dwells in you
- **Fill time**—The amount of time available to Fill you
- **Drain time**—The amount of time available to Drain you after a Dwell

> **Note**: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

6 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

7 Press (OK)

Press the **OK** key to confirm and save your settings.

8 Touch (Next)

Touch the **Next** button to continue to the next screen.

Tidal: Cycle-Based Settings continued

My Settings

My Treatment | My Settings | My Records

1/24/2008 2:22 PM

Your Tidal treatment settings

cycles/pauses —— volumes —— times

tidal drain vol.
1750 mL

last fill volume
2000 mL

◀ Back

9   10   11   12

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

9 Select values

Touch the yellow button to select the value it displays:

- **Tidal drain volume**—How much you are to be drained each exchange
- **Last fill volume**—The amount of your last Fill

> ⚠️ **Warning**: Your Tidal Drain Volume must include your Tidal Fill Volume plus your expected UF from the Tidal Dwell in order to prevent an overfill situation. Overfilling can cause serious injury or death. For more information on overfilling, see page 171.

> ℹ️ **Note**: Light blue buttons cannot be selected. Your machine calculates the values in blue buttons based on the values you enter in the yellow buttons.

> ℹ️ **Note**: If the 'last bag option' was set to YES, the **last fill volume** button will instead be **last bag fill volume**. If you need to set the last bag option, see "Options Settings," on page 84.

10 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value.

Repeat these steps to enter all of your prescribed values.

11 Press OK

Press the **OK** key to confirm and save your settings.

12 Touch Back

Touch the **Back** button to return to the previous screen, then touch the **Back** button again to reach the "My Settings" main screen.

Skip to page 74 to enter your personal Patient Settings.

Patient Settings Tab
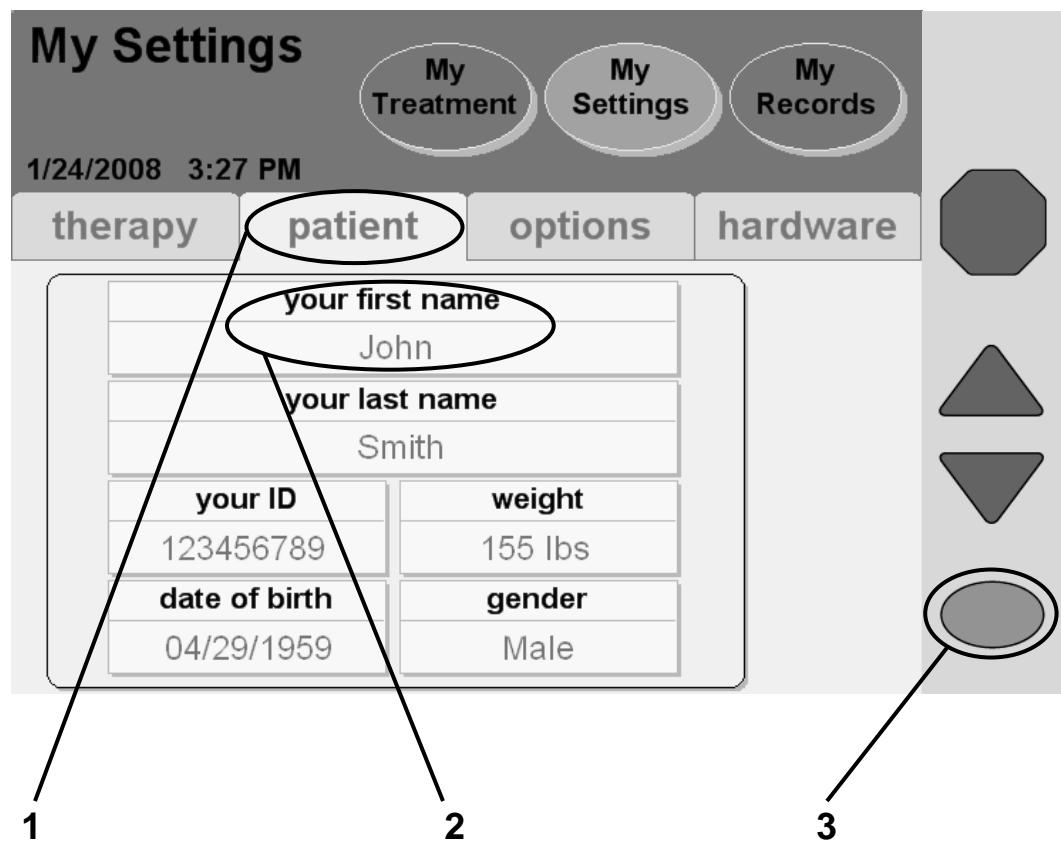
My Settings

My Treatment   My Settings   My Records

1/24/2008   3:27 PM

therapy   patient   options   hardware

| your first name |
| John |

| your last name |
| Smith |

| your ID | weight |
| 123456789 | 155 lbs |

| date of birth | gender |
| 04/29/1959 | Male |

1   2   3

> **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

1 Touch patient

> Touch the **patient** button to go to the "My Settings: Your First Name" screen.

2 Touch your first name

3 Press OK

> Touch the **your first name** button and then press the **OK** key to enter your first name. You will automatically move to the keyboard screen.

> **(i)** **Note**: You only need to enter your personal patient information the first time you start up your machine. Your information will be saved for later treatments.

Entering Your First Name

My Settings

My Treatment | My Settings | My Records

1/24/2008 4:10 PM

your first name

John

A B C D E F G H I
J K L M N O P Q R
S T U V W X Y Z

Cap | Del | SPACE | Save | Cancel

4   5   6
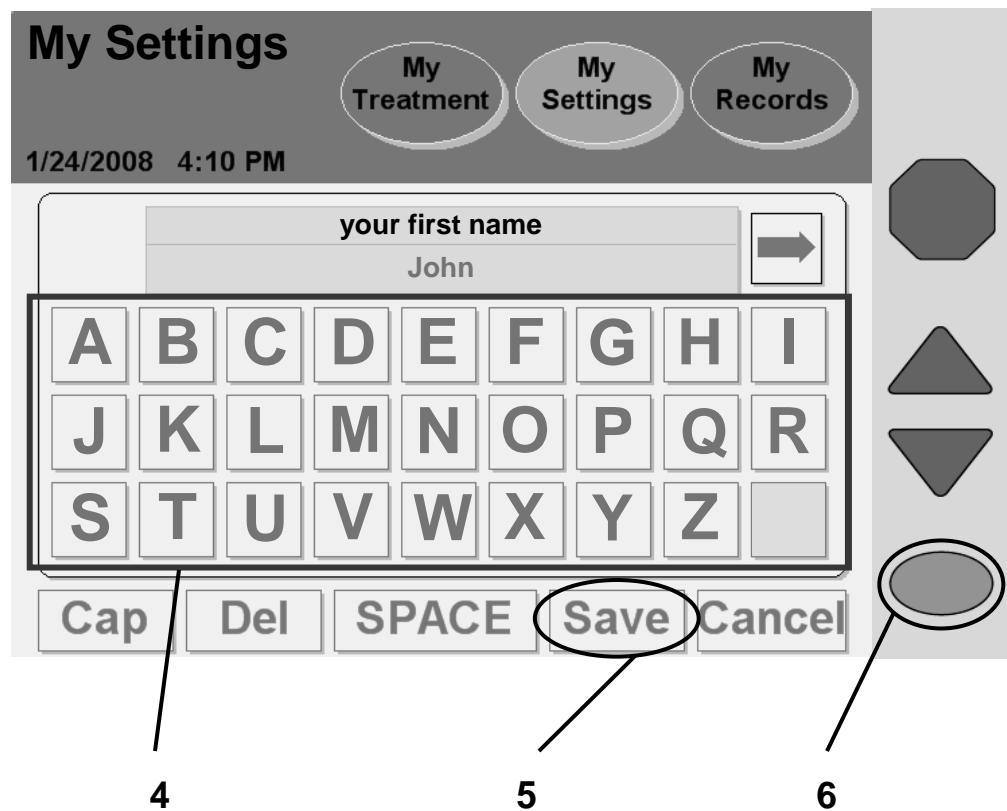
4 Enter your first name

Use the keypad displayed on the screen to enter your name by touching each corresponding letter. The name is displayed in the "Your First Name" box as you type.

> (i) **Note**: Delete the default name before entering your own name. To delete a letter, touch the **Del** button. To switch between upper and lowercase letters, touch the **Cap** button. To exit this screen without making any changes, touch the **Cancel** button and then press the **OK** key.

> (i) **Note**: If you need to enter a number or symbol, touch the ⇨ button on the right side of the text box above the keypad. To return to the letters, touch the ⇦ button that appears on the left side of the text box above the number keypad.

5 Touch Save

When you have entered your first name, touch the **Save** button.

6 Press (OK)

Press the **OK** key to confirm and save your settings. You will return to the "My Settings: Patient Settings" screen.

Follow the previous example and touch the **your last name** and **your ID** buttons on the "My Settings: Patient Settings" screen. Your ID number is assigned by your healthcare staff. See the "My Treatment Parameters" sheet on page 6 for your ID number.

Entering Your Date of Birth
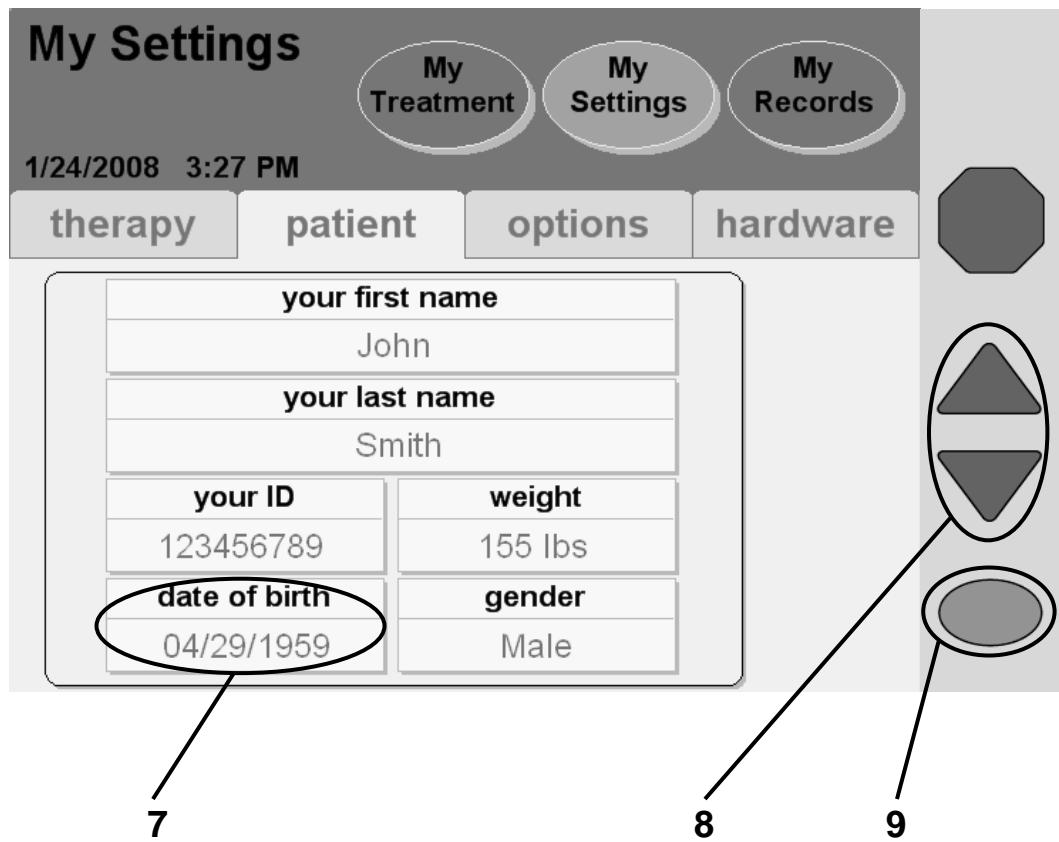
7   8   9

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

7 Touch [date of birth]

Touch the **date of birth** button to enter your birth date. The button will turn orange and the first set of numbers will be active.

> (i) **Note**: Depending on your Date Format setting, you may need to enter the day before the month; see the Date Format button in the "Hardware" section on page 86.

8 Enter your date of birth

Use the **Up/Down Arrow (▼/▲)** keys to change the first two numbers to the month of your birth date. Example:

date of birth
[04]/29/1959

▲▼ **use arrow keys to set**

date of birth
[05]/29/1959

Press the **OK** key to confirm the selection and move on to the next set of numbers in your birthdate.

date of birth
05/[29]/1959

▲▼ **use arrow keys to set**

date of birth
05/[30]/1959

Press the **OK** key to confirm the selection and move on to set your birth year as shown above.

9 Press (OK)

When you are finished entering your birth year, press the **OK** key to confirm and save your date of birth. Continue on to the next page to enter your weight.

Enter Your Weight
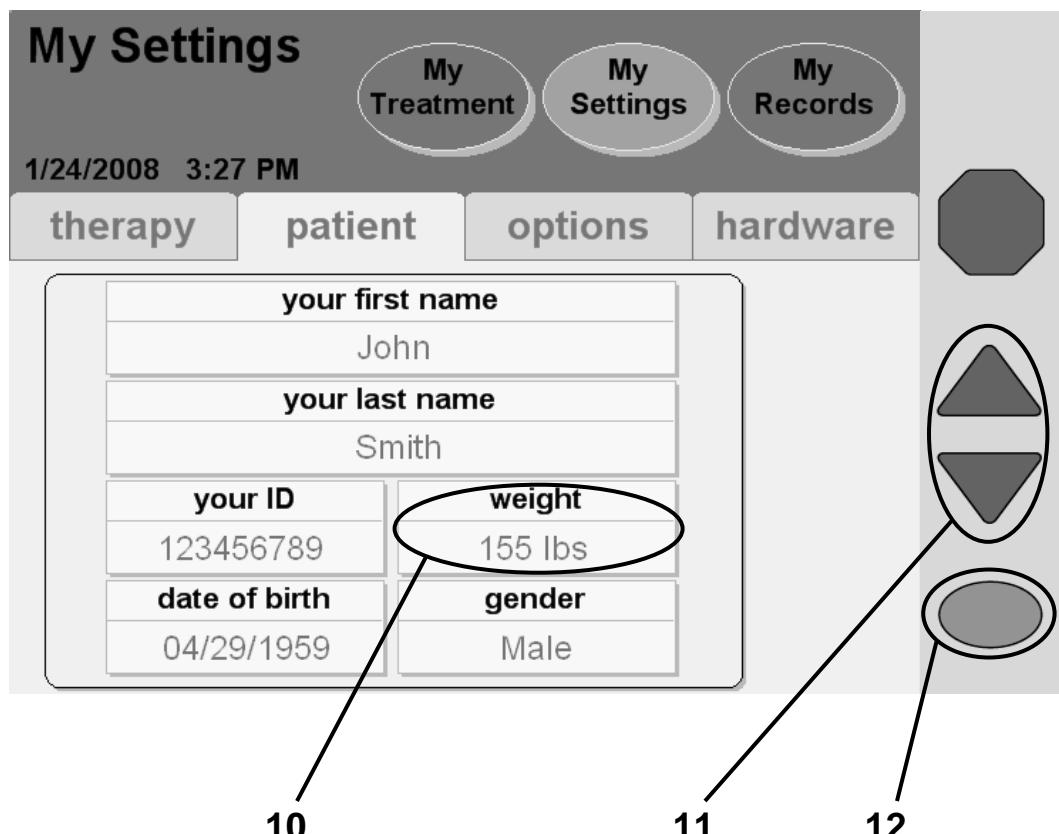
My Settings

My Treatment   My Settings   My Records

1/24/2008   3:27 PM

therapy   patient   options   hardware

your first name
John

your last name
Smith

your ID	weight
123456789	155 lbs

date of birth	gender
04/29/1959	Male

10   **11**   **12**

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

---

10 Touch ⌈weight⌉

Touch the weight button to enter your dry weight as
prescribed by your doctor.

> ⓘ **Note**: The weight entered should be your estimated
> dry weight or target weight as prescribed by your
> doctor; see "My Treatment Parameters," page 2.
> Failure to enter your own prescribed treatment
> parameters could result in complications that may
> be severe.
>
> ⓘ **Note**: Your weight may be entered in either pounds
> (lbs.) or kilograms (kg). See "Options Settings,"
> on page 84.

11 Enter your weight

Use the **Up/Down Arrow (▼/▲)** keys to enter your weight.

12 Press (OK)

When you are finished entering your weight, press the **OK**
key to confirm and save your selection. Continue on to the
next page to enter your gender.

Enter Your Gender
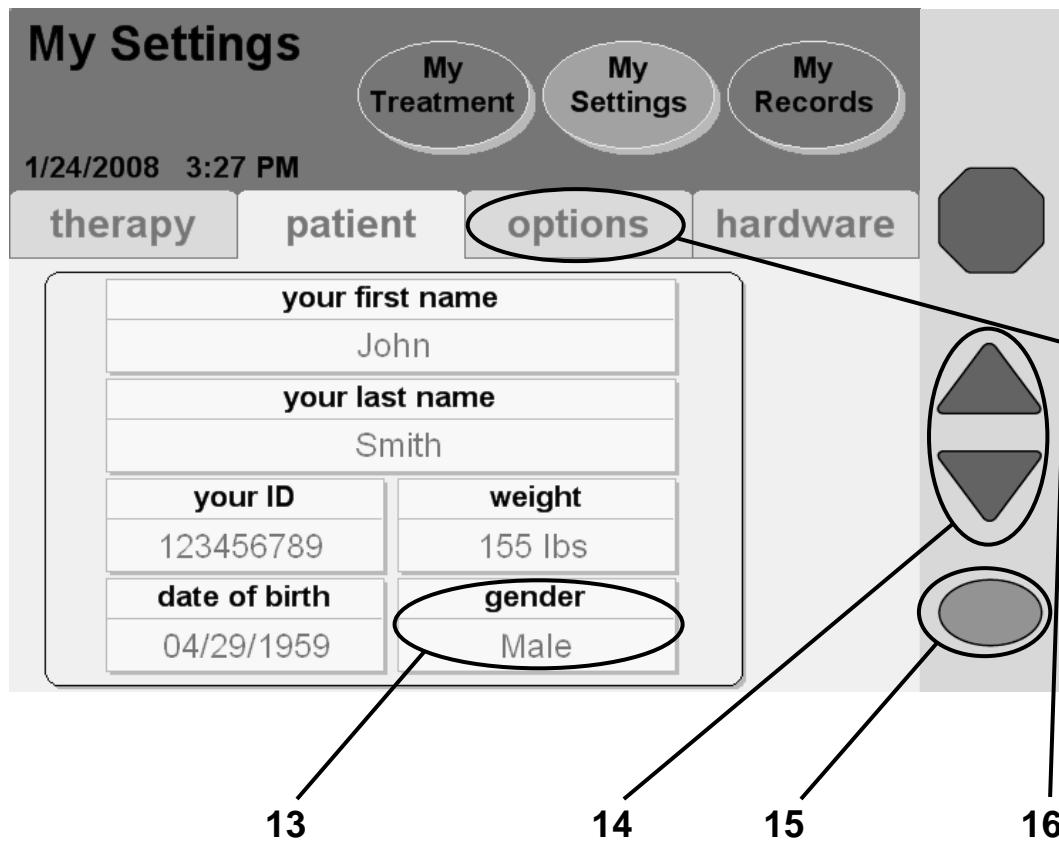
My Settings

My Treatment My Settings My Records

1/24/2008   3:27 PM

therapy | patient | options | hardware

your first name
John

your last name
Smith

your ID	weight
123456789	155 lbs

date of birth	gender
04/29/1959	Male

13   **14**   **15**   **16**

Note: The values shown here are for example only. You must use the values prescribed by your doctor.

13 Touch gender

Touch the **gender** button to enter your sex.

14 Enter your gender

Use the **Up/Down Arrow (▼/▲)** keys to switch between Male and Female.

15 Press (OK)

When you are finished entering your gender, press the **OK** key to confirm and save your selection.

16 Touch options

Touch the **options** button to go to the "Options Settings" screen.

Options Settings Tab
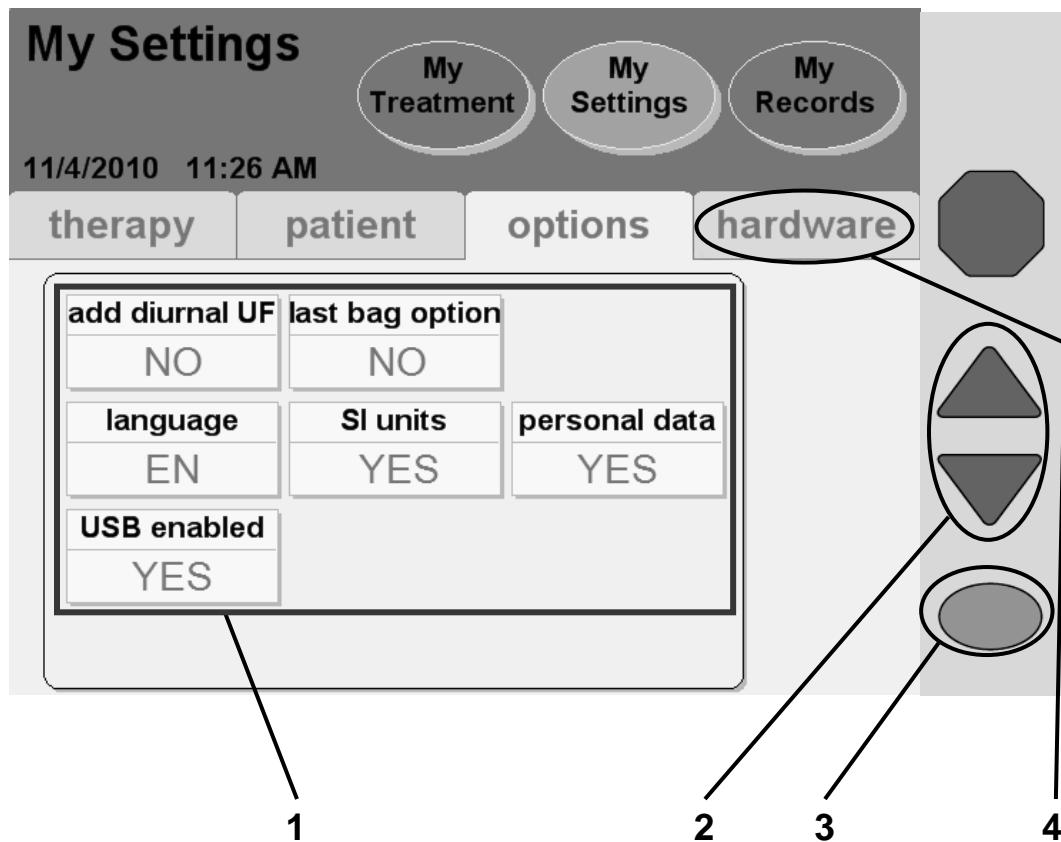
My Settings

My Treatment | My Settings | My Records

11/4/2010 11:26 AM

| therapy | patient | options | hardware |

| add diurnal UF | last bag option |
| NO | NO |

| language | SI units | personal data |
| EN | YES | YES |

USB enabled

YES

1   **2**   **3**   **4**

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

---

1 Select values

Touch the yellow button to select the value it displays:

- **Add diurnal UF**—Whether or not to include Drain 0 in the total ultrafiltration (UF) during the day. If you answer YES, the UF from Drain 0 is included in the UF total. This option defaults to NO.

- **Language**—English, Spanish, or French.

- **Last bag option**—If this option is selected, your cycler will fill you exclusively from the Last Bag line (green clamp) for your last Fill. During the last dwell your cycler will empty the heater bag, fill it from the last bag, warm the fluid and deliver this specific solution for your last fill.

  If you need more than 24,000 mL total fill volume and do not require a Last Bag Option, this Last Bag line (green clamp) may be used for additional solution.

- **SI Units**—If set to NO, your weight is displayed in lbs., your temperature is in °F, and your blood glucose is in mg/dL.

  If set to YES, your weight is in kgs, your temperature is in °C, and your blood glucose is in mmol/dL.

- **Personal data**—If this option is set to YES (recommended), your cycler will ask you to enter your updated health information after each treatment is complete.

- **USB enabled**—Whether or not the IQdrive is to be used to transfer and store therapy settings and treatment data.

2 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your prescribed value. Repeat these steps to enter all of your prescribed values.

3 Press (OK)

Press the **OK** key to confirm and save your settings.

4 Touch hardware

Touch the **hardware** button to go to the "Hardware Settings" screen.

Hardware Settings Tab

My Settings

My Treatment My Settings My Records

1/24/2008 5:10 PM

| therapy | patient | options | hardware |

— sound — date/time — display —

alarm loudness	date format	screen blanking
10	mm/dd/yyyy	YES
key loudness	**date**	**brightness**
10	1/24/2008	5
	time format	
	am/pm	
	time	
	5:10 pm	

1   2   3   4
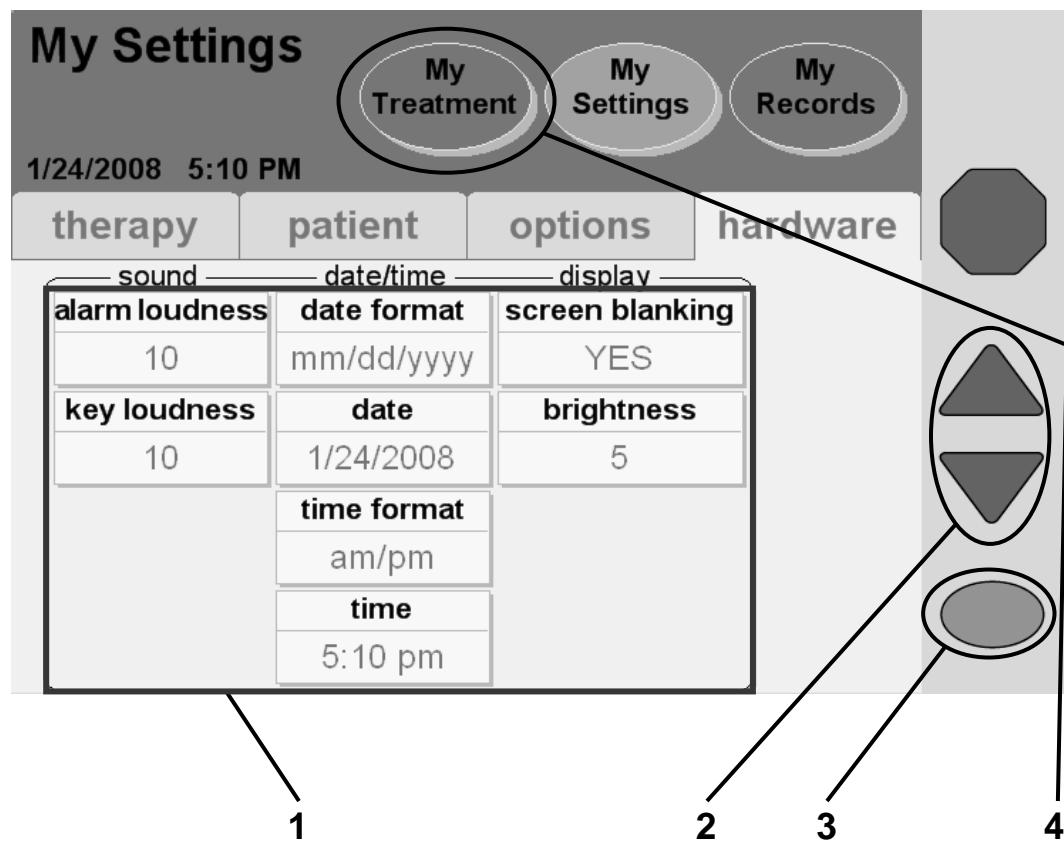
1 Select values

Touch the yellow button to select the value it displays:

- **Alarm loudness**—The volume level of the alarm (1 = soft, 20 = loud)
- **Key loudness**—How loud the key-press sound is (0 = off, 20 = loud)
- **Date Format**—Choose between listing the day before the month or the month before the day
- **Date**—Set today's calendar date (see page 79 for example)
- **Time format**—Choose between 12-hour (AM/PM) or 24-hour time
- **Time**—Set the time
- **Screen blanking**—If this option is set to YES (or ON), your Touch Screen will go dark after ten minutes of inactivity. If screen-blanking is set to NO (or OFF), your screen will always stay on.
- **Brightness**—How bright the screen is (1 = dark, 10 = bright)

2 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to the desired value. Repeat these steps to enter all of your values.

3 Press OK

Press the **OK** key to confirm and save your settings.

4 Touch My Treatment

At this point, you should have entered your entire prescription. When you are ready to begin your treatment, touch the **My Treatment** screen-button.

⚠️ **Warning**: Do not begin your treatment if your settings are incorrect. Improper treatment settings could result in complications that may be severe.

If you are not yet ready to start your treatment, you may leave your machine on this screen. The screen will blank-out after ten minutes if screen blanking is set to YES. Touch anywhere on the screen to restore the display, when desired.

This Page is Intentionally Blank

My Treatment

Pre-Treatment Checklist
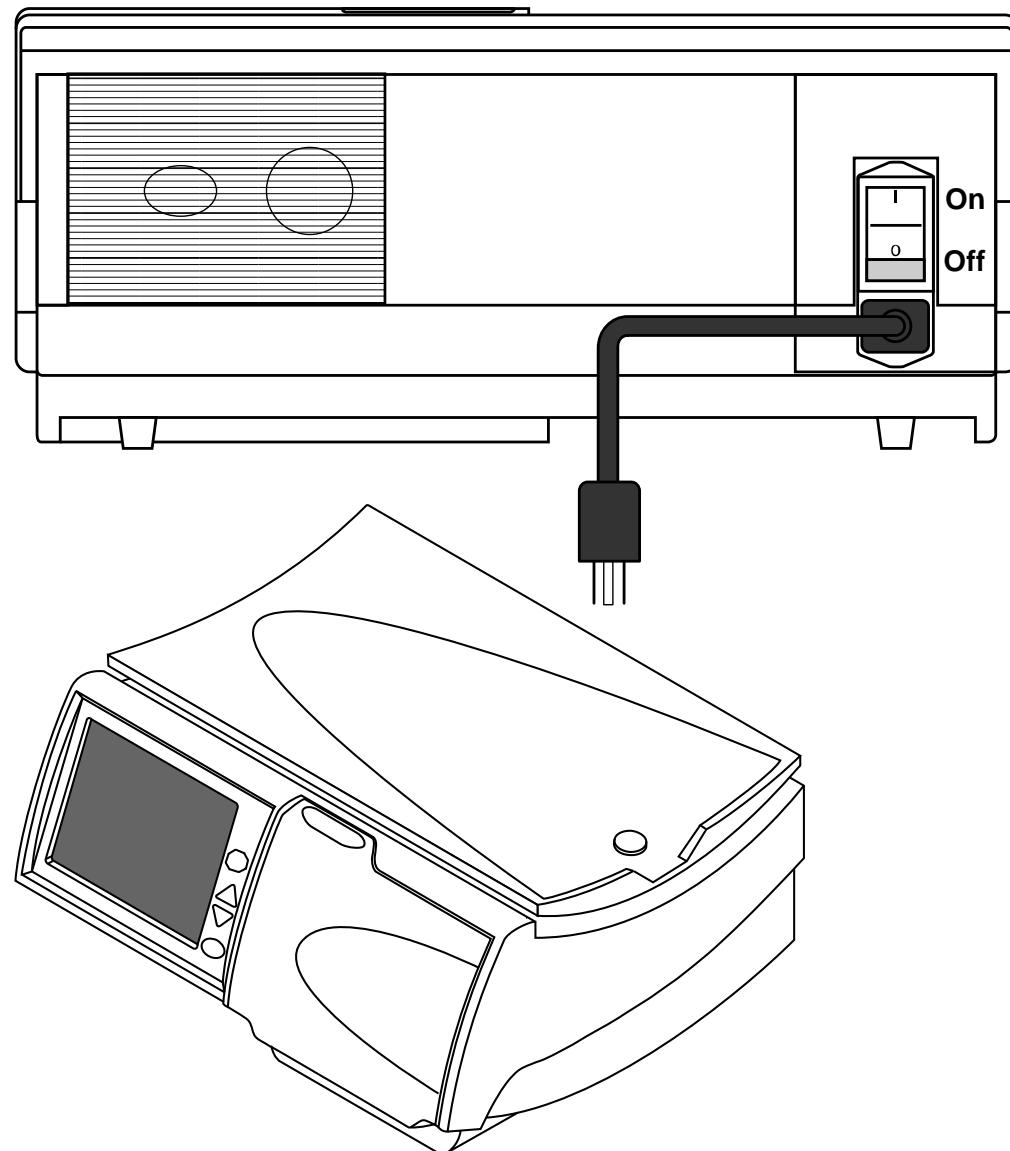
Getting Started

Before you start your treatment, you should check the following on your cycler:

POWER

- Check that the power cord is plugged into a grounded, three-prong electrical outlet, and the power switch on the back of your machine is in the **ON** (|) position.

- Check that the heater tray is free from obstructions and is not touching the top of your cycler's cabinet (as described on page 22).

- Check that the gap between the heater tray and the cycler cabinet is equal on all sides.

- Check that your machine has been recently cleaned and is ready for treatment (see page 220 for more information).
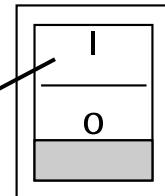
|	
⚠	**Warning**: If any of the conditions listed above have not been met, you must correct them before continuing with your treatment preparation. Failure to do so could result in complications that may be severe.
ⓘ	**Note**: Check that, if you are using an IQdrive, the IQdrive is inserted properly into the IQdrive slot on the back of your machine (see page 172).
ⓘ	**Note**: Your Liberty cycler automatically runs a self-test during startup and alerts you if a problem exists. No manual testing of your cycler is required after installation.

Starting Your Treatment

My Treatment   My Settings   My Records

1/28/2008   11:58 AM

1
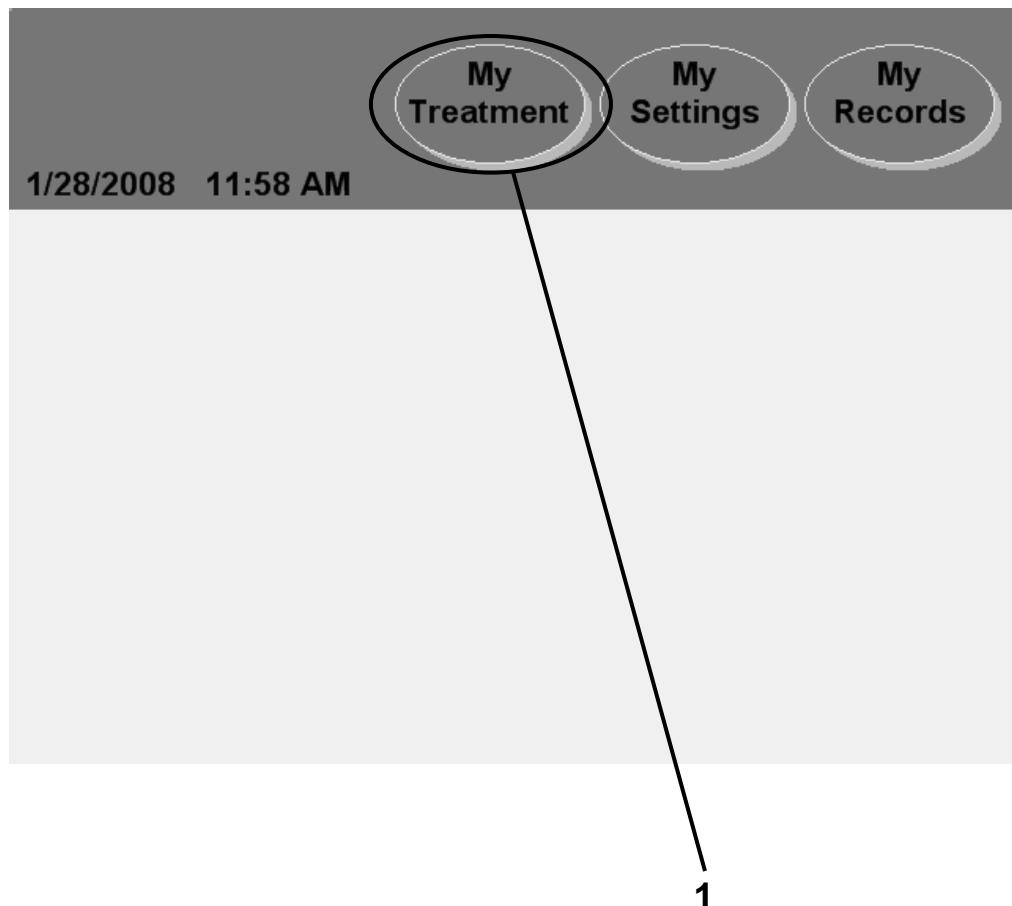
1 Touch ⟨My Treatment⟩

You may reach the "Treatment" screens from any other screen. Touch the **My Treatment** screen-button to begin your treatment setup procedures.

If your cycler is ON but the screen has blanked-out and is dark, you may touch anywhere on the Touch Screen to restore the display.

|	
⚠	**Warning**: Do not begin your treatment until your entire prescription has been entered.
	Warning: Check for proper functioning of your machine before beginning your treatment.
ⓘ	**Note**: This manual is only a guide for the Liberty cycler screens. Follow your exact screen order on the machine and use these pictures only as a reference.
ⓘ	**Note**: If your IQdrive therapy settings have changed since your last treatment, you will need to review those settings before continuing with your treatment. See "Using the IQdrive," on page 172. *Do not remove the IQdrive during your treatment*.

Starting Treatment continued
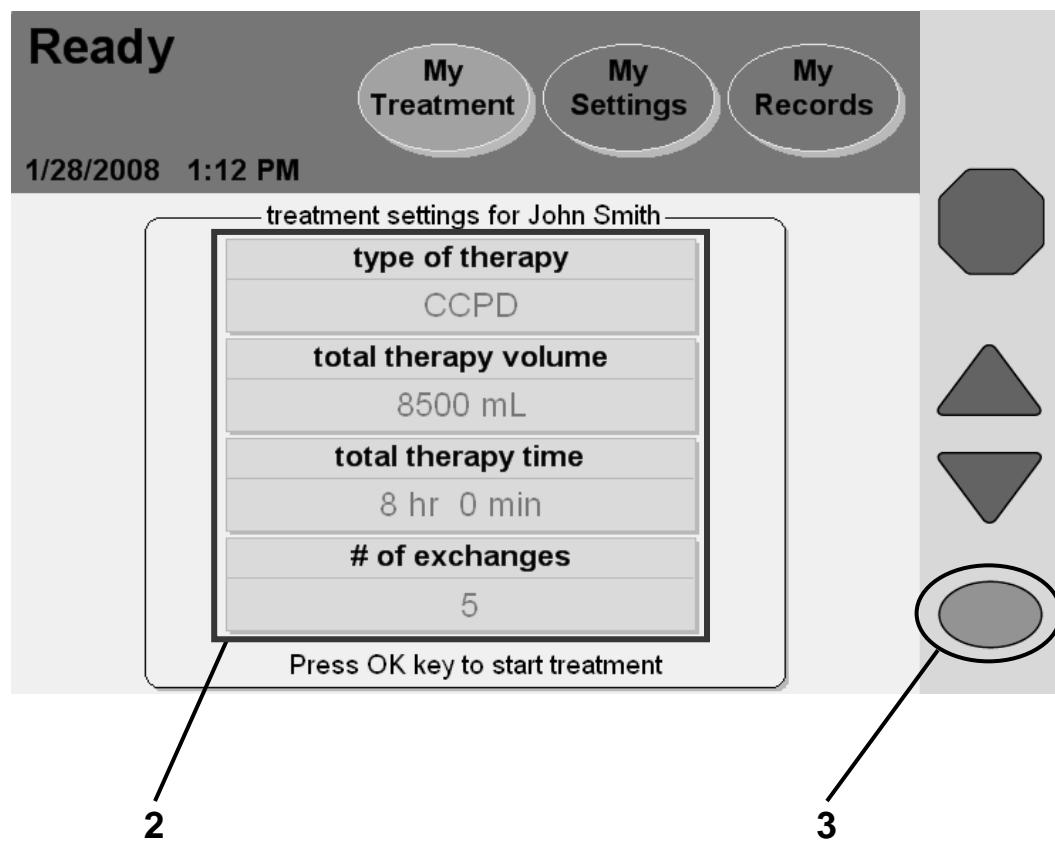
Ready

My Treatment   My Settings   My Records

1/28/2008   1:12 PM

treatment settings for John Smith

| type of therapy |
| CCPD |
| total therapy volume |
| 8500 mL |
| total therapy time |
| 8 hr 0 min |
| # of exchanges |
| 5 |

Press OK key to start treatment

2   **3**

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

---

2 Verify treatment values

The treatment parameters displayed here must match your prescription (see page 2). If you still need to enter the correct values, turn to page 50.

3 Press (OK)

If the treatment values are listed correctly, press the **OK** key to continue. Your cycler will take a moment to process and you will move on to the next screen.

⚠ **Warning**: Your doctor must prescribe your entire treatment. Using incorrect values could result in complications that may be severe. Do not use example values shown in machine pictures.

Preparing

Set-Up

My Treatment   My Settings   My Records

3/18/2009 9:21 AM

step 1

Gather supplies, mask, and wash hands.

Insert cassette
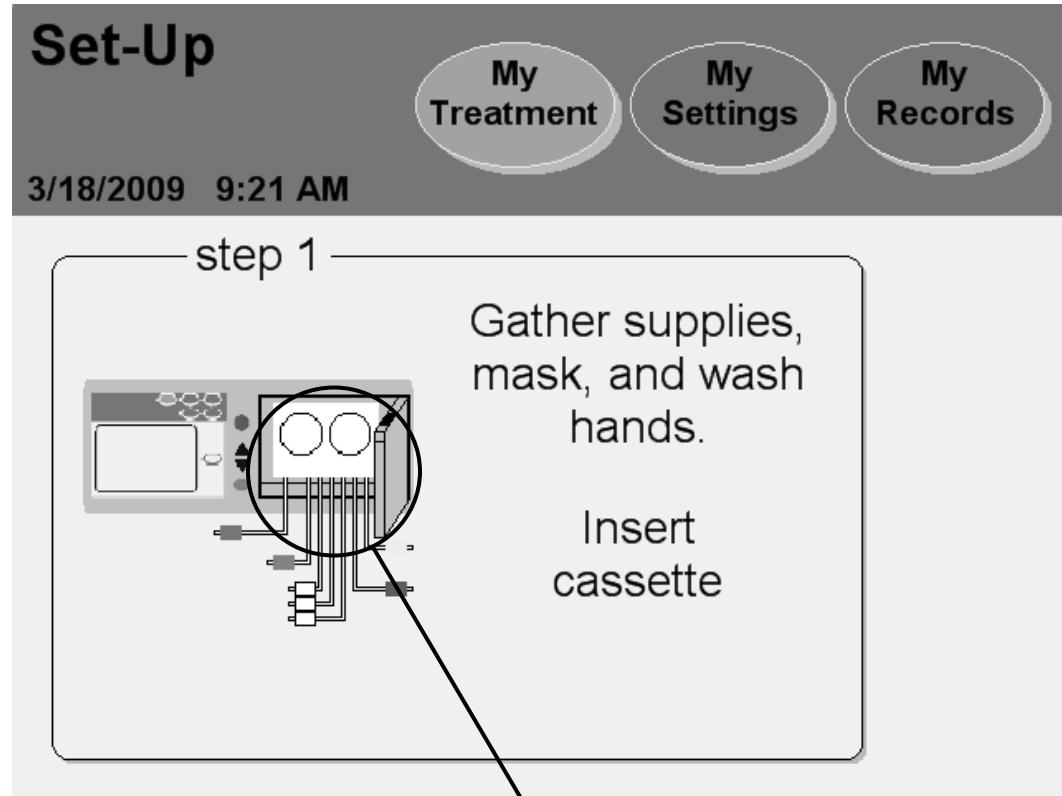
4 Gather Supplies   **5**

4 Gather supplies, mask, and wash hands

Before starting your treatment, you will need to get the following ready:

- **Supplies**—Typical supplies are:
  - ✓ Mask
  - ✓ Solution bags
  - ✓ Liberty Cycler set
  - ✓ stay•safe caps
  - ✓ Drain line or drain bags
  - ✓ Hand sanitizer
- **Mask**—Put on your mask, everyone else in the room must also wear a mask
- **Wash hands**—Wash your hands as instructed by your healthcare staff

> ⚠ **Warning**: You must use aseptic technique as directed by your PD nurse to prevent infection.

5 Inspect cassette

> ⚠ **Warning**: A new, sterile cassette and drain line must be used for every treatment. Check that the cassette and tubing are free from kinks or damage. Look for scratches, loose tubing or small hole in cassette membrane. Damaged tubing or cassettes can lead to leaks, contamination, and infection. **Save your tubing set** for pick up and call Technical Support immediately at 1 800 227-2572. You will be contacted about having the used tubing set picked up. DO NOT USE THIS SET! Please notify your PD nurse about this event.

> ⊗ **Caution**: The cassette door is pressurized. Do not attempt to reopen the cassette door until your machine instructs you to. Do not touch the door sensor when loading the cassette, see page 32.

Set-Up

3/18/2009   9:21 AM

step 1

Gather supplies, mask, and wash hands.

Insert cassette

6   **7**

stay•safe PIN connector 2

New Cap

Extension

stay•safe PIN connector 1   **stay•safe Organizer**

6 Insert cassette

⚠️ **Warning**: Check that the pump module is clean and free from obstructions before inserting the cassette. **Keep fingers clear of moving parts**.

To insert the cassette:

- Firmly push the door latch to open the cassette door.
- Hold the cassette with the plastic domes facing outward.
- Slide the cassette up and under the guide pins at the top of the pump module. Then snap the cassette in place using the catch at the bottom of the pump module. See "The Pump Module" on page 32 for a drawing of the pump plate. The tubing lines from the cassette must be hanging down in the front and free from kinks.
- Close the door over the cassette, making sure the door clicks into place to lock it. Your cycler will pressurize the cassette door and then display the next setup screen.

7 Insert stay•safe patient connector

Next insert your stay•safe patient connector into the stay•safe organizer clip below the control panel. Insert the tubing into the Tubing Channel on the right.

Connect Solution Lines

Set-Up

My Treatment   My Settings   My Records

3/18/2009   9:26 AM

step 2

Connect solution lines

Place bag on heater tray

Connect drain line.

Press next to continue

Next ▶

8   9   10

Heater Bag Placement
Line up solution bag at corners. Do not extend bag over edge
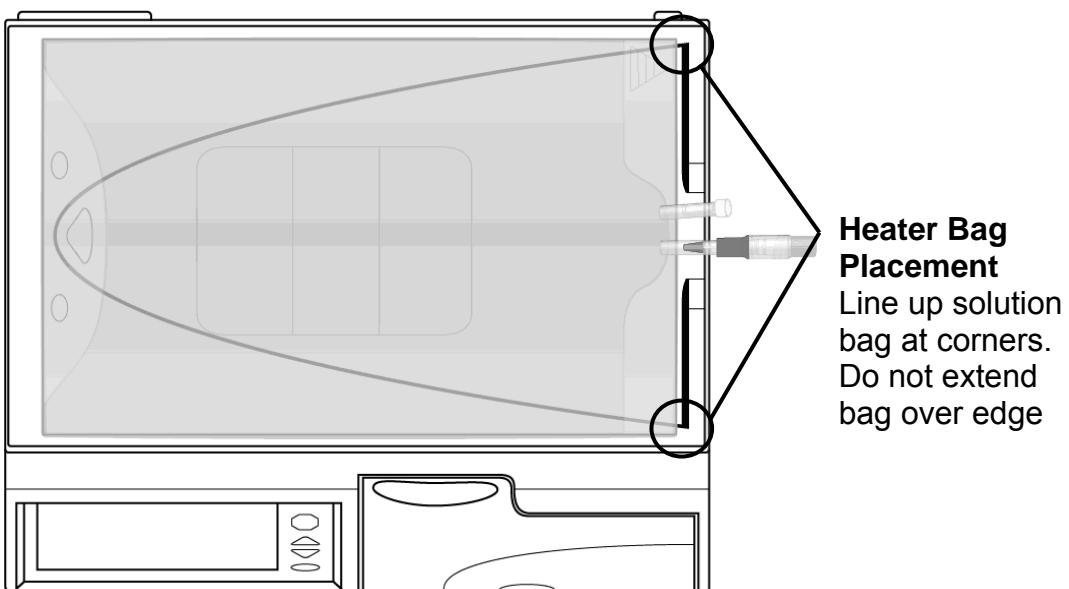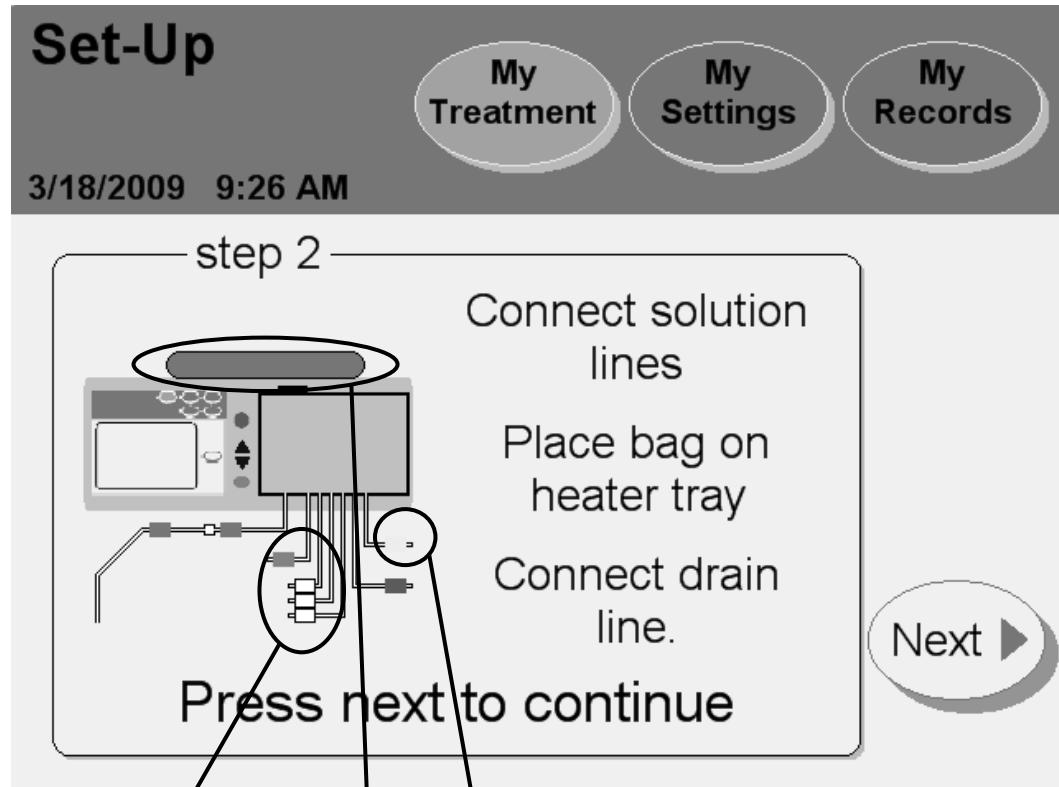
8 Connect solution lines

Place your solution bags on a flat surface with the connection ports facing you. When directed connect the solution lines as follows:

- ⬛ red clamp line to the heater bag
- ⬭ white clamp lines to the solution bags
- ⬭ green clamp line to the last bag of your treatment, if prescribed.

⊗ **Caution**: If you are using the Liberty cart, be sure to properly balance the solution bags by hanging them on both sides of the cart. Unbalanced bags on the cart may cause it to tip over and damage your machine.

9 Place bag on heater tray

Use a bag with a minimum of 2000 mL on the heater tray that has an additional 1000mL for flushing and priming the system. The red clamp heater line should already be connected. Once your treatment starts, you must not remove the heater bag. Nothing other than the heater bag may be placed on the heater tray.

⚠ **Warning**: You must properly connect your solution bags as prescribed.

⚠ **Warning**: Do not use external heating sources not authorized by Fresenius Medical Care to warm your solution bags. Contact your healthcare staff for more information.

⚠ **Warning**: Make sure that the solution lines are free from kinks.

⚠ **Warning**: Do not allow the heater bag to hang off the heater tray and touch the cabinet.

⚠ **Warning**: Do not connect any bag when it is hanging on cart or lying on the floor and by bending over.

ⓘ **Note**: The bag you use for your heater bag must be at least 1000 mL larger than your first Fill volume.

10 Connect drain lines

Connect the cassette's ⬭ yellow clamp line to a drain line or drain bag set. Do not close the yellow clamp.

ⓘ **Note**: If you connect directly to a drain line instead of a drain bag set, an air gap at the end of the line must be present to allow proper drainage. Do not submerge the end of the drain line in liquid such as a toilet bowl. Always remove the cap at the end of the drain line.

Set-Up

My Treatment   My Settings   My Records
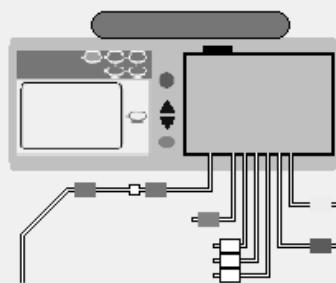
3/18/2009   9:26 AM

step 2

Connect solution lines

Place bag on heater tray

Connect drain line.

Press next to continue

Next ▶

11

11 Touch ⟨Next⟩

All the prescribed lines should be connected at this point. Touch the **Next** button to continue; your cycler will now weigh your heater bag.

⚠ **Warning**: Do not disturb the bag as it is being weighed.

Break Cones and Clamp Unused Lines

Set-Up

My Treatment   My Settings   My Records

3/18/2009   9:28 AM

step 3

Break cones and clamp unused lines.

Press next to continue

Next ▶
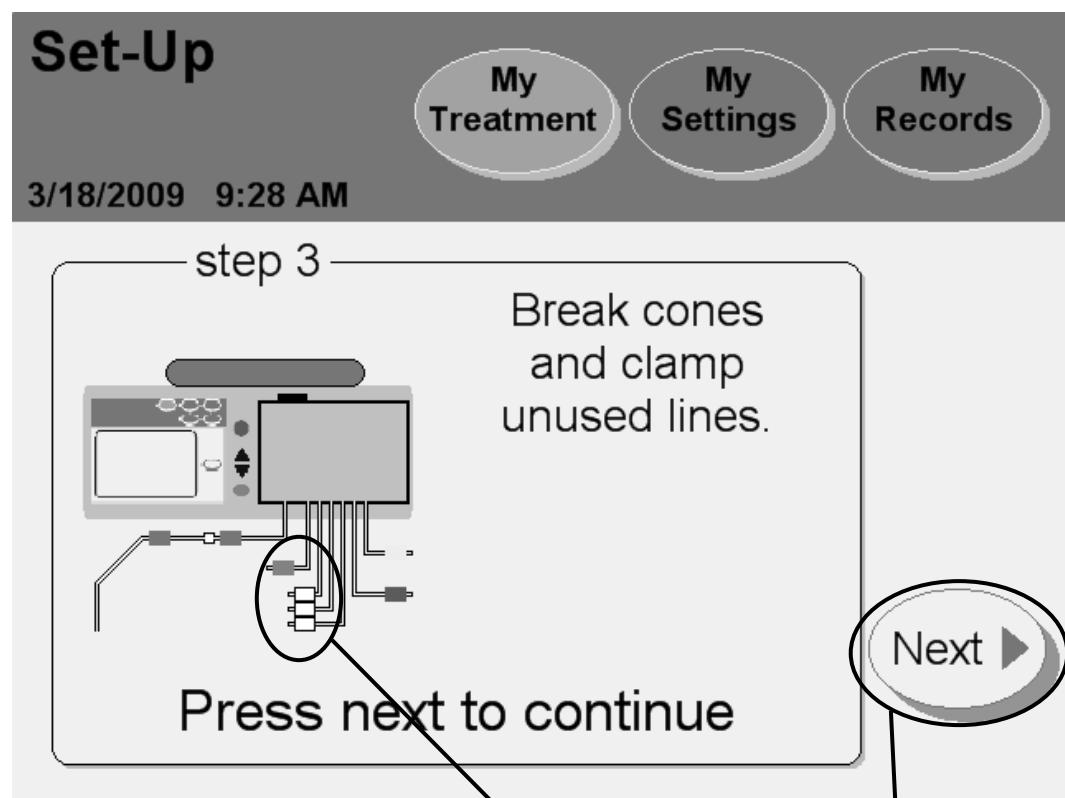
12 Initiate Solution Flow   **13**   **14**

12 Initiate solution flow

Obtain the Package Insert that is included in each case of solution bags and follow the specific instructions under "Directions for Use" to initiate solution flow. Make sure the cone/frangible is broken completely. A white guide should be visible. You may use Handi-Tool to assist you with breaking the cone.
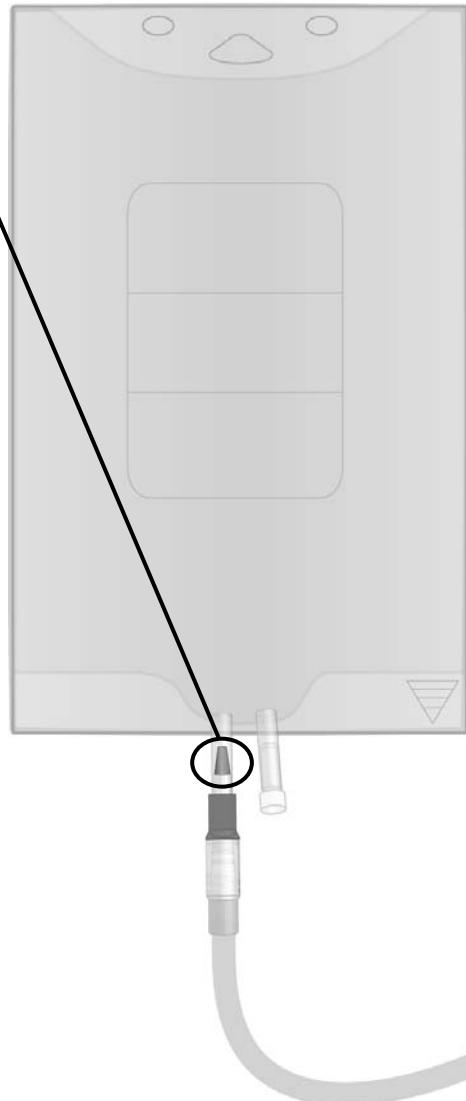
13 Clamp unused lines

Clamp any line that is not connected to a solution bag. Keep the heater bag line (red clamp), drain line (yellow clamp), and patient line (blue clamp) open throughout setup and treatment.

14 Touch Next

Touch the **Next** button to continue. Your cycler will now test to see which lines are connected.

Check Bags

Set-Up

My Treatment   My Settings   My Records

3/18/2009   9:32 AM

step 4

Verify bag connections.
Press back to repeat bag detection test.

◀ Back

Last   Bag   Bag   Bag   Heater
Bag   3   2   1   Bag

Press next to continue

Next ▶

15   16
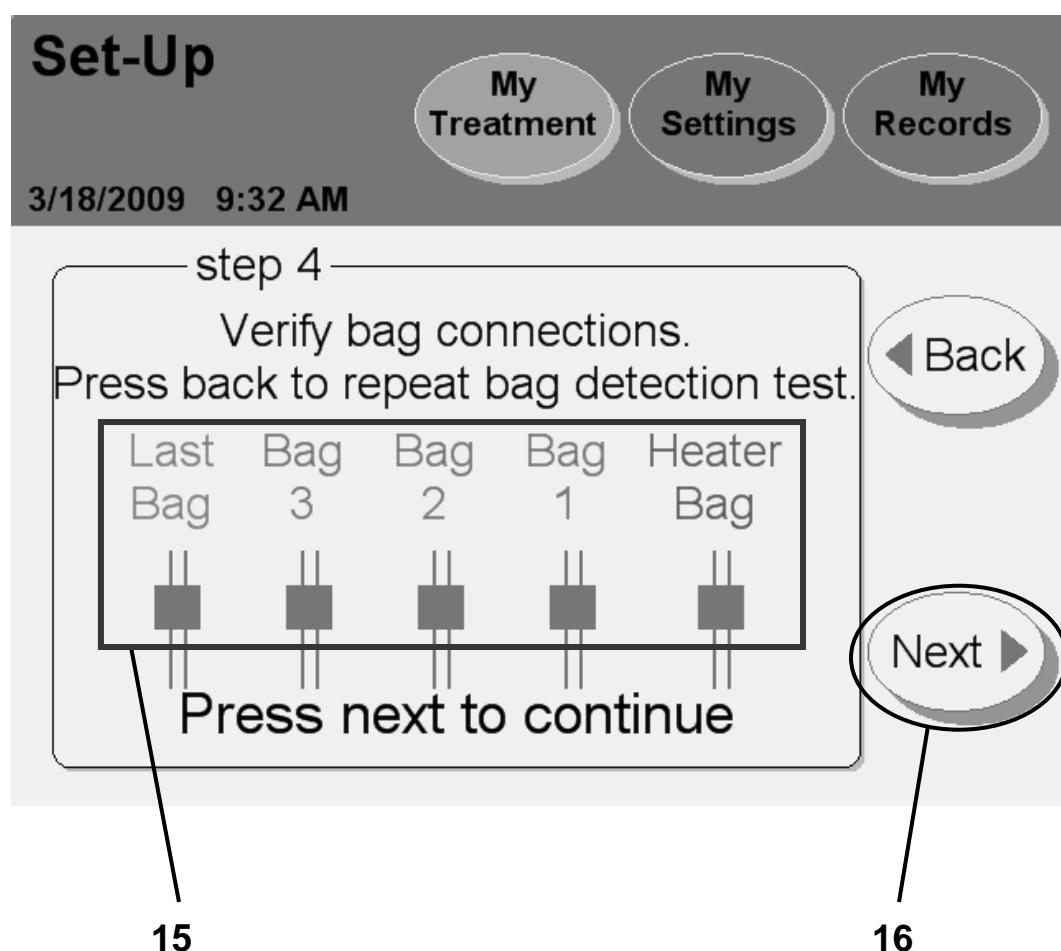
15 Verify bag connections

During the bag detection test, your machine automatically detects which lines are connected to solution bags. After the test, your cycler displays which lines are connected and which are unconnected.

Unconnected   **Connected**

Make sure that your cycler has properly detected the bag connections. If the test results are wrong, check the connections, whether the cones are completely broken, and whether the correct clamps are open or closed. Touch the **Back** button to run the test again.

> (i) **Note**: You must have all of your solution bags connected at this point. After the bag connection verification, you cannot connect another solution bag for your current treatment.

16 Touch (Next)

When each of the connected bags is correctly displayed, touch the **Next** button. Your machine will begin flushing the lines.

Performing Flush

Flushing

3/18/2009   9:35 AM

Time remaining
1 min 30 sec

Time set
2 min 0 sec

Please wait
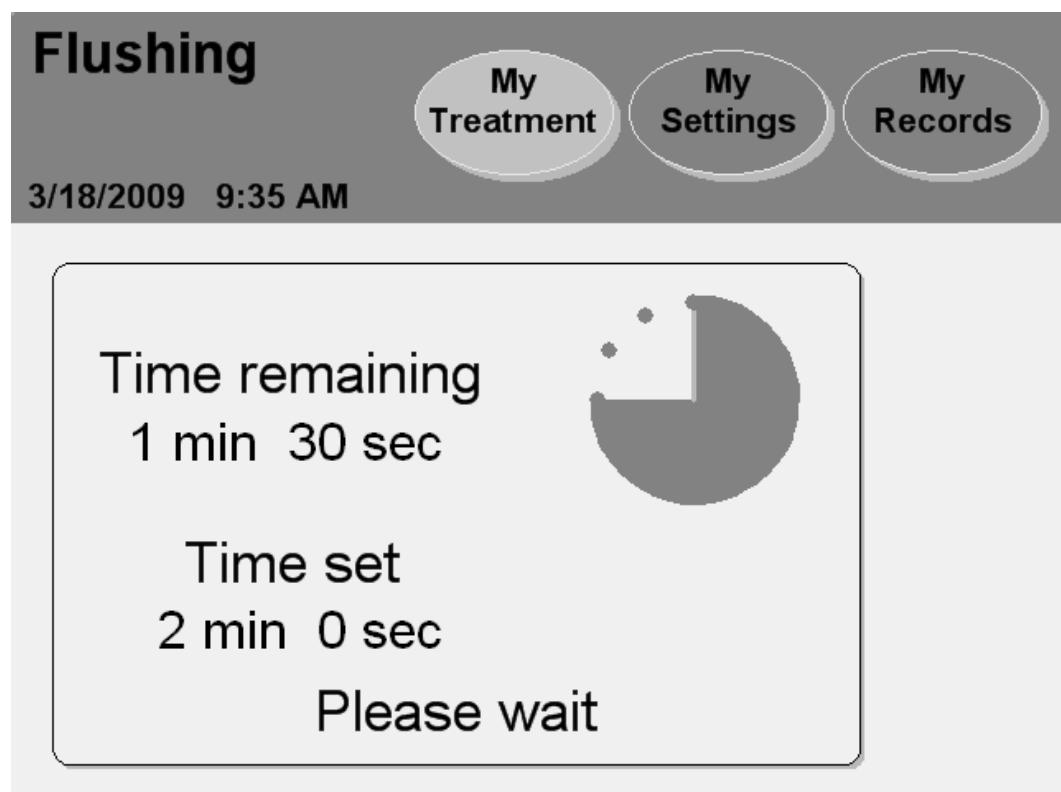
Machine Flushing

Your machine will now begin a tubing flush. The screen displays a timer to count down the flushing time.

The next screen will appear when the flushing is complete.

> **ⓘ** **Note**: If you need to stop the flushing process, press the **STOP** key. The pump will stop and the "Flushing Stopped" screen will be displayed. Flushing will resume when you press the **OK** key.

Priming
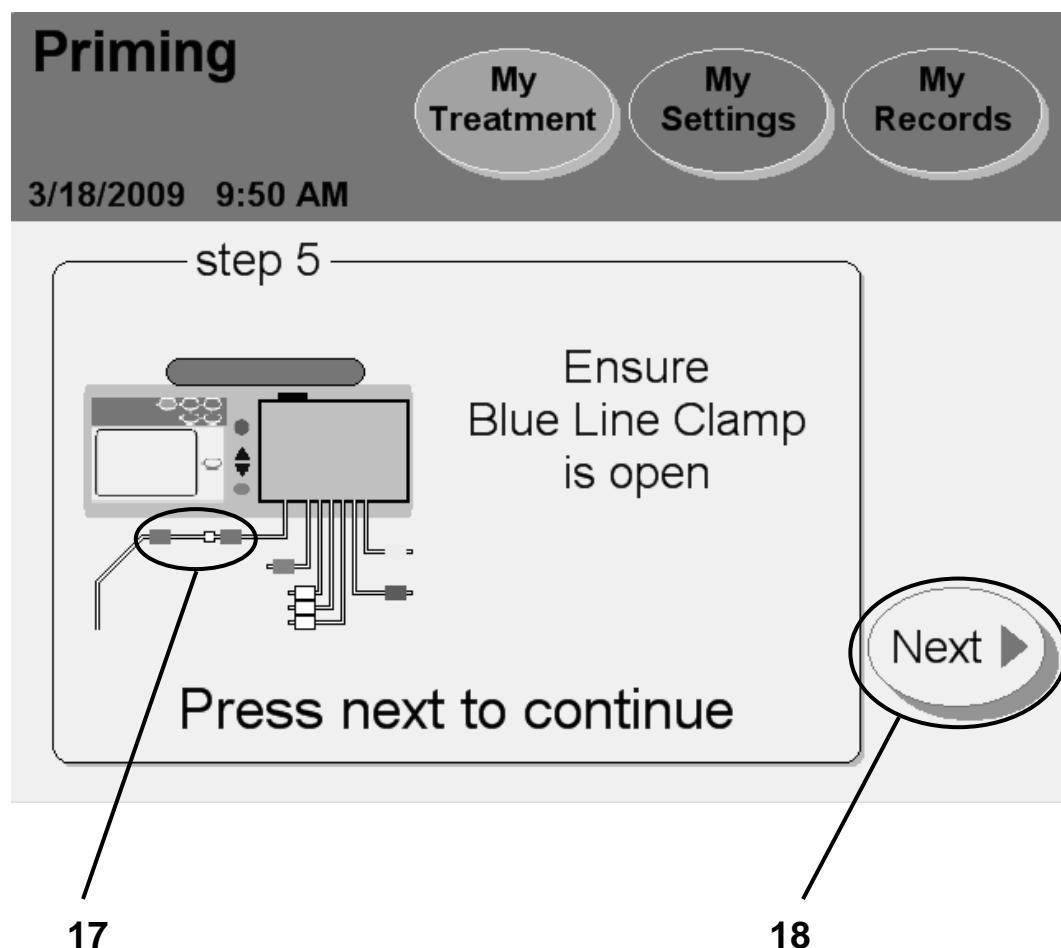
17 Ensure Patient Line (blue clamp) is open

Make sure the patient line (blue clamp) is open to prepare the patient line for priming.

18 Touch (Next)

Touch the **Next** button to begin the priming process.

Note: During the prime phase, the patient line (blue clamp) must be lower than the heater bag.

Performing Prime

Priming

My Treatment   My Settings   My Records

3/18/2009   9:53 AM

Time remaining
0 min 15 sec

Time set
2 min 0 sec

Please wait
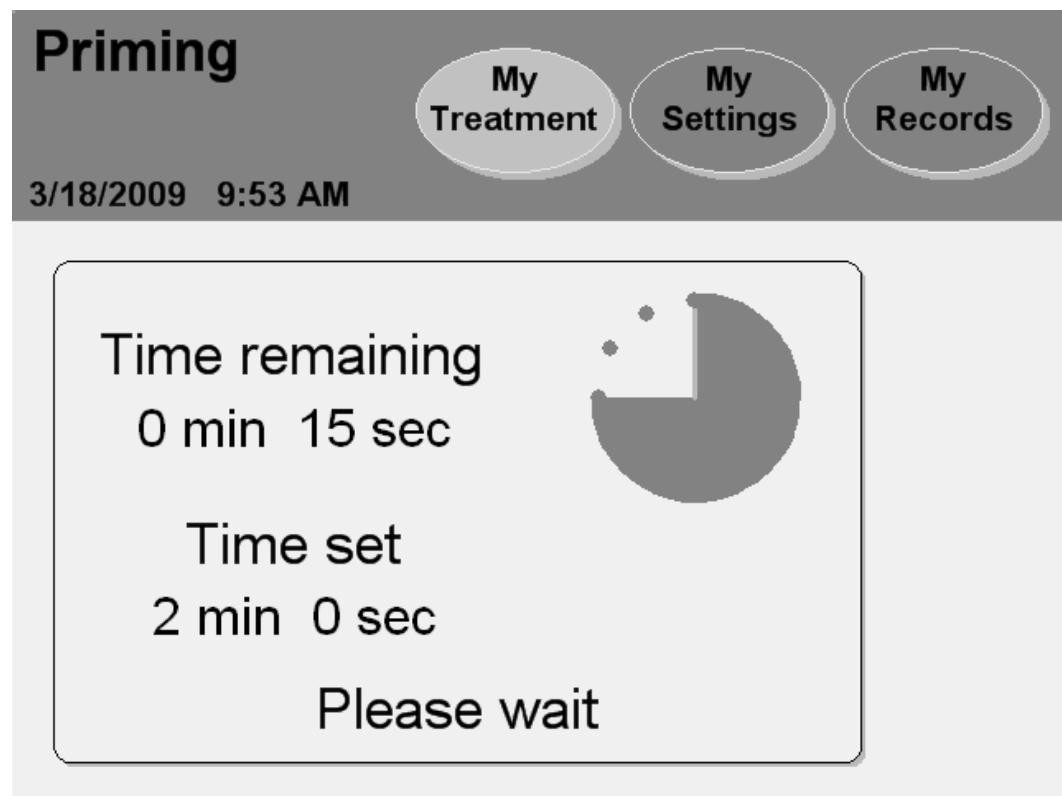
Performing Prime

Your machine will now prime the lines. The screen displays a timer to count down the Priming time.

The next screen will appear when the priming is complete.

Priming Complete

Prime
Complete

My Treatment   My Settings   My Records

3/18/2009   10:05 AM

step 6

Back

Close patient line clamp
or
press back to prime again

Next

Press next to continue

19   **20**
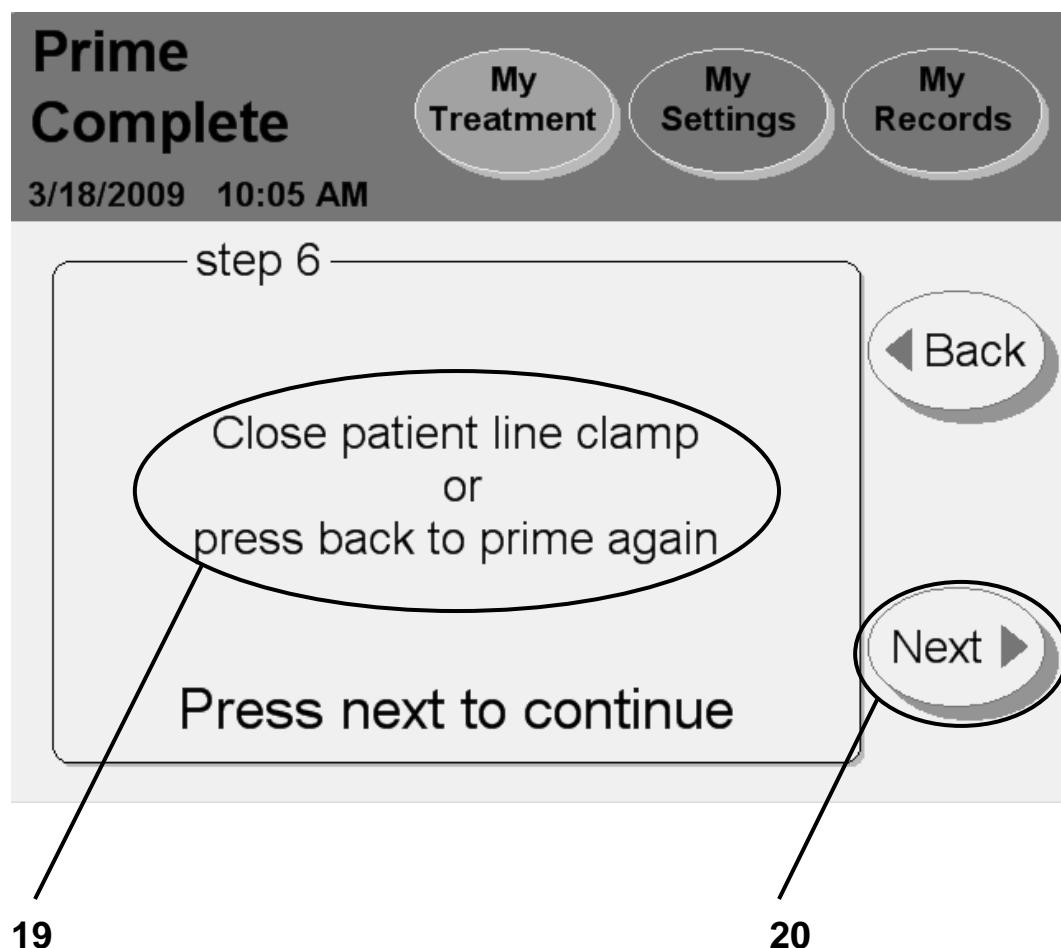
19 Close patient line clamp or press back to prime again

If you see air in the lines and need to prime them again, touch the **Back** button. Your machine will re-prime the lines.

Note: If you are using tubing set model P/N 050-87216 with a twenty foot long patient line, you must press the **Back** button again to ensure the line is fully primed.

If your lines have been primed and there is no air in them, close the patient line (blue clamp).

20 Touch Next

Make sure your patient line (blue clamp) is clamped then touch the **Next** button to continue to the next screen. There you will enter your daytime manual exchange volume, if you did one. A manual exchange is when you connect your catheter extension set to a bag of solution and perform a Fill without using your Liberty cycler.

Entering a Daytime Exchange
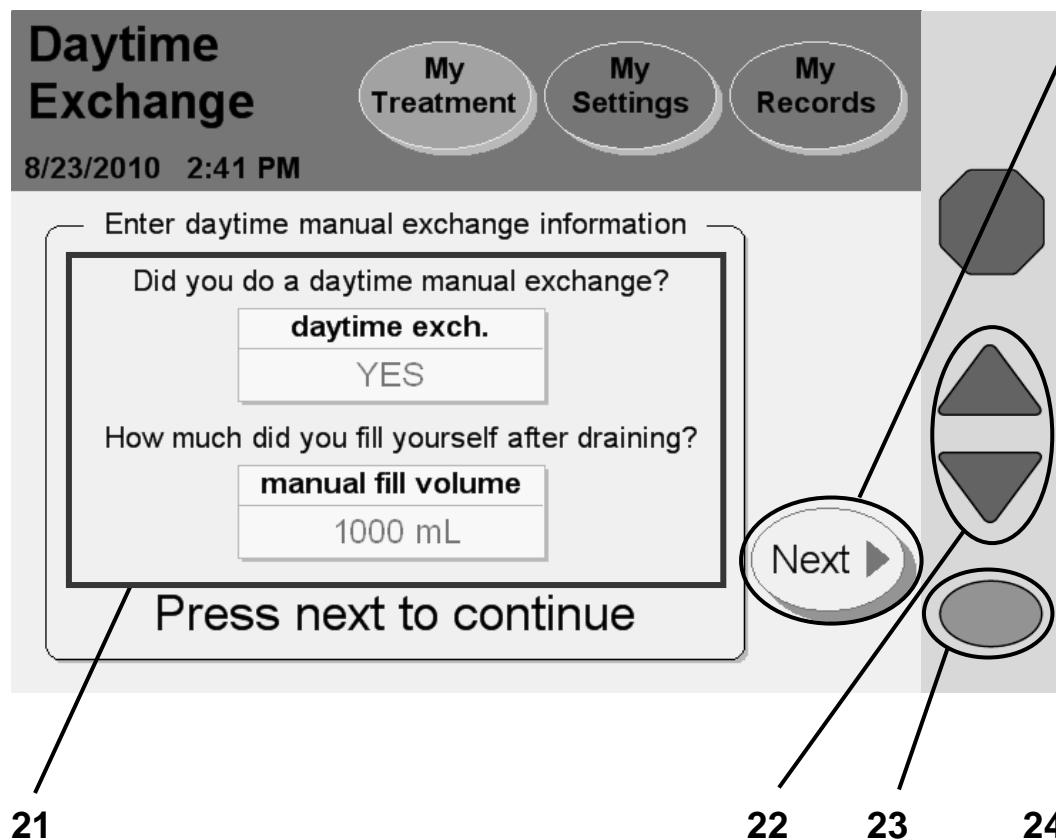
Daytime Exchange

My Treatment   My Settings   My Records

8/23/2010   2:41 PM

Enter daytime manual exchange information

Did you do a daytime manual exchange?

daytime exch.

YES

How much did you fill yourself after draining?

manual fill volume

1000 mL

Next ▶

Press next to continue

21   22   23   24

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

21 Select daytime manual exchange information

<u>If you did not</u> perform a manual exchange Fill since you last turned off your cycler, you may leave this button set to NO. Continue to step 22 below.

<u>If you did</u> perform a manual exchange Fill since you last turned off your cycler, you must set the **daytime exch.** button to YES.

⚠️ **Warning**: You must enter whether or not you performed any manual exchanges since you last turned off your cycler. If you performed a manual exchange, you must then also enter the fill volume. If you do not program this information into your Liberty cycler at this time, your cycler will not know that you have additional fluid in your abdomen. Do NOT bypass Drain 0. Your Liberty cycler will switch to Fill 1 when you are finished draining.

To set the **daytime exch.** button to YES, touch the button and it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to change it from NO to YES. Press the **OK** key to save the change.

22 Enter volume if you had a manual exchange

After setting the **daytime exch.** button to YES, the **manual fill volume** button will change from gray to yellow. You may now edit that button. Touch the **manual fill volume** button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to scroll up or down to the fill volume you have left in your abdomen from your last manual exchange Fill.

23 Press OK

Press the **OK** key to confirm and save your settings.

24 Touch Next

Touch the **Next** button to continue to the next screen

Confirming Your Daytime Exchange

Daytime Exchange

My Treatment My Settings My Records

8/23/2010 2:57 PM

daytime exch. = YES

manual fill volume = 1000 mL

◀ Back

Press next to confirm
or
back to re-enter manual exch. info

Next ▶

25   **26**
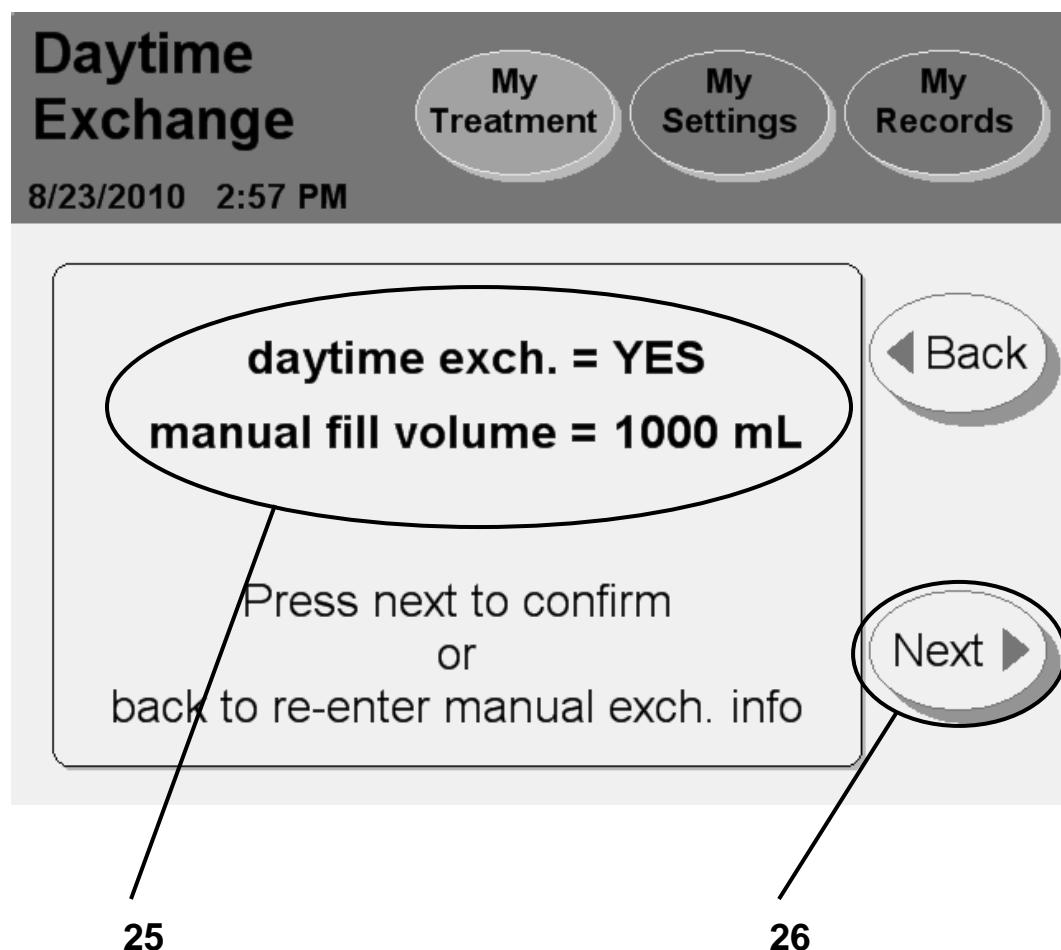
25 Double-check your settings

Your cycler will display the daytime exchange settings you just entered on the previous screen.

If this screen does not match what you entered, touch the **Back** button. You must then re-enter the correct settings (see the previous page).

26 Touch (Next)

If your daytime exchange settings are listed correctly, touch the **Next** button to continue to the next screen. There you will see instructions on how to connect to your machine.

Connecting Yourself

Ready for Treatment

My Treatment · My Settings · My Records

3/18/2009 10:06 AM

step 7

Use aseptic technique to connect blue line to yourself

Open the blue line clamp and your catheter clamp

Press next to continue

Next ▶

27   28   29

stay•safe®

stay•safe Organizer

New Cap   Extension
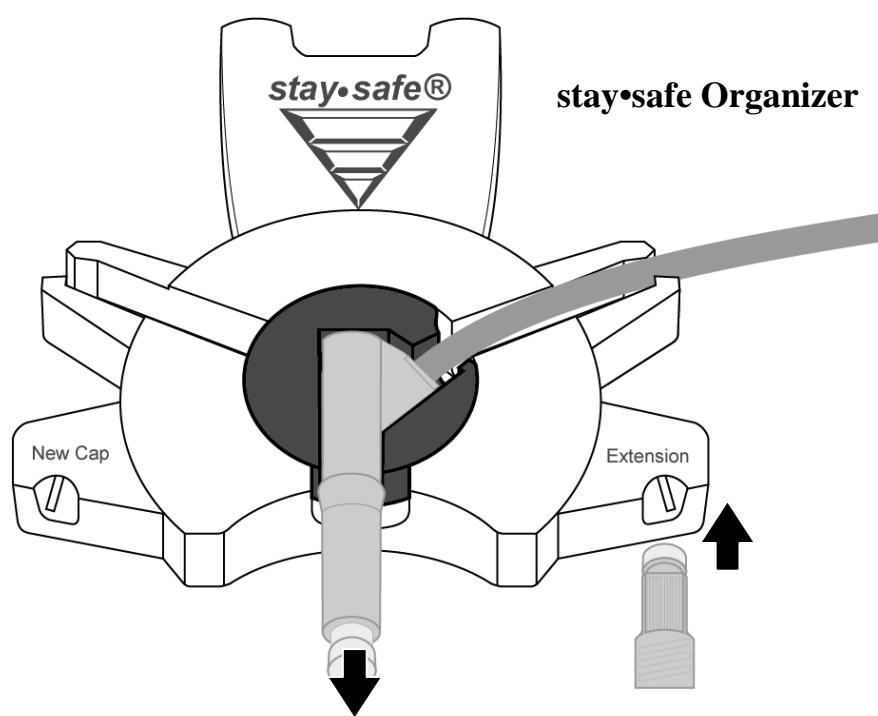
27 Use aseptic technique to connect yourself

Warning: You must use aseptic technique to prevent infection. Keep your mask on until you have finished connecting.

Warning: Use a new, sterile connector each time you connect.

To connect to your cycler:
- Wash your hands or use hand sanitizer as directed by your PD nurse
- Insert your catheter extension cap into the Extension Cap Holder on your stay•safe Organizer to remove the cap.
- Remove the clear stay•safe cap from the stay•safe patient connector
- Connect your catheter extension line to the stay•safe patient connector on the patient line (blue clamp)

28 Open the patient line (blue clamp) and your catheter extension set clamp

29 Touch ⬭Next

Press the **Next** button to begin your prescribed exchanges.

Warning: If you turn off your cycler after you have filled, when you restart your cycler you MUST NOT bypass Drain 0. It could result in an overfill.

Warning: If you do one or more manual daytime exchanges that are not programmed into the Liberty cycler, your cycler will not know that you have additional fluid in your abdomen. Do NOT bypass Drain 0. Your Liberty cycler will switch to Fill 1 when you are finished draining.

Note: Your actual treatment time begins at this point, the beginning of Drain 0.

For information on bypassing an exchange, see page 171.

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Exchanges

Exchanges

Drain   **Fill**   **Dwell/Pause**
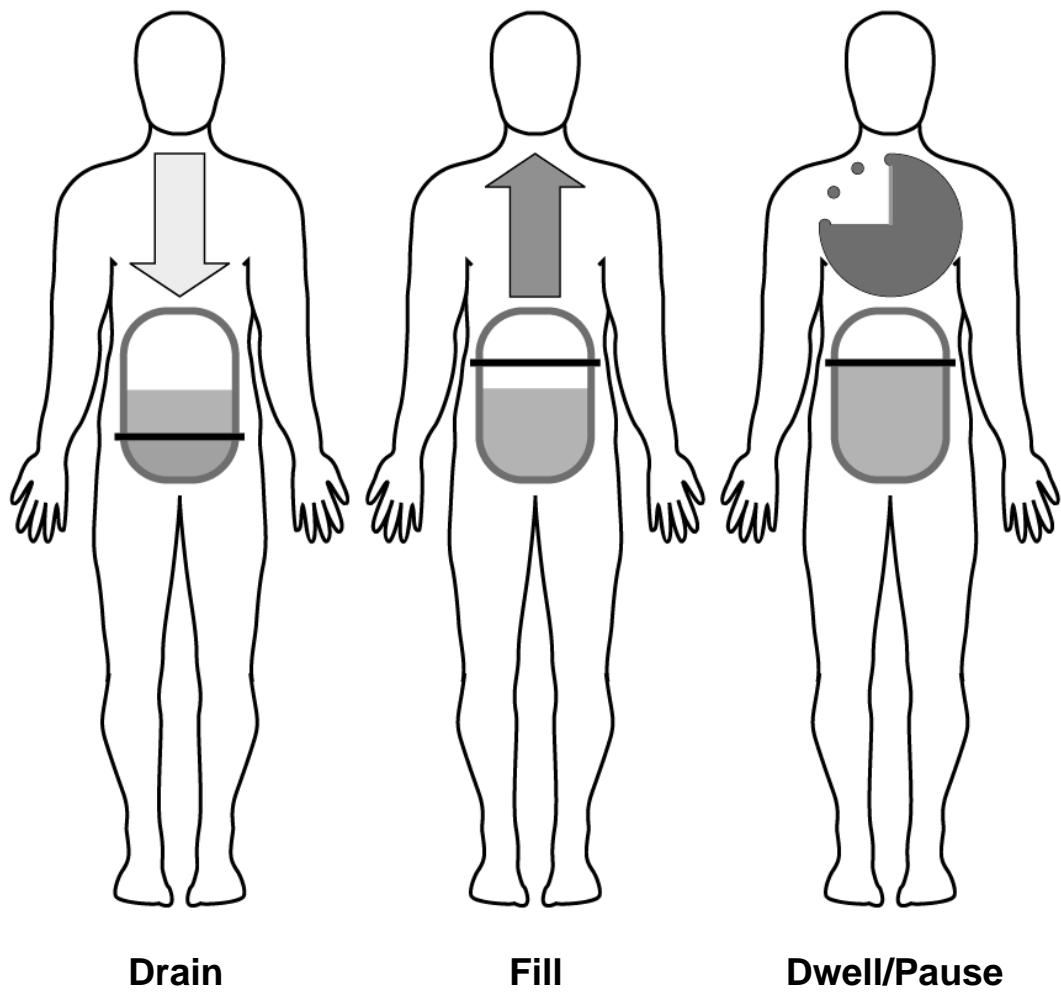
IPD – Intermittent Peritoneal Dialysis

IPD is an *Intermittent Therapy*, meaning it is interrupted. With IPD, your cycler does your Exchanges during the night. Your machine Drains you in the morning so you do not have dialysate in your peritoneal cavity during the day.

Tidal Peritoneal Dialysis

Depending on the program, Tidal PD can be either Intermittent or Continuous. With Tidal PD, your cycler does your Exchanges during the night. However, your machine does not always fully drain you during each Exchange. Only a portion is Drained and Filled with each Exchange. Depending on your prescription, you may end the treatment with a Fill or Drain.

CCPD – Continuous Cycling Peritoneal Dialysis

CCPD is a *Continuous Therapy*. It is the most common therapy prescribed. With CCPD, you have dialysate in your peritoneal cavity at all times. Two or more dialysate Exchanges are done through the night and one long Exchange is done during the day. Each morning your cycler will Fill you for the day. When you reconnect to your machine again at night, you must first drain the dialysate that Dwelled in you since the end of your last treatment.

PD+ – Peritoneal Dialysis Plus™

PD Plus™ is a *Continuous Therapy* like CCPD, but it also includes Drains and Pause-type Dwells during the day to offer more waste removal.

Your cycler's screen order

The number of times that you Drain, Fill, and Dwell (or Pause) depends on your prescribed therapy. The following screens are shown only to explain the different features. Follow your own machine's setup. Your cycler will automatically take you through your prescription.

Exchange: Drain 0

Drain 1 of 2

3/18/2009   10:10 AM

Ultrafiltration (UF)

510 mL

Expected drain volume

1000 mL

Total volume drained

1510 mL
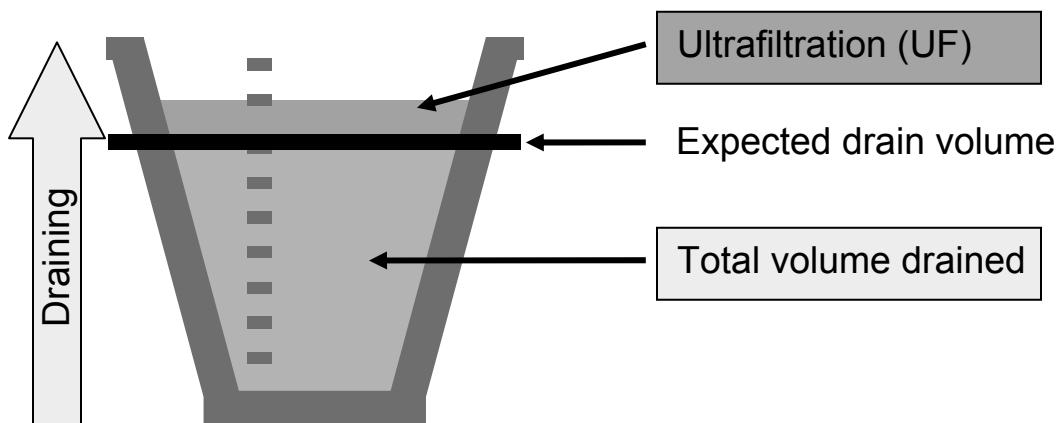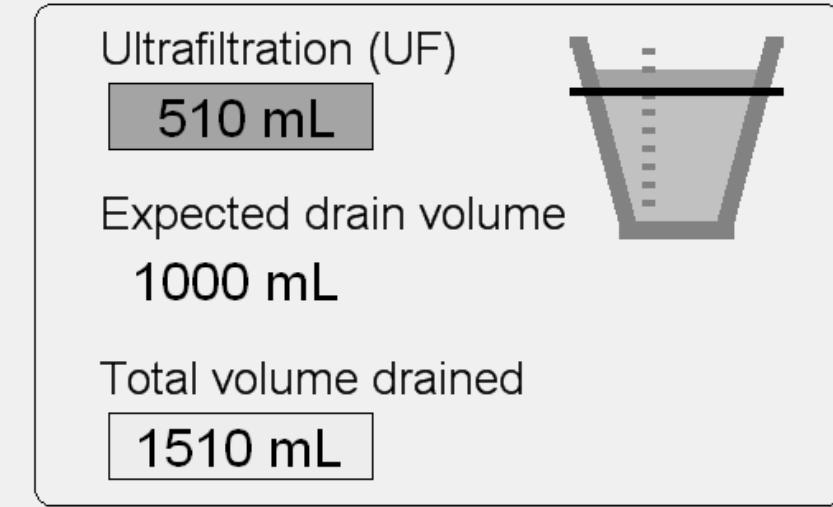
Draining

Ultrafiltration (UF)

Expected drain volume

Total volume drained

Note: The values shown here are for example only. You must use the values prescribed by your doctor.

Drain 0

Drain 0 is the Drain that starts your treatment. Drain 0 does not count toward your total ultrafiltration (UF) for the entire treatment unless the 'Add diurnal UF' option was set to YES (see page 84).

> ⚠ **Warning**: Do not bypass Drain 0 unless you have discussed your situation with your PD nurse or physician. For information on bypassing an exchange, see page 166.

> ⓘ **Note**: Use the clear 'pillow' on your drain line to look at the dialysate fluid as your cycler pumps it to the drain. You may need to turn the pillow upside down to allow the fluid to collect in it. If your dialysate fluid is not clear, save a fluid sample and contact your PD nurse.
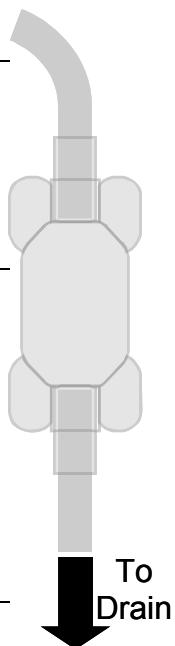
To Drain

All Drain screens

The "Drain" screen displays a graph to track your Drain progress. As your cycler drains you, the fluid level in the container on the left will rise.

You will continue to drain until the graph rises to the black line. This black line is your expected drain volume. This is based on your prescription.

When your cycler drains more fluid than you filled with, this is called ultrafiltration. The graph will show the fluid level rise past the black line. Any ultrafiltration is shown in orange above the black line on the cup.

> ⓘ **Note**: You may drain more quickly sitting or standing up than lying down. There is more pressure on your abdomen in a sitting or standing position.

> ⓘ **Note**: If you need to stop the draining process, press the **STOP** key. The pump will stop and the "Draining Stopped" screen will be displayed. Draining will resume when you press the **OK** key.

When the Drain is complete, your cycler will either begin to Fill you with fresh dialysate or end your treatment. If you are ending your exchanges with a Drain and this is the last Drain of your treatment, then turn to "Ending Treatment" on page 138. For Fills, see the Fill explanation on the next page.

Exchange: Fill1
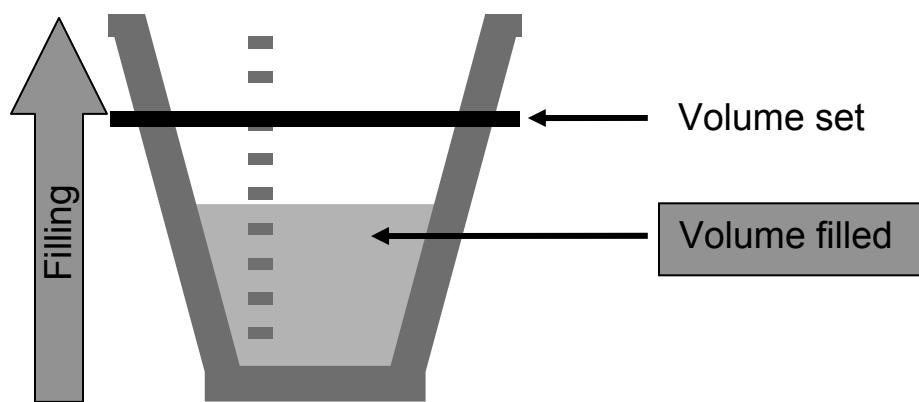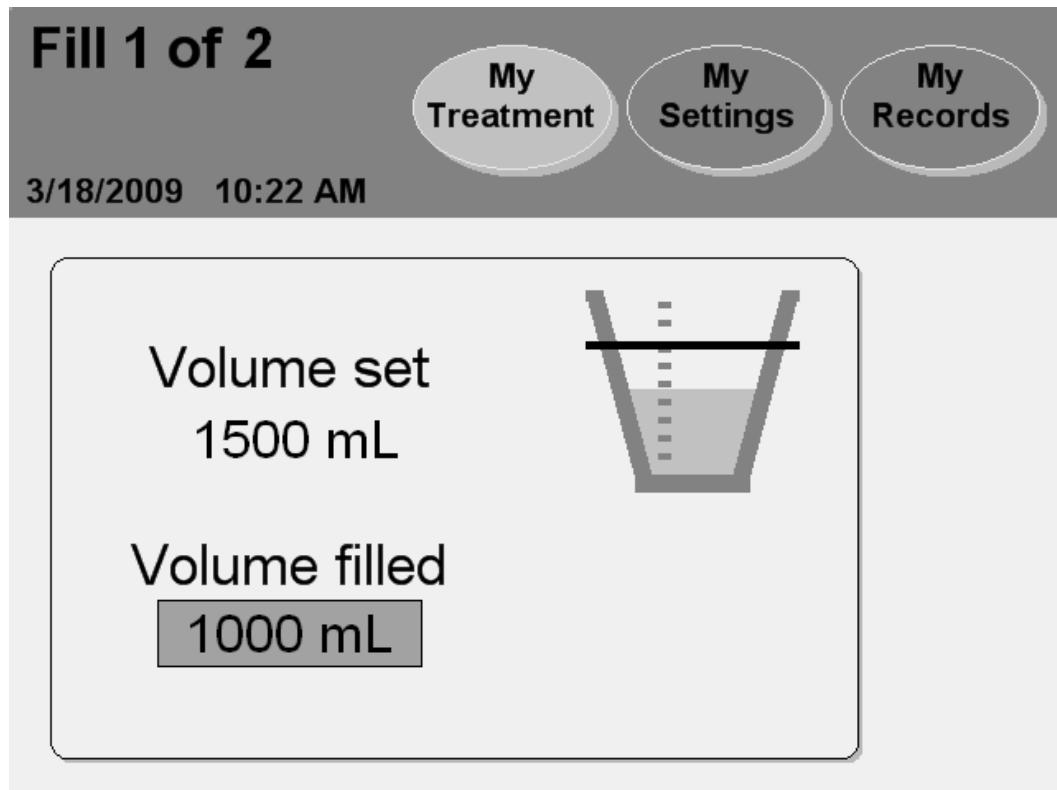
Volume set
1500 mL

Volume filled
1000 mL

Filling

Volume set

Volume filled

Note: The values shown here are for example only. You must use the values prescribed by your doctor.

Fill 1

Fill 1 is the first Fill of your treatment. Your cycler will always go to Fill 1 after Drain 0.

All Fill screens

The "Fill" screen displays a graph to track your Fill progress. As your cycler fills you, the fluid level in the picture on the left will rise. The black line indicates the expected fill volume level.

You will continue to fill until the graph rises to the black line. This black line is your set fill volume. This is based on your prescription.

⚠	**Warning**: If you feel a large, painful build-up of pressure during your fill, do not finish your fill cycle. You must press the **STOP** key to stop your cycler immediately then call your PD nurse or doctor. Overfilling can cause serious injury or death. For more information on overfilling, see page 171.
ⓘ	**Note**: You may fill more quickly lying down than sitting or standing up. There is less pressure on your abdomen in a lying down position.
ⓘ	**Note**: If you need to stop the Fill process, press the **STOP** key. The pump will stop and the "Filling Stopped" screen will be displayed. Filling will resume when you press the **OK** key.
ⓘ	**Note**: Your cycler will delay your Fill if the heater bag solution temperature is colder than 33°C (91.4°F). When the temperature reaches at least 25°C (77°F), your cycler will display the message "Press OK key to start fill..." If you press the **OK** key, you will begin your Fill with the cool solution. If the cool solution makes you feel uncomfortable, do not press the **OK** key. You must then wait until the solution has warmed up to the set temperature.

When the Fill is complete, your cycler will go to Dwell (page 134) or Pause (page 130) depending on your therapy.

If you have programmed a Last Fill, and this is the last Fill of your treatment, then turn to "Ending Treatment" on page 138.

Exchange: Pause

Pause 1 of 2

My Treatment   My Settings   My Records

3/18/2009   10:32 AM

Pause time
0 h 10 min

Push in the pin THEN close the blue line clamp and your catheter clamp

Use aseptic technique to disconnect yourself

Next ▶

Press next to continue

1

2

Twist ¼ turn
and Push in
PIN

**stay•safe PIN
connector**

Close Clamp
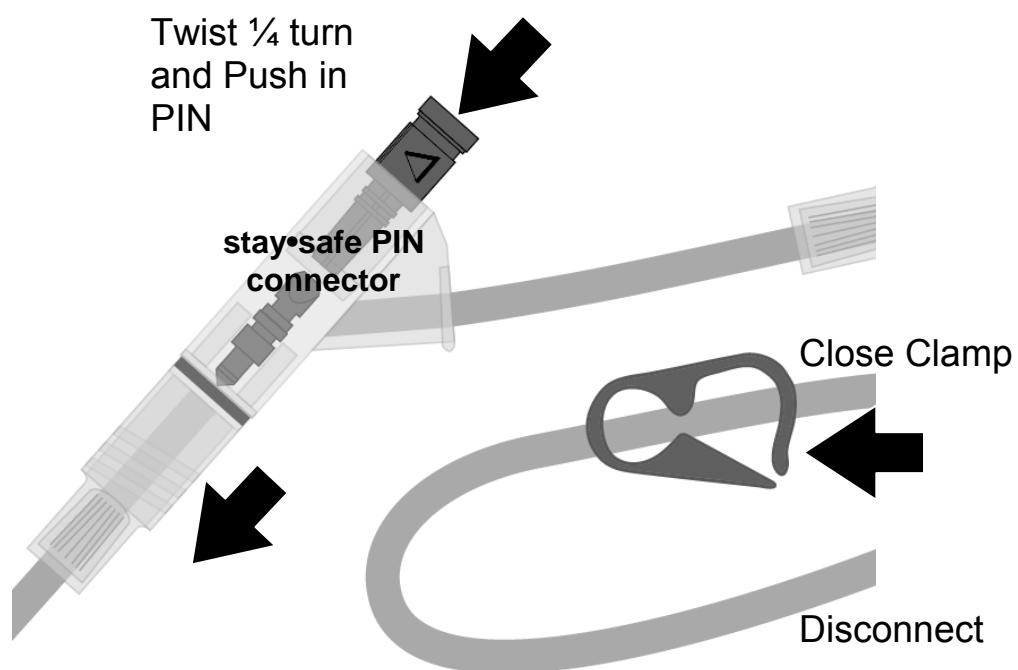
Disconnect

1 Pause: Disconnect from cycler

A Pause is a special type of Dwell. During a Pause you still Dwell with the solution, but you may choose to disconnect from your cycler. It is also different from other Dwells because it is not timed, meaning you may pause for as long as you need. The number of Pauses during your treatment depends on your prescription; see "My Treatment Parameters" on page 2.

When your cycler is on the "Paused" screen, you may disconnect from your machine.

⚠ **Warning**: You must use aseptic technique as directed by your PD nurse to prevent infection.

⚠ **Warning**: Use a new, sterile stay•safe patient connector and cap <u>every</u> time you disconnect from your cycler. Be sure to insert the new, sterile cap into the stay•safe New Cap Holder before you disconnect.

To disconnect from your cycler:
- Push in the PIN—twist the PIN ¼ turn and then push it in to make sure that a new PIN is inserted in the line
- Close patient line (blue clamp)
- Close catheter extension clamp
- Carefully disconnect the patient line from your extension set and cap off with a new sterile stay•safe cap
- Check that your catheter/extension set is firmly anchored in place

Your cycler will display how long you Pause under 'Pause time'.

2 Touch (Next)

You may now leave your machine. Touch the **Next** button when you are ready to reconnect to your cycler.

ⓘ **Note**: The **Next** button is not available until your cycler has finished filling up the heater bag.

Exchange: Pause Re-Start

Pause 1 of 2
Re-Start

My Treatment   My Settings   My Records

3/18/2009   10:50 AM

Use aseptic technique to connect blue line to yourself

Open the blue line clamp and your catheter clamp

Press next to continue

Next ▶

3

4

stay•safe PIN connector 2

stay•safe Organizer

New Cap

Extension

stay•safe PIN connector 1

Twist ¼ turn and Push in PIN
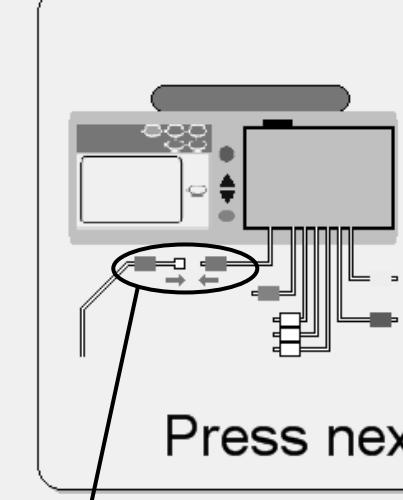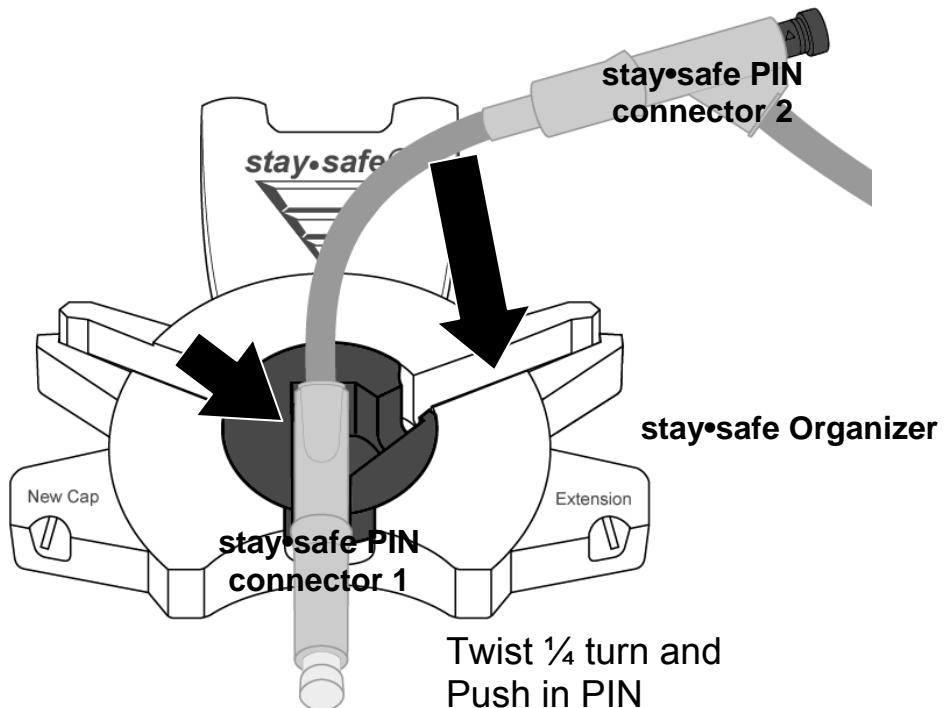
3 Reconnect to your cycler

Reconnect to your machine when you are ready to resume your treatment. Be sure to remove your used stay•safe PIN connector from its holder before beginning.

> ⚠️ **Warning**: You must use aseptic technique as directed by your PD nurse to prevent infection. Wear a mask and wash your hands before reconnecting.

To reconnect to your cycler:

- Put on your mask
- Wash your hands
- Unwrap the next stay•safe PIN connector.
- Insert the next stay•safe PIN connector on your patient line into the stay•safe organizer clip below the control panel
- Insert the tubing into the Tubing Channel on the right
- Remove the clear stay•safe cap from the stay•safe PIN connector
- Connect your catheter extension line to the stay•safe PIN connector on the patient line (blue clamp)
- Open patient line (blue clamp)
- Open catheter extension set clamp

4 Touch (Next)

When you touch the **Next** button, your machine will begin the Drain process.

Exchange: Dwell
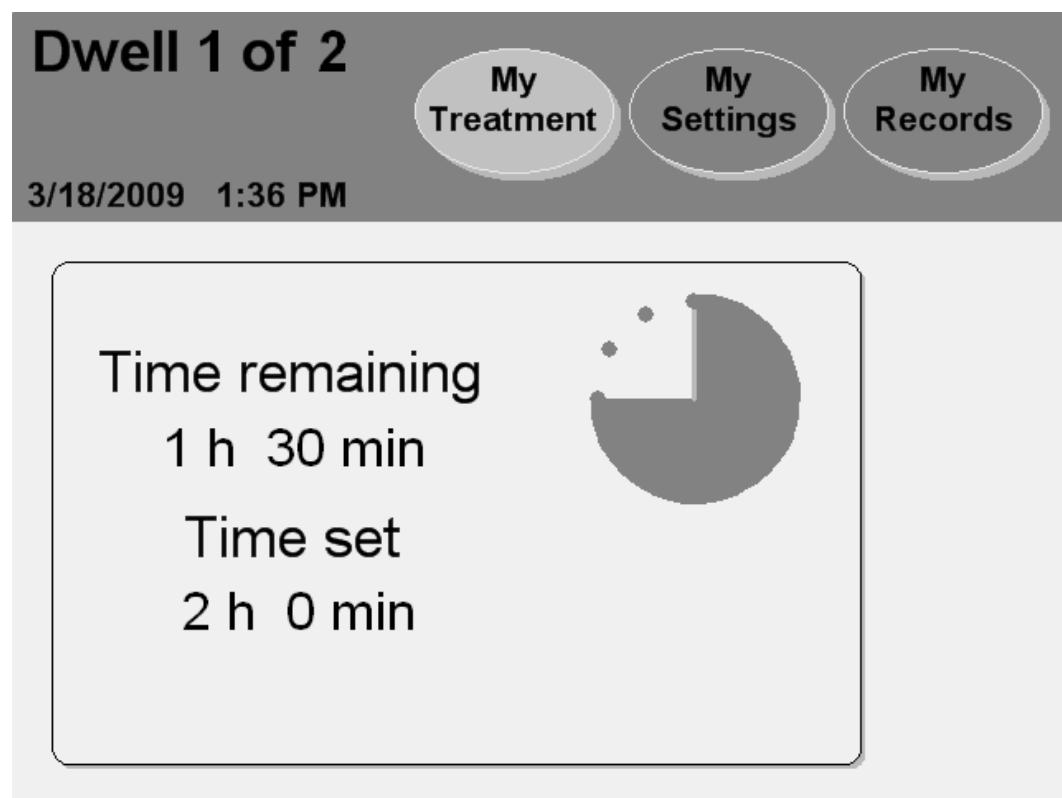
> ℹ️ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

All Dwell screens

During a Dwell, you stay connected to your machine while your fluid dwells inside you. Most Dwells take place at night when you are sleeping.

The "Dwell" screen displays a timer to count down your Dwell time. During the Dwell stage, your machine will pump dialysate to the heater bag. The heater tray will then warm the solution for your next Fill.

⚠	**Warning**: During the heating process, the Heater Tray can get as hot as 50 °C (122 °F). Do not come into contact with the Heater Tray as it may cause injury.
🛈	**Note**: If you need to stop the dwell process, press the **STOP** key. The Dwell timer will stop counting down and the "Dwell Stopped" screen will be displayed. The Dwell will resume when you press the **OK** key.
🛈	**Note**: The cycler cannot bypass an exchange while the heater bag is filling.

When your Dwell time is complete, your cycler will Drain you again. See page 126 for more information on the Drain process.

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Ending Treatment

Ending Your Treatment

Treatment Complete

My Treatment   My Settings   My Records

3/18/2009   1:43 PM

step 8

Push in the pin THEN close the blue line clamp and your catheter clamp

Use aseptic technique to disconnect yourself

Next ▶

Press next to continue

1   **2**

Twist ¼ turn and Push in PIN

Close Clamp
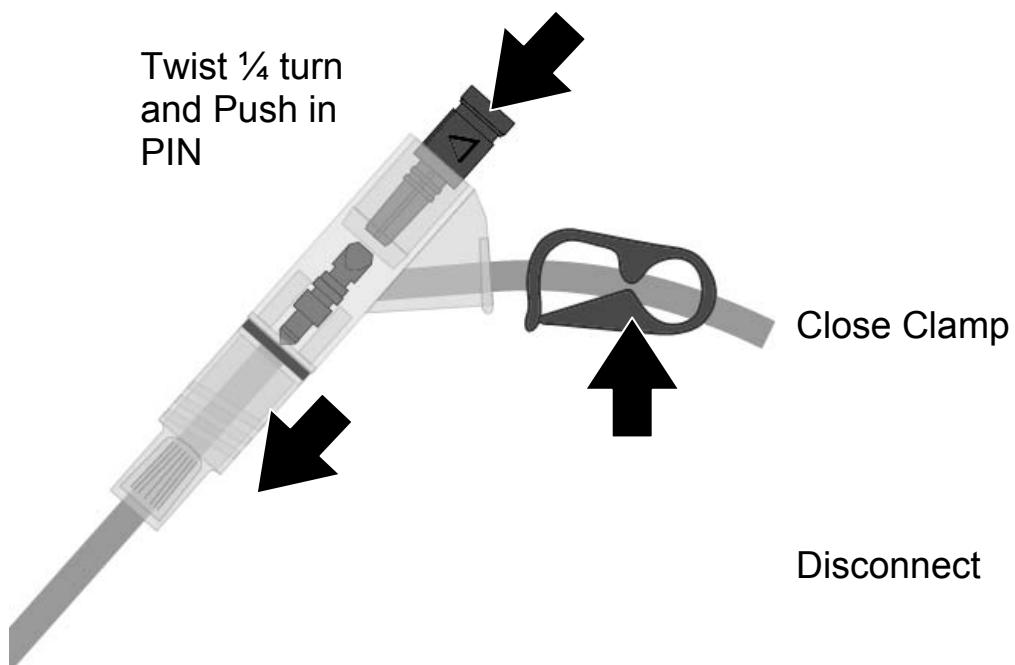
Disconnect

1 Disconnect yourself

After your last Drain or Fill of your treatment, your treatment will be complete for the day. When your cycler reaches this screen, you may disconnect.

⚠	**Warning**: You must use aseptic technique as directed by your PD nurse to prevent infection.
⚠	**Warning**: Use a new, sterile stay•safe patient connector and cap <u>every</u> time you disconnect from your cycler. Be sure to insert the new, sterile cap into the stay•safe New Cap Holder before you disconnect.

To disconnect from your cycler:

- Push in the PIN—twist the PIN ¼ turn and then push it in to make sure that a new PIN is inserted in the line
- Close patient line (blue clamp)
- Close catheter extension set clamp
- Carefully disconnect the patient line from your extension set and cap off with a new sterile stay•safe cap
- Check that your catheter/extension set is firmly anchored in place

2 Touch (Next)

Touch the **Next** button to continue. If you set the 'personal data' option to YES (see "Options Settings" on page 84), your cycler will next go to the "Personal Data" screen. If the 'personal data' option is not set, turn to page 146.

Entering Your Personal Health Data
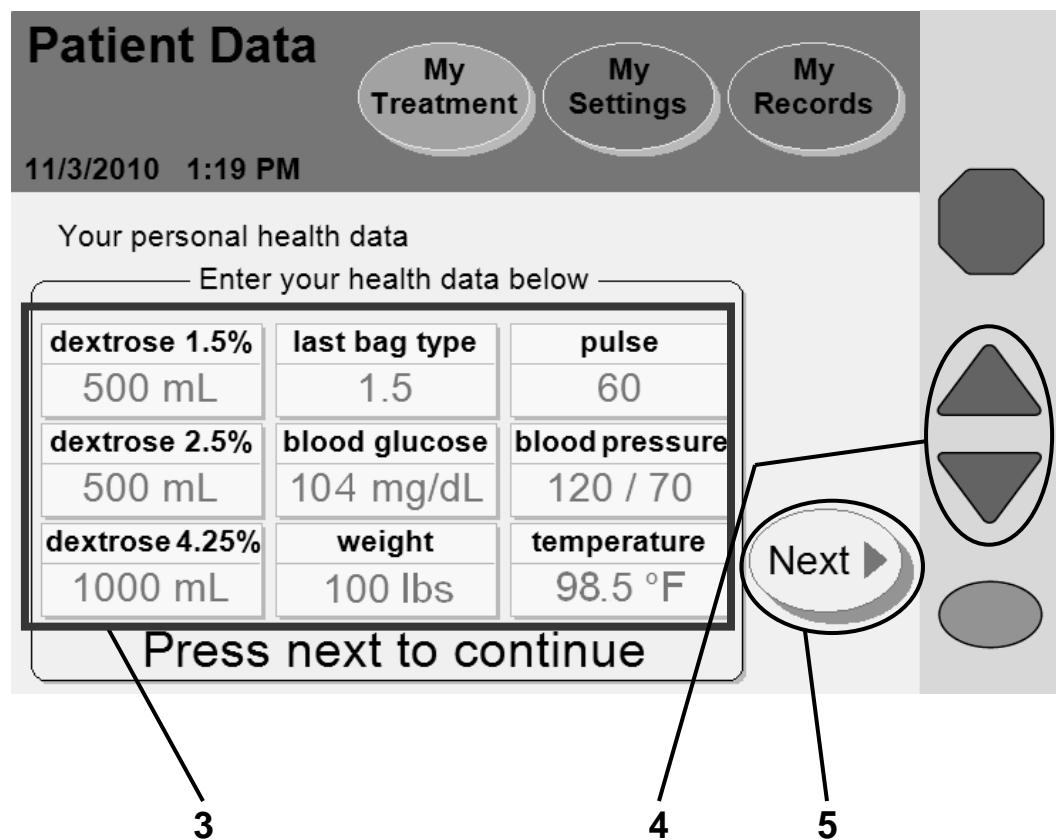
Patient Data   My Treatment   My Settings   My Records

11/3/2010   1:19 PM

Your personal health data
— Enter your health data below —

dextrose 1.5%	last bag type	pulse
500 mL	1.5	60
dextrose 2.5%	blood glucose	blood pressure
500 mL	104 mg/dL	120 / 70
dextrose 4.25%	weight	temperature
1000 mL	100 lbs	98.5 °F

Next ▶

Press next to continue

3   4   5

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

> **(i)** **Note**: This screen will appear only if you set the 'personal data' option to YES. See "Options Settings," on page 84.
>
> **You must enter your personal data now—you cannot edit this screen later.**

3 Select values

Here you need to update your personal health data. Touch the yellow button to select the value it displays:

- **Dextrose 1.5%**—The volume of dextrose 1.5% used during treatment
- **Dextrose 2.5%**—The volume of dextrose 2.5% used during treatment
- **Dextrose 4.25%**—The volume of dextrose 4.25% used during treatment
- **Last Bag Type**—Dextrose type of the last bag used (1.5, 2.5, or 4.25)
- **Blood glucose**—Your blood glucose level
- **Patient Weight**—Your weight after your treatment
- **Pulse**—Your pulse in beats per minute
- **Blood pressure**—Measure your blood pressure as directed by your PD nurse. Touch the **blood pressure** button to select it, then use the **Up/Down Arrow (▼/▲)** keys to change the first number (systolic). Press the **OK** key to confirm the selection. Use the **Up/Down Arrow (▼/▲)** keys to set the next number (diastolic) and press the **OK** key again to confirm the selection.
- **Temperature**—Measure and enter your temperature as directed by your PD nurse

> **(i)** **Note**: These values must be properly measured to determine the effectiveness of your treatment.

4 Enter values

When you touch a yellow button, it will turn orange. Use the **Up/Down Arrow (▼/▲)** keys to set it to your measured values. Repeat these steps to enter all of your information.

When you are finished entering all your data, press the **OK** key to confirm the selections.

5 Touch (Next)

After pressing the **OK** key, touch the **Next** button to continue. If you press **Next** without entering your Personal Data, no information will be recorded for this date.

Your Treatment Summary
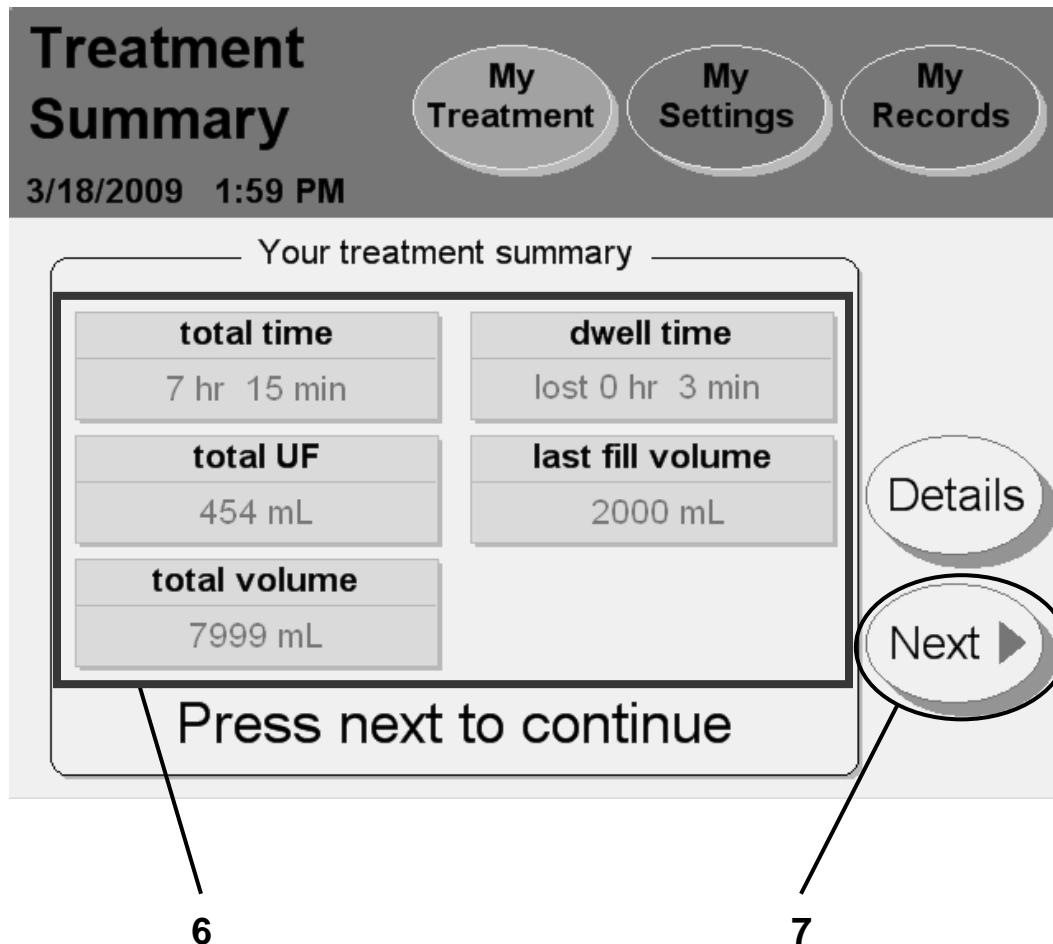
Treatment Summary

3/18/2009   1:59 PM

My Treatment   My Settings   My Records

Your treatment summary

total time	dwell time
7 hr 15 min	lost 0 hr 3 min

total UF	last fill volume
454 mL	2000 mL

total volume	
7999 mL	

Details

Next ▶

Press next to continue

6   7

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

6 Review Treatment Summary

This screen displays a summary of your last treatment. Your total time, UF, and volume are listed. More specific information is stored in the "Details" screen, available through the **Details** button on the right side of the screen or within the **My Records** screen-button along the top.

> **Note**: You may touch the **Details** button for more information about your latest treatment. The "Details" screen displays information about exchanges, times and volumes. See the next page for more information about this screen.

> **Note**: Your cycler is designed to complete your treatment on time. If, within that time, the dwell was longer than expected (due to an alarm), the **Dwell Time** button will display the word 'gained' before the time. If the dwell was shorter than expected (due to a drain or fill bypass), the **Dwell Time** button will display the word 'lost' before the time.

7 Touch (Next)

Touch the **Next** button when you are finished reviewing your treatment.

Treatment Summary continued

cycle #	fill vol	fill time	dwell time	drain vol	drain time	UF vol
0				1900	20	-100
1	2000	15B	60P	2100	18	100
2	2000	13S	120	2100	21B	100
3	2000	15	90S	2000	20	0
4	2000	16F	120	2000	20	0
5	2000	14				

Treatment Summary

11/4/2010   11:30 AM

My Treatment   My Settings   My Records

Your treatment details for **11/4/2010**

◀ Back

all volumes in mL
all times in min

net UF: 200

review   **return**

Note: The values shown here are for example only. You must use the values prescribed by your doctor.

Review Treatment Details

This screen displays the cycles of your last treatment. Your information is listed by cycle number and includes:

- Fill volume
- Fill time
- Dwell time
- Drain volume
- Drain time
- Ultrafiltration volume

> **Note**: If the Drain, Fill, Dwell, or Pause times were interrupted at all, the following letters will appear next to the time to show the interruption:
> **F** – Power Failure
> **B** – Bypass
> **P** – Paused
> **S** – STAT Drain

Touch Back

Touch the **Back** button to return to the "Treatment Summary" screen. Then, to continue to the next step on the next page, touch the **Next** button when on the "Treatment Summary" screen.

Remove Set Screen 1

Remove Set

My Treatment   My Settings   My Records

8/25/2010   11:23 AM

— step 9 —

Close all clamps

Press next to continue

Next ▶

8   9
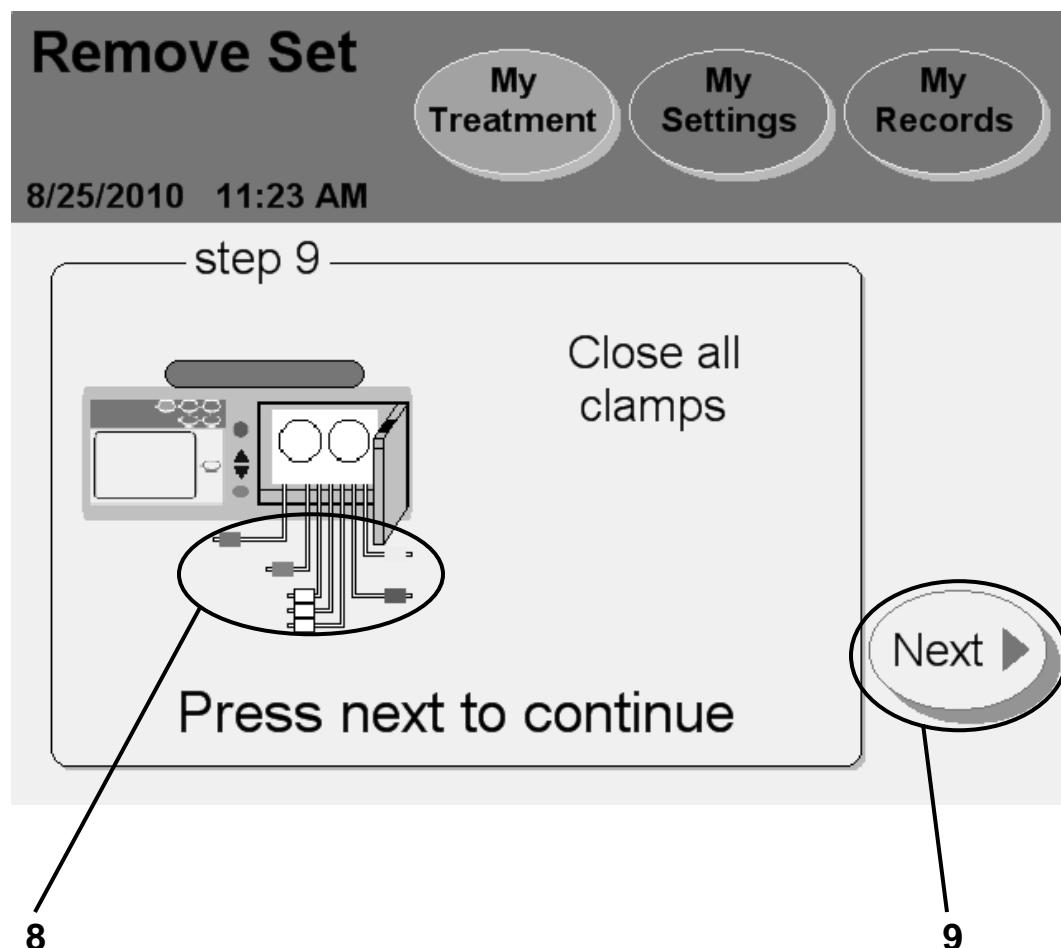
8 Close all clamps

Clamp all lines to prevent any fluid spills when removing the disposable set.

> **Note**: Clamp all lines to prevent spills. Spills can cause damage to carpeting and other surfaces. To contain such spills, your machine should be on a spill-tolerant surface. Clean up spills immediately.

9 Touch (Next)

Touch the **Next** button to continue to the next step.

Remove Set Screen 2

Remove Set

My Treatment

My Settings

My Records

8/25/2010   11:27 AM

step 9

Remove cassette

Press next to continue

Next ▶

10

11
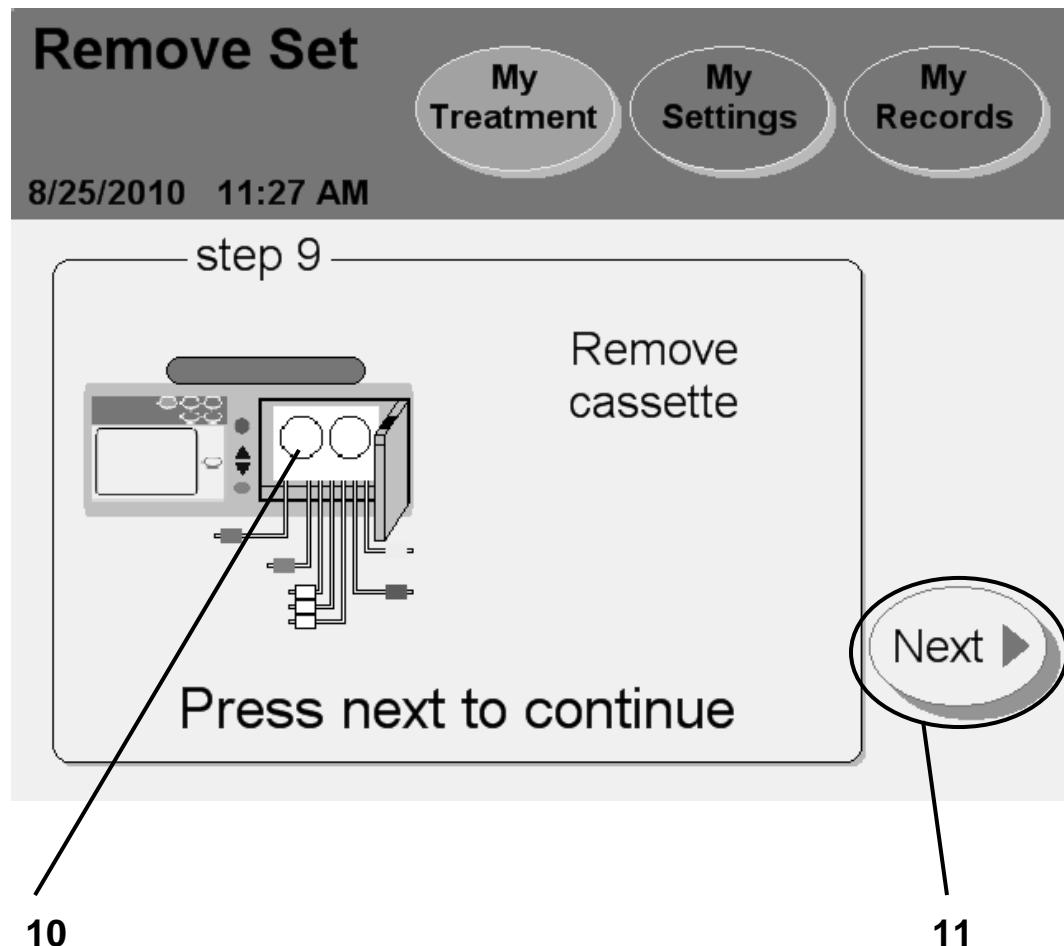
10 Remove cassette

Push the door latch to open the cassette door.

⚠️ **Warning**: Be careful of pinch points in moving parts, injury may occur.

Remove the cassette from your machine. Discard your waste materials as instructed.

⊗ **Caution**: If your pump module has moisture in it, your cassette may have a leak. **Save your tubing set** and call Technical Support immediately at 1 800 227-2572. You will be contacted about having the used tubing set sample picked up. Please notify your PD nurse about this event.

You should also clean your machine at this time. Follow your healthcare staff's instructions. See "Cleaning Your Cycler," on page 220.

Close and latch the cassette door again.

11 Touch ⬭Next⬭

The **Next** button will appear after the door has been closed. Touch the **Next** button to continue.

Power Down Cycler

Power Down Cycler

My Treatment   My Settings   **My Records**

3/18/2009   2:16 PM

step 10

Your treatment is finished.
Have a nice day!

Please turn off power

**view your health
and treatment data**
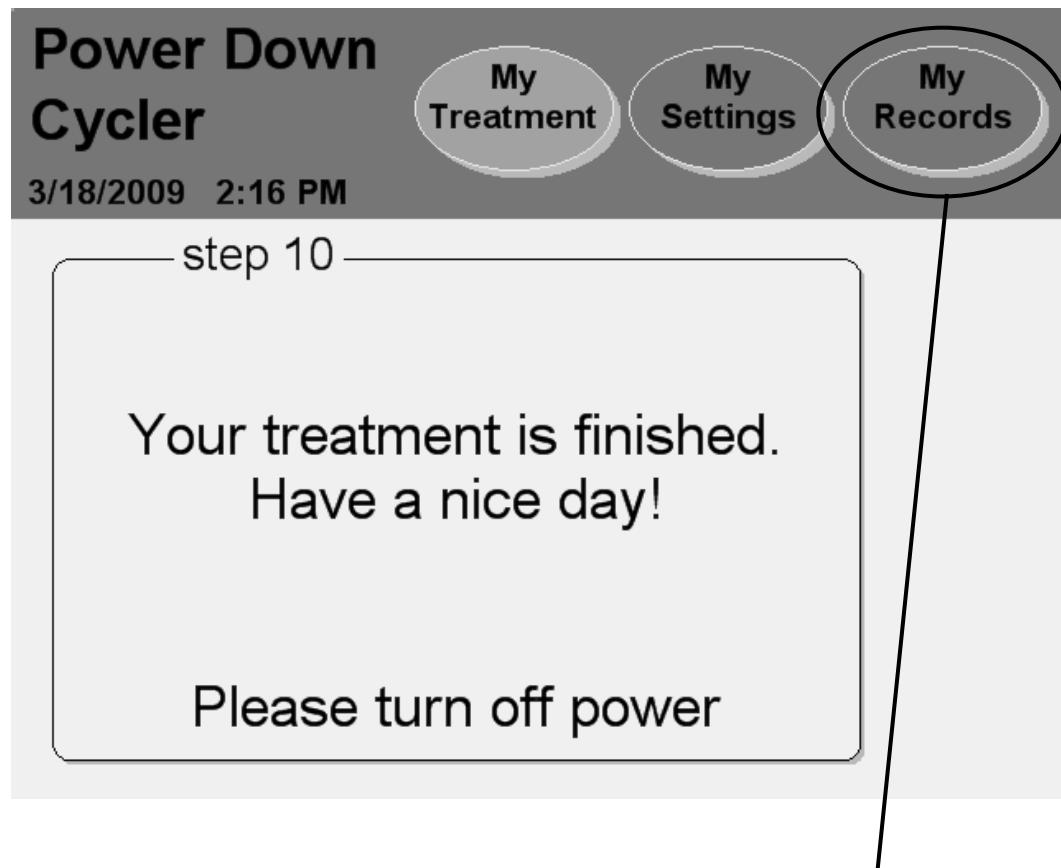
Have a nice day

Locate the switch on the back of your cycler and turn it off.

Turn OFF

On

Off
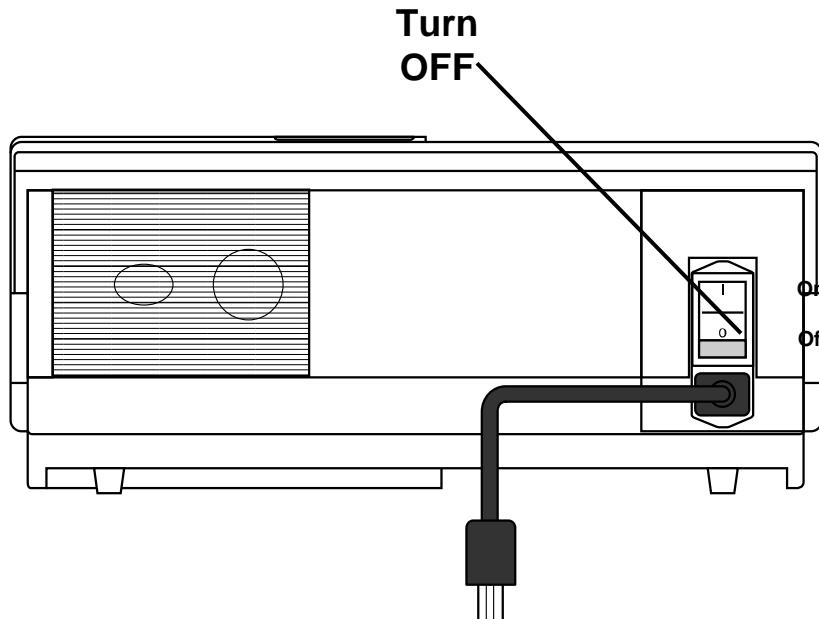
You will need to power on your cycler again before your next treatment.

If you need to remove your IQdrive to take it to your PD nurse, you may safely remove it at this time.

⊗ **Caution**: Handle your IQdrive with care. When taking your IQdrive to and from your healthcare provider, store it in a plastic bag and keep it clean and dry. Do not leave your IQdrive in a hot car or in the bottom of a purse where it can become damaged.

Touch My Records

If you would like to further review your treatment information, restart your cycler and touch the **My Records** screen-button. See page 156 for an explanation of the "My Records" screen.

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Appendix

Appendix
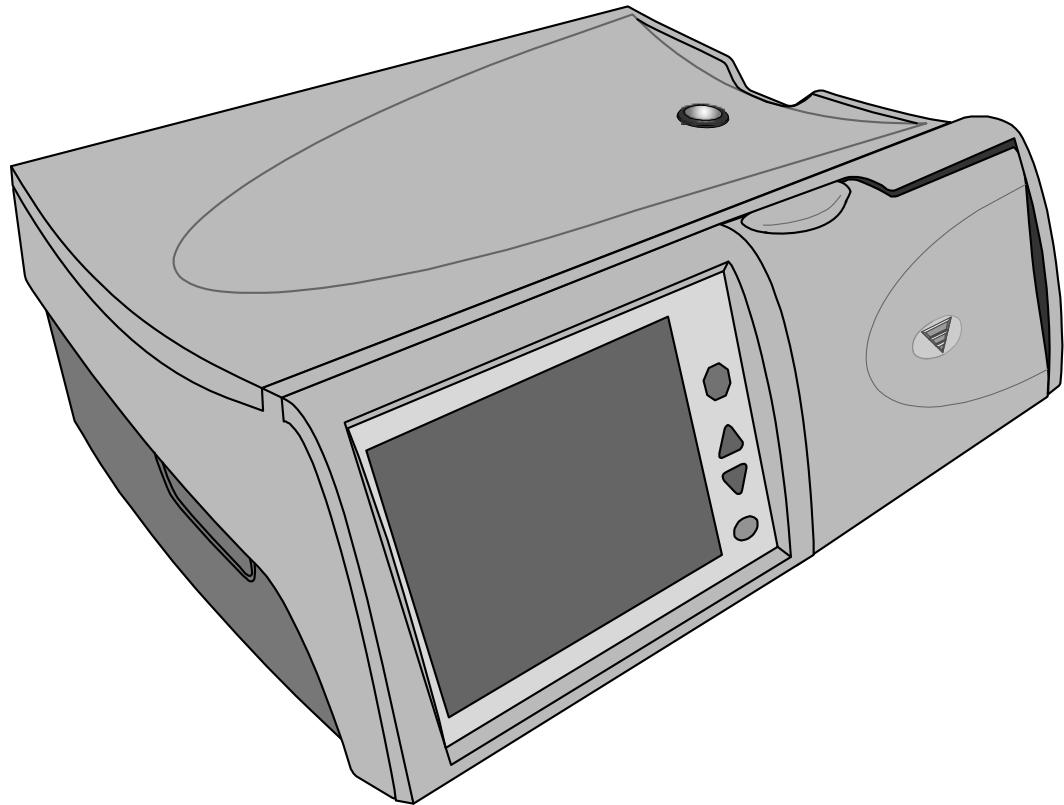
Appendix

The Appendix explains helpful instructions on different features that you may not use every treatment:

If you get 'lost' in any of these screens, simply touch the **Back** button, if available, to go to a previous screen. You may also touch any screen-button in the Status Bar to view other screens. See page 30 for more information on screen-buttons.

The My Records Screen-Button
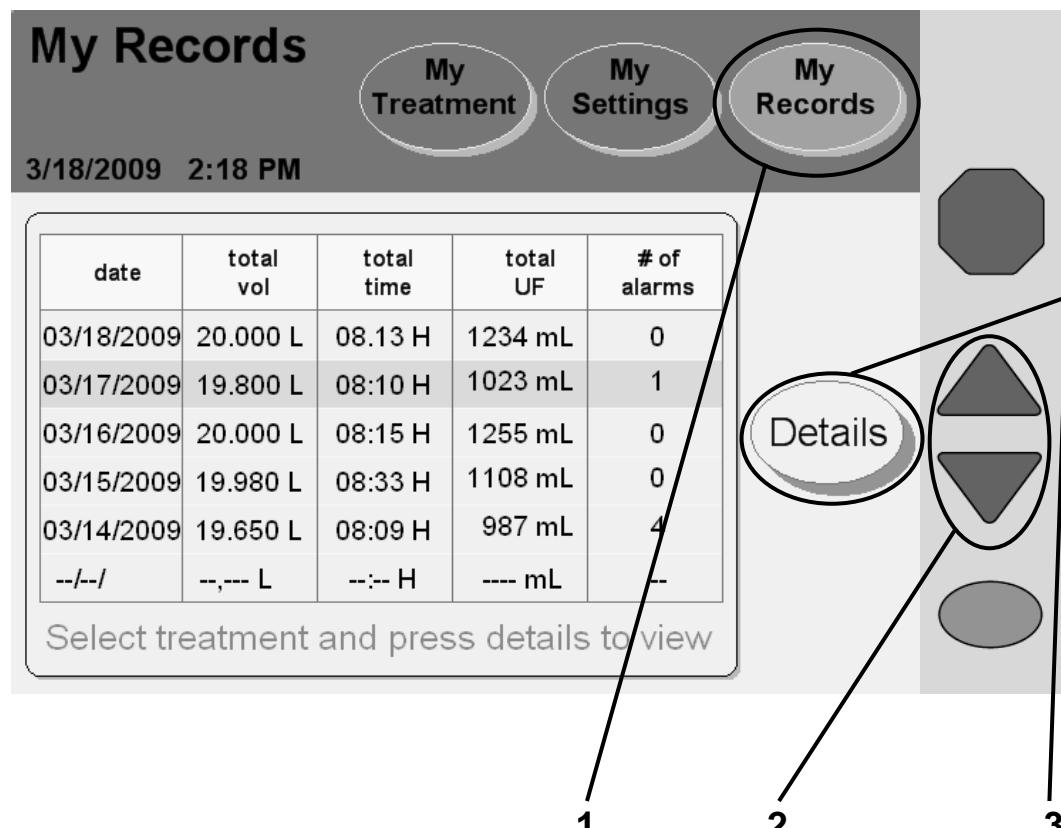
date	total vol	total time	total UF	# of alarms
03/18/2009	20.000 L	08.13 H	1234 mL	0
03/17/2009	19.800 L	08:10 H	1023 mL	1
03/16/2009	20.000 L	08:15 H	1255 mL	0
03/15/2009	19.980 L	08:33 H	1108 mL	0
03/14/2009	19.650 L	08:09 H	987 mL	4
--/--/	--,--- L	--:-- H	---- mL	--

1 **2** **3**

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

1 Touch My Records

> Your treatment history is a record of your past treatments. Your cycler saved all the information here during each of your treatments. You cannot change any of the information here. This information is for you and your PD nurse to review.
>
> You may reach the "My Records" screen from any other screen. Touch the **My Records** screen-button to view your treatment history.

2 Select treatment date to view

> The select treatment table displays your last six treatments in the main area. Use the **Up/Down Arrow (▼/▲)** keys to scroll through the different pages of your treatments to see older treatment dates, if desired. Touching a treatment date will select that treatment by highlighting it with a blue bar.
>
> Your cycler saves your last three months of treatment data.

3 Touch Details

> Touch the **Details** button to view the treatment details for the selected date.

Treatment Details

My Records

| My Treatment | My Settings | My Records |

11/4/2010   11:30 AM

Your treatment details for **2/7/2007**

cycle #	fill vol	fill time	dwell time	drain vol	drain time	UF vol
0				1900	20	-100
1	2000	15B	60P	2100	18	100
2	2000	13S	120	2100	21B	100
3	2000	15	90S	2000	20	0
4	2000	16F	120	2000	20	0
5	2000	14				

all volumes in mL
all times in min

net UF: **200**

Back

Next

4   5

ℹ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

4 View treatment details

This screen shows information about the selected treatment date. The treatment date is displayed at the top of the Main Area. The information is organized by the cycle number (#) and shows:

- Fill volume
- Fill time
- Dwell time
- Drain volume
- Drain time
- Ultrafiltration volume

Note: If the Drain, Fill, Dwell, or Pause times were interrupted at all, the following letters will appear next to the time to show the interruption:
F – Power Failure
B – Bypass
P – Paused
S – STAT Drain

Note: To go back and select a new treatment date, touch the **Back** button.

5 Touch (Next)

Touch the **Next** button to view your personal health data for the selected treatment.

Your Personal Health Data
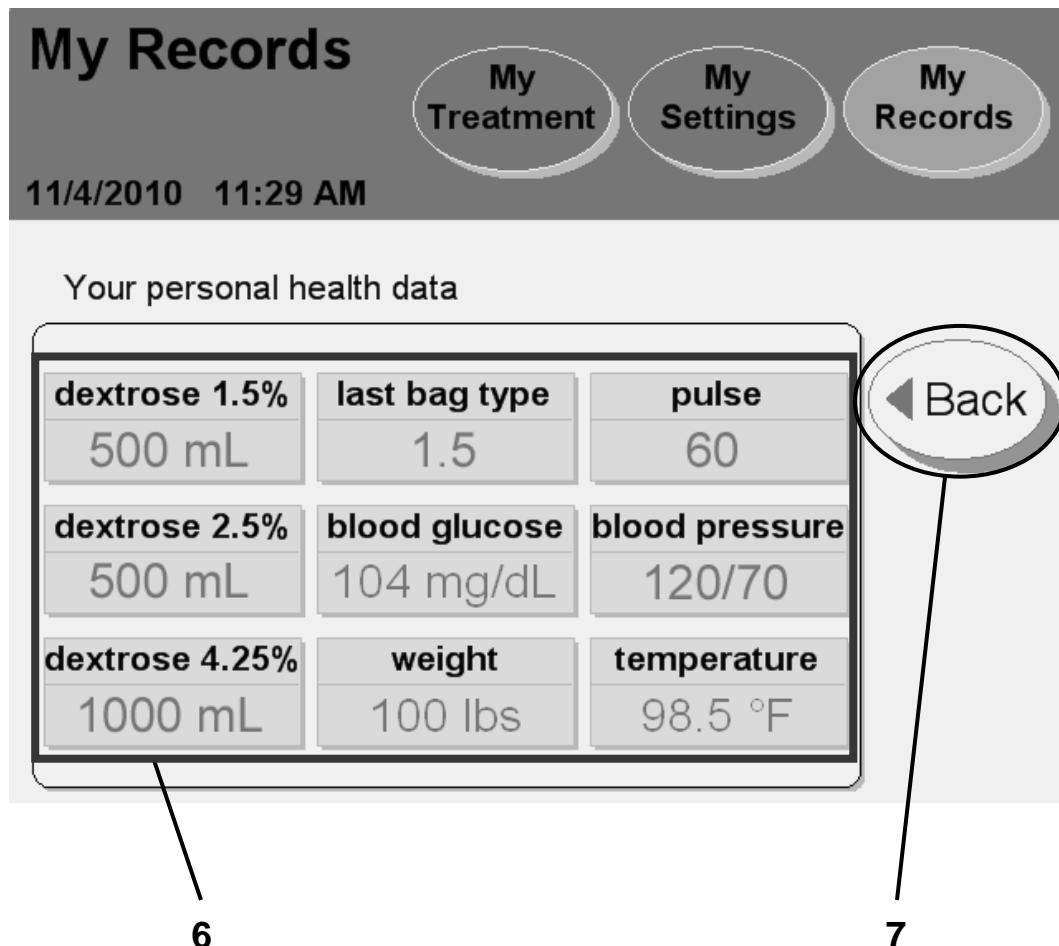
My Records

| My Treatment | My Settings | My Records |

11/4/2010   11:29 AM

Your personal health data

dextrose 1.5%	last bag type	pulse
500 mL	1.5	60
dextrose 2.5%	blood glucose	blood pressure
500 mL	104 mg/dL	120/70
dextrose 4.25%	weight	temperature
1000 mL	100 lbs	98.5 °F

◀ Back

6   7

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

6 View screen details

This screen displays the personal data you entered at the end of your treatment (see page 140). If you did not enter any data at that time, the field will display 'N/A' for Not Available. The "Your Personal Health Data" screen shows:

- Dextrose 1.5%
- Dextrose 2.5%
- Dextrose 4.25%
- Last bag type
- The weight you entered after treatment
- Blood glucose
- Pulse
- Blood Pressure
- Temperature

7 Touch ⟨Back⟩

Touch the **Back** button to return to the "Your Health Data" screen.

> **Note**: You may touch any of the screen-buttons in the Status Bar to exit the "Personal Health Data" screens.

Using the STOP key

Fill 1 of 2
Stopped
11/4/2010   4:39 PM

My Treatment   My Settings   My Records

Volume set
1500 mL

STAT drain

Volume filled
1000 mL

Press OK key to continue fill

1   2
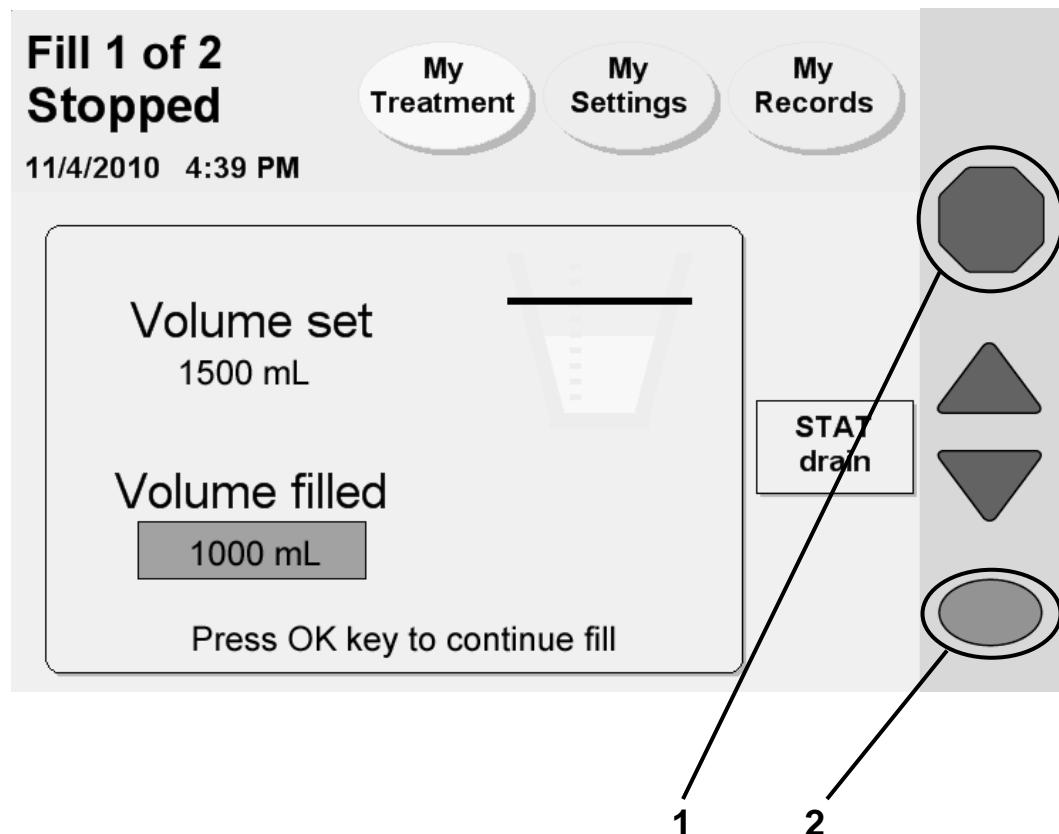
1 Press ⬭STOP

If it is absolutely necessary to stop your machine when it is performing an action, you may press the **STOP** key. The following green Status Bar machine functions may be stopped:

- Flush
- Prime
- Bag Detect
- Heating
- Drain
- Fill
- Dwell

> ⓘ **Note**: If you are performing a Fill, Dwell, or Pause, you may choose to do an immediate (STAT) drain at this time. Do not press the **OK** key on your cycler; instead turn to the next page of this manual for instructions on performing a STAT drain.

2 Press ⬭OK when you are ready to continue

When your cycler is stopped, the following occurs:

- The pump motor stops
- The Status Bar changes to yellow
- The word 'stopped' appears at the top of the screen
- The words 'press **OK** to continue' are displayed at the bottom of the screen.

When you are ready to continue, press the **OK** key.

Using the STAT Drain

Fill 1 of 2
Stopped

My Treatment   My Settings   My Records

11/4/2010   4:39 PM

Volume set
1500 mL

STAT drain

Volume filled
1000 mL

Press OK key to continue fill

1

2   **3**

Fill 1 of 2
Stopped

My Treatment   My Settings   My Records

11/4/2010   4:39 PM

select STAT drain option
Are you sure you want to do STAT drain?

STAT drain   Cancel

1 Press (STOP)
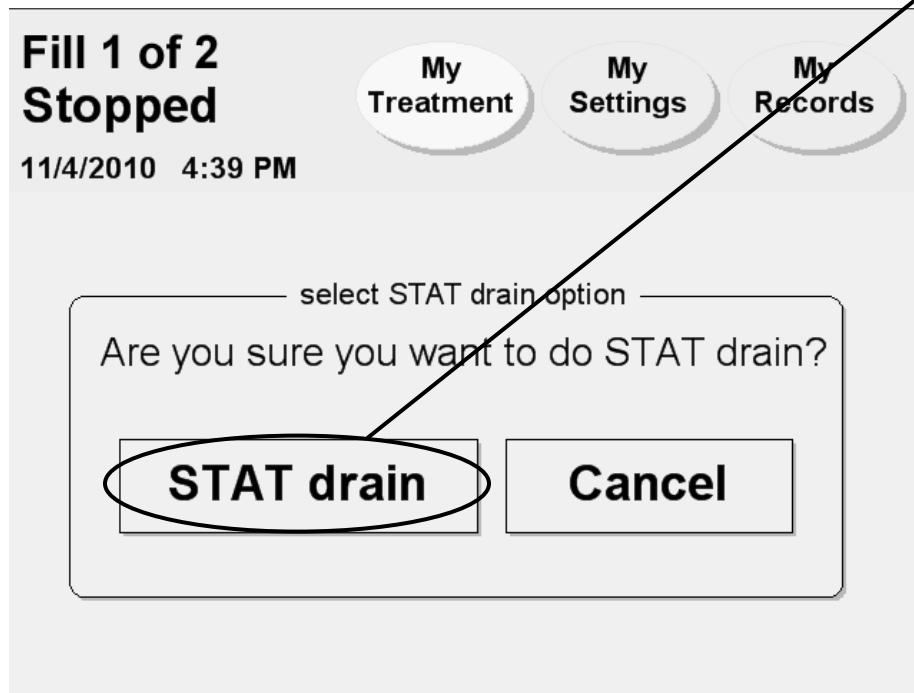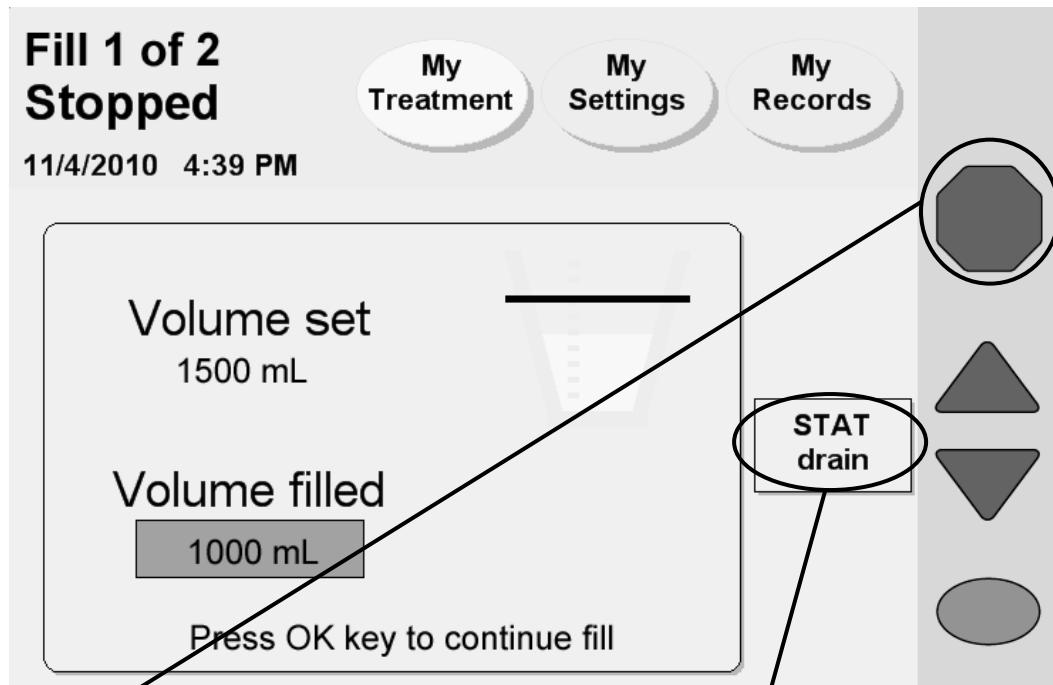
> If you are performing a Fill, Dwell, or Pause, you may choose to do a STAT (immediate) drain. This unscheduled Drain will interrupt your Fill, Dwell, or Pause. Press the **STOP** key to first stop your Fill, Dwell, or Pause.

2 Touch STAT drain

> After the "Stopped" screen displays the message "Press **OK** key to continue fill," touch the **STAT drain** button.

3 Touch STAT drain **on the next screen**

> Your cycler will display the "Select STAT drain option" screen. To continue with the STAT drain, touch the **STAT drain** button.
> If you were previously in a Fill or Dwell cycle, the STAT drain will immediately begin draining your abdomen.
> If you were previously in a Pause cycle, your cycler will ask you to reconnect first. See page 132 for information on how to reconnect after a Pause. After you reconnect, the STAT drain will immediately begin draining your abdomen.
>
> During a STAT drain, your cycler will display a "Drain" screen with the word 'STAT' in the upper left corner to show that it is running an unscheduled drain.

> (i) **Note**: A STAT Drain works the same as a regular Drain. You may stop it or bypass it as needed.

> After your STAT drain is complete, your cycler will either begin a short Dwell or Pause (depending on which cycle you interrupted) so your cycler can prepare the heater bag for your next cycle. Afterward, your cycler will begin your next programmed Fill, if required. Your treatment data will show that you performed a STAT drain (see page 156 for more information).

> If you instead do not want to run a STAT drain, either touch the **Cancel** button or wait 10 seconds. Your cycler will go back to the "Stopped" screen (see page 162).

Bypassing an Exchange

To perform bypass, see page 171.

Normal Treatment with Prescribed Drain 0

| Drain 0 Begins | Drain 0 Ends, Fill 1 Begins | Fill 1 Fills Prescribed Volume | Dwell 1 with Prescribed Volume |
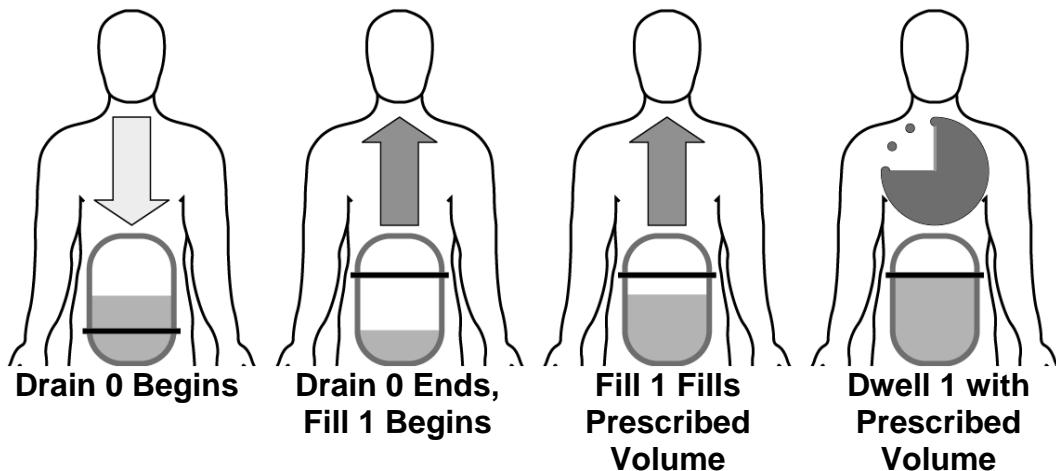
Drain 0 Bypassed With Undrained Peritoneal Cavity (Scenario 2)

| Drain 0 Begins But Phase is Bypassed | Fill 1 Begins with Undrained Peritoneal Cavity | Fill 1 Fills Prescribed Volume | Dwell 1 with Excess Volume |
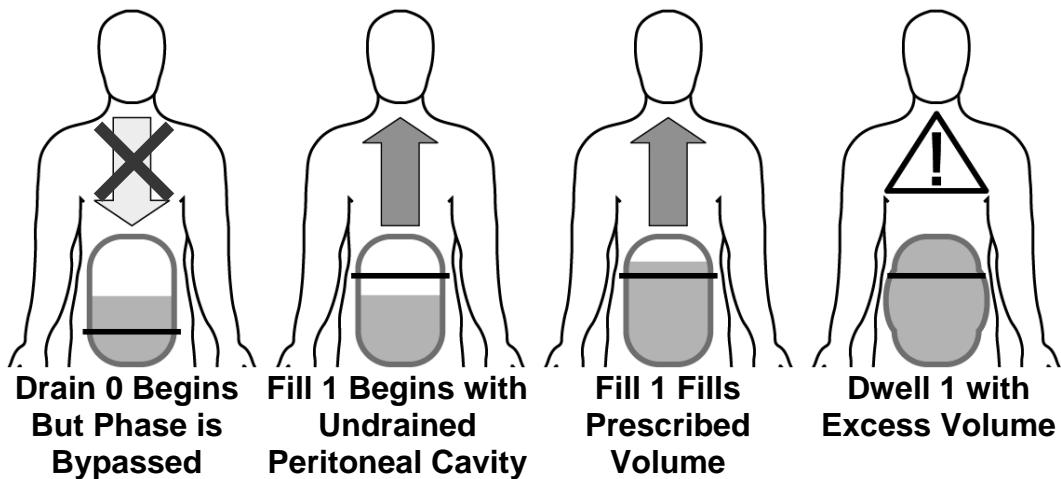
Bypassing an exchange

To perform bypass, see page 171.

A bypass is the manual skipping of an exchange. Your cycler will not allow you to bypass any Drain phase after Drain 0 if there is a danger of overfilling. However, Drain 0 may be bypassed under certain circumstances. If using a daytime dwell, please consult your health professional before bypassing Drain 0 since bypassing after a daytime dwell may result in reduced dialysis adequacy. Before bypassing you must consider that there are three different scenarios that could occur, depending on your prescription. You and your PD nurse must choose the situation that best describes you:

1. *You do not have a Last Fill programmed* and therefore have a 'dry day' or very little fluid left in your abdomen. Your cycler will attempt to drain at least 70% of 50 mL (35 mL) of fluid before switching to Fill 1. You can safely bypass Drain 0 during this time.

2. *You do one or more manual daytime exchanges that you did not program into your cycler (*see page 116*).* In this case, your cycler does not know that you have additional fluid in your abdomen, so you must NOT bypass Drain 0. Wait for your cycler to finish draining you before continuing to Fill 1.

3. *You have a Last Fill programmed.* During Drain 0 your cycler will try to drain at least enough so that the next fill will not cause overfilling. Your cycler may or may not be able to drain all of the fluid out because your body might have re-absorbed some of the fluid. If you are receiving alarms, talk with your PD nurse to decide if you should bypass.

It is important to understand the dangers of overfilling. Overfilling (also known as Increased Intraperitoneal Volume, IIPV) is when you have too much fluid in your abdomen. IIPV/overfill may result in serious injury or death from conditions such as: abdominal wall and/or diaphragmatic hernias, hydrothorax, heart problems including chest pain and heart failure, high blood pressure, pulmonary edema, decreased pulmonary function and pericardial effusion. Patients and caregivers should watch for the potential signs of IIPV. These include: difficulty breathing; vomiting or spitting up; feeling full, bloated, or overfilled after treatment; abdominal pain or discomfort; expanded or tense abdomen; chest pain, increased blood pressure, change in mental status,

and leakage of fluid from the PD catheter extension set exit site.

If you experience any of these symptoms or feel a large, painful build-up of pressure during your fill, do not finish your fill cycle. Press the **STOP** key and immediately initiate a STAT Drain as instructed by your PD nurse. See page 164 for more information on how to use the STAT Drain feature. Once the fluid is completely drained from your abdomen, call your doctor or PD nurse.

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Bypassing an Exchange (continued)

Drain 1 of 4

My Treatment My Settings My Records

3/18/2009 10:10 AM

select bypass option

bypass current phase

1   2
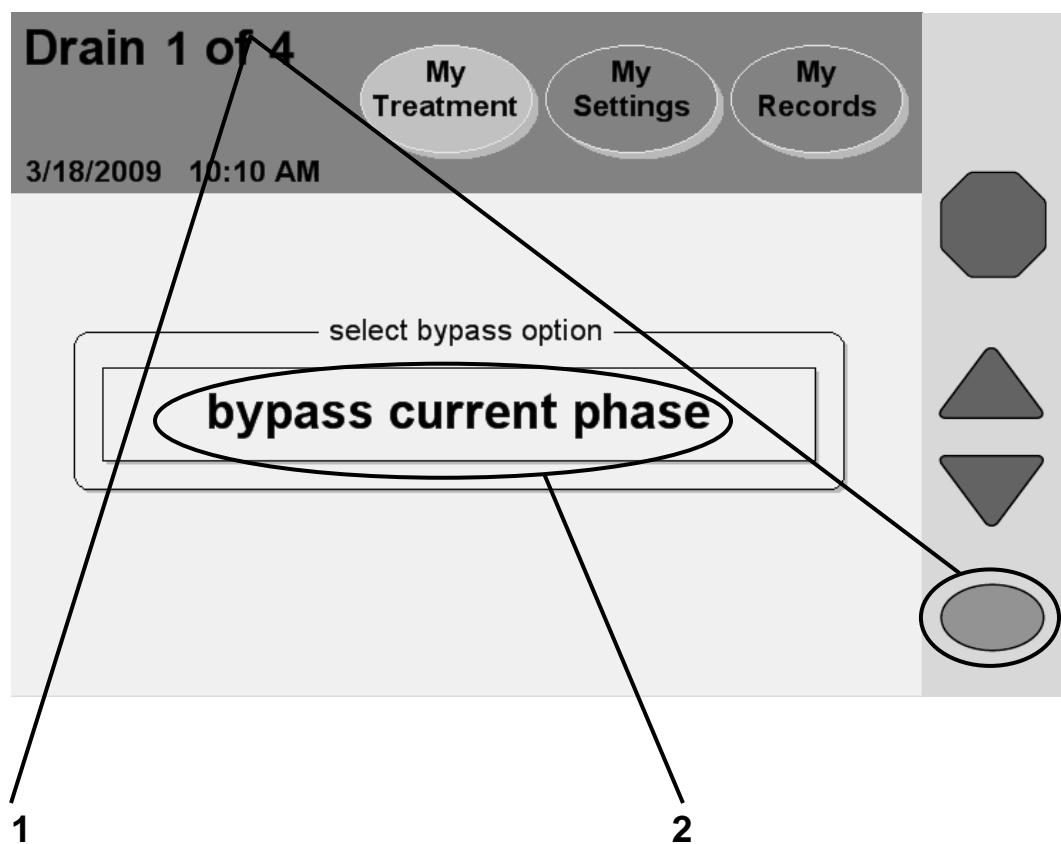
ⓘ | **Note**: If you accidentally reach this screen and do not want to bypass the current phase, wait a few seconds and you will return to the previous screen.

1 Press and hold (OK) for four seconds

Bypassing (or skipping) any phase of your treatment should be avoided unless you've discussed situations that may require bypassing with your doctor or PD nurse. If you must bypass a Drain, Fill, or Dwell phase, press and hold the **OK** key for four seconds to display the "bypass current phase" screen.

2 Touch [bypass current phase]

Touch the **bypass current phase** button to skip the current phase and continue to your next exchange. If your cycler calculates that there is still too much fluid in your abdomen, you may not bypass. Your cycler will then display a blinking message, "bypass not allowed at this time" and then go back to the previous screen You must wait as your cycler drains more fluid from your abdomen before trying to bypass again.

> **Warning**: If you feel a large, painful build-up of pressure during your fill or any of the signs listed on page 171, do not finish your fill cycle. Press the **STOP** key and immediately initiate a STAT Drain as instructed by your PD nurse. See page 164 for more information on how to use the STAT Drain feature. Once the fluid is completely drained from your abdomen, call your doctor or PD nurse.

> **Warning**: Do not bypass Drain 0 if you have a last fill programmed or if you turn off your cycler after you have filled. Do not also then bypass Fill 1 if you have a Pause programmed. You must make sure that you have drained enough fluid from your abdomen before bypassing Drain 0. Failure to do so could result in an overfill situation. Overfilling can cause serious injury or death.

> **Warning**: If you do not program a manual daytime exchange into your Liberty cycler, your cycler will not know that you have additional fluid in your abdomen. Do NOT bypass Drain 0. Your Liberty cycler will switch to Fill 1 when you are finished draining.

> **Note**: If you bypass during a Fill or Dwell, you will either not receive your prescribed amount of dialysate or not have as much time to filter out the waste. Your treatment will not be as effective. The letter 'B' will also be displayed next to your treatment details in the "My Records" screen to show a bypass occurred. For more information, see "Treatment Details" on page 156.

Using the IQdrive (Optional)

USB Port

Logo

USB Port

On

Off

View From Back of Liberty Cycler
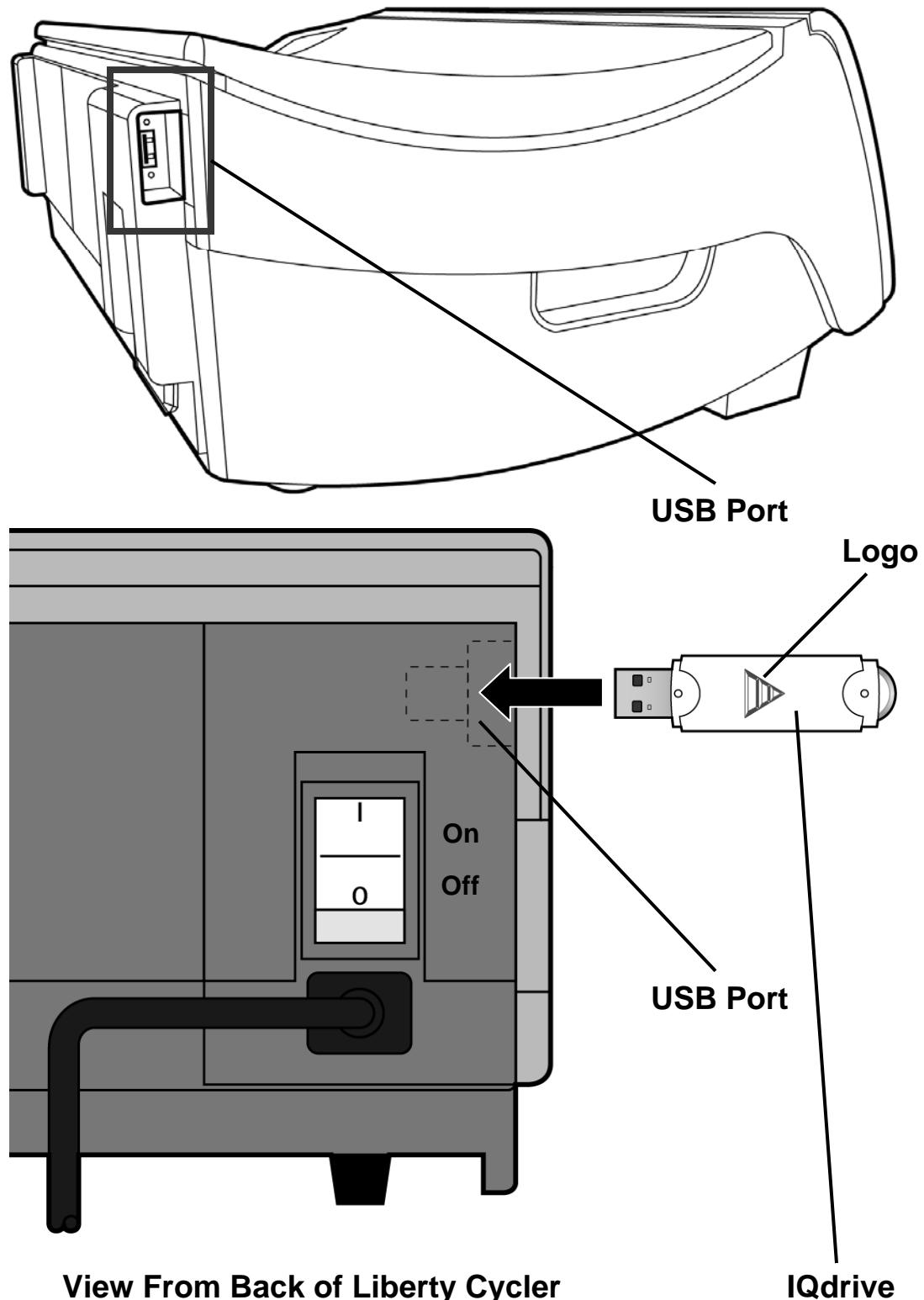
IQdrive

IQdrive overview

The IQdrive is a device used to transfer your prescription and treatment data. The 'USB enabled' option must be set to YES to access it (see page 84). Your healthcare staff will provide you with an IQdrive, program it with your therapy settings, and explain how to use it for record-keeping. The IQdrive fits into the USB port on the back of your cycler.

Caution: Handle your IQdrive with care. When taking your IQdrive to and from your healthcare provider, store it in a plastic bag and keep it clean and dry. Do not leave your IQdrive in a hot car or in the bottom of a purse where it can become damaged.

Caution: Your Liberty cycler IQdrive is only for use with your Liberty cycler. Do not use your IQdrive to store your own data from other sources (for example, digital photos from your computer). Storing personal data on your IQdrive will corrupt your treatment data and your Liberty cycler will no longer be able to record your treatment progress on your IQdrive. Your healthcare staff will then need to erase everything on your IQdrive and reformat it.

Note: If the 'USB enabled' option is set to YES but no IQdrive is inserted in the IQdrive slot upon power-up, you will have two choices: Either continue without using the IQdrive (by pressing the **OK** key) or insert the IQdrive immediately.

Inserting the IQdrive

Insert the rectangular metal end of the IQdrive into the slot (USB port) in the back, left corner of your cycler as shown in the picture to the left. The little light on the end of the IQdrive will face away from the front of the machine. The IQdrive is keyed to fit in only one direction. If the device does not fit, turn it over and try again.

Note: If your cycler displays the message, "IQdrive not detected," remove the IQdrive and firmly re-insert it to try again.

USB Upload
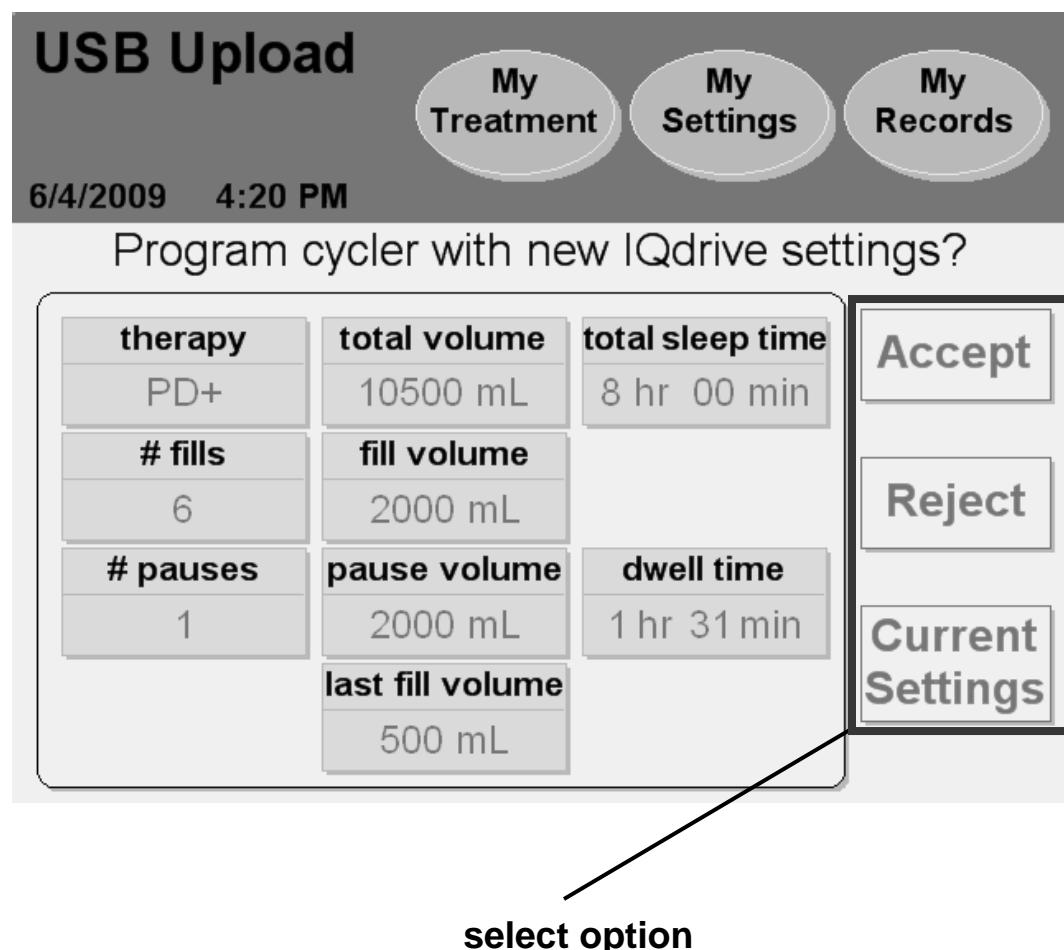
USB Upload

My Treatment   My Settings   My Records

6/4/2009   4:20 PM

Program cycler with new IQdrive settings?

therapy	total volume	total sleep time	
PD+	10500 mL	8 hr 00 min	Accept
# fills	fill volume		Reject
6	2000 mL		
# pauses	pause volume	dwell time	Current Settings
1	2000 mL	1 hr 31 min	
	last fill volume		
	500 mL		

select option

ⓘ **Note**: The values shown here are for example only. You must use the values prescribed by your doctor.

USB Upload

The first time you insert the IQdrive and power-up your cycler, this screen will be displayed. This screen will also be displayed if your PD nurse changes your prescription on the IQdrive.

The main area of the "USB Upload" screen displays the therapy settings to be uploaded onto your cycler. You must carefully review them to make sure they match your doctor's prescription.

> ⚠️ **Warning**: Your doctor must prescribe your entire treatment. Using incorrect values could result in complications that may be severe.

To the right side are three buttons:

- **Accept**—Touch this button to use the new settings for your therapy.
- **Reject**—Touch this button if the IQdrive settings are incorrect. You will use the old therapy settings that are saved to your cycler.
- **Current Settings**—Touch this button to review your old therapy settings. From that screen you may touch the **IQdrive Settings** button to return to this screen.

After selecting either **Accept** or **Reject**, you will move to the "Ready" screen as usual. Turn to page 50 to continue entering your treatment values or, if already entered, turn to page 90 to begin your treatment.

> ⓘ **Note**: Do not remove the IQdrive until your treatment is complete. If the device is removed early, your data cannot be saved to the IQdrive. You may keep the IQdrive in your cycler until your healthcare staff asks you to bring it back.

> ⓘ **Note**: If you choose to reject the IQdrive prescription, you will have to reject it for every treatment until you insert an IQdrive with an updated prescription. Contact your PD nurse if you need to update your prescription on your IQdrive.

Data Security

The data files transferred via the IQdrive contain only patient data. The data is encrypted with a key based encryption. The encrypted data cannot be read without reapplying the encryption algorithm thereby ensuring the security of the data.

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Using the Wireless Modem (Optional)

**RS-232 Port
(Modem Connection)**
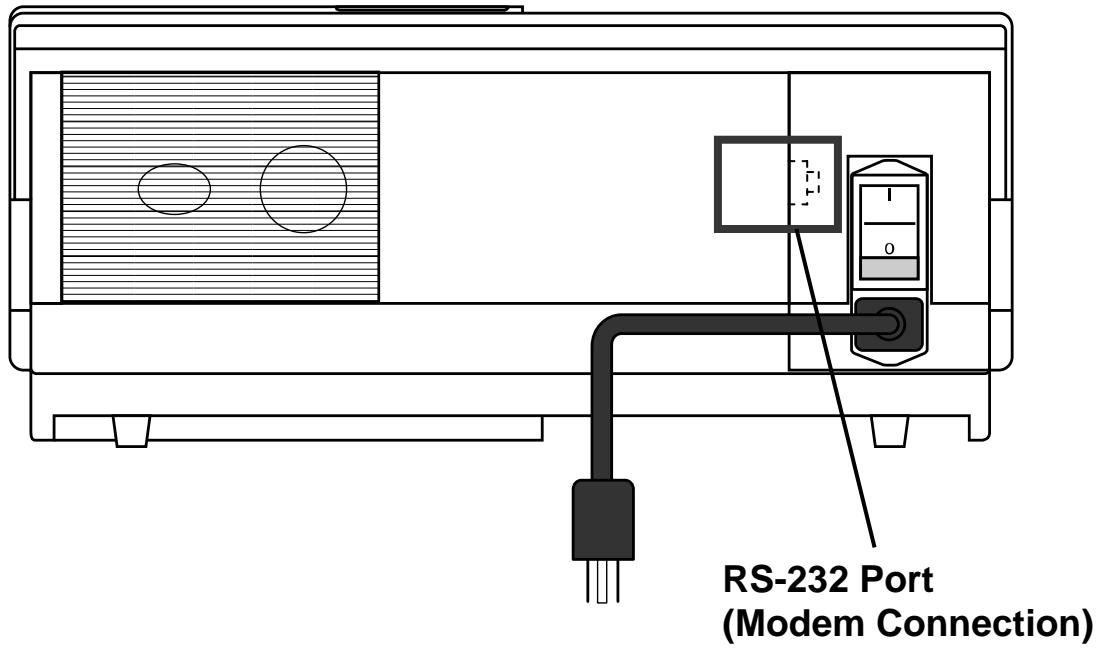
View From Back of Liberty Cycler

Wireless Modem overview

The wireless modem is an optional device used to automatically transfer your treatment data at the end of each treatment to the Fresenius Medical Care hosted FTP server. The modem connects to the RS-232 port on the back of your cycler. Your healthcare staff will provide you with a wireless modem if needed.

Note: The modem is not in use during the treatment.

Note: Your cycler does not receive any inputs or therapy settings using the modem.

Note: If the treatment data transfer is not successful, your cycler will retry the transfer at the end of next treatment. To view the treatment data on your cycler, see "The My Records Screen-Button," on page 156.

Note: For more information on the wireless modem, see the Liberty Cycler Wireless Modem User's Guide (P/N 480071).

Data Security

The data files transferred via the external cellular modem contain only the treatment and patient information which is collected and stored within the Liberty Cycler. The data is encrypted with a key based encryption. The encrypted data cannot be read without reapplying the encryption algorithm thereby ensuring the security of the data.

Moving Your Liberty Cycler
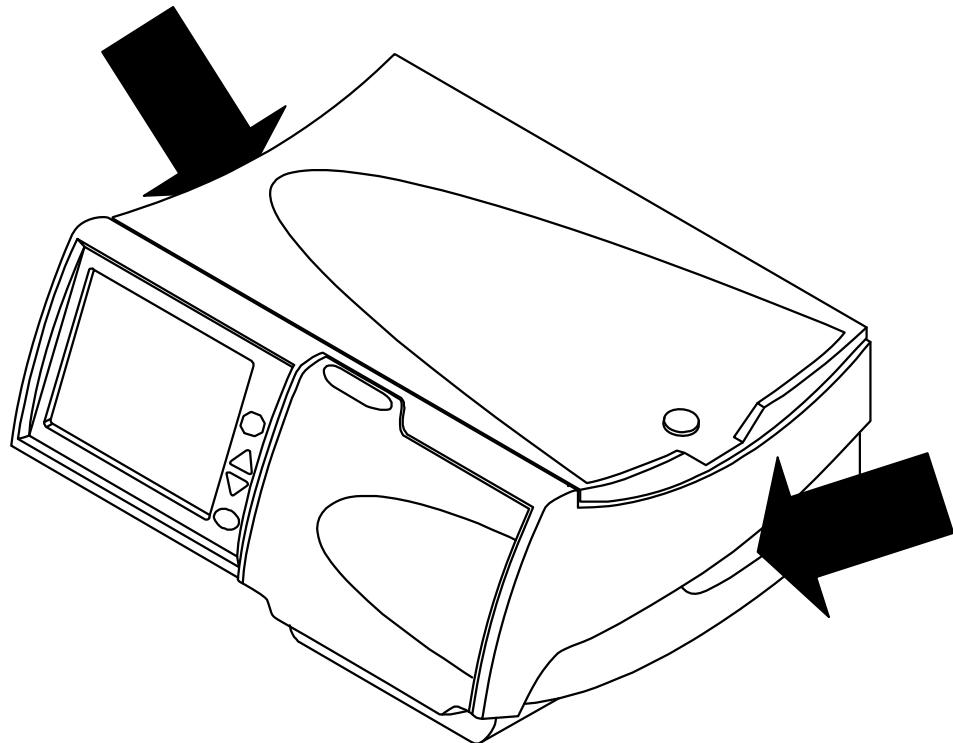
Moving your Liberty cycler

Your Liberty cycler is designed to be portable so you may easily continue your dialysis therapy when you travel.

Unplug your cycler's power cord from the unit before moving it. Hold your cycler by its handles on either side when lifting it.

|	
⚠	**Warning**: Use proper lifting techniques: lift with your knees and not your back.
⊗	**Caution**: Do not lift your machine by the heater tray/scale. Doing this may damage the scale.
⊗	**Caution**: If you are using the Liberty cart, be sure to properly balance the solution bags by hanging them on both sides of the cart. Unbalanced bags on the cart may cause it to tip over and damage your machine. Make sure that you set the cart brakes to OFF when moving the cart and ON when the cart is stationary.
ⓘ	**Note**: It is recommended that you pack your cycler in its shipping box when you travel outside of your home. Use the original packing material to protect your cycler when it is in the box.

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Alarms & Troubleshooting

Warnings and Alarms

Press STOP key to silence alarm
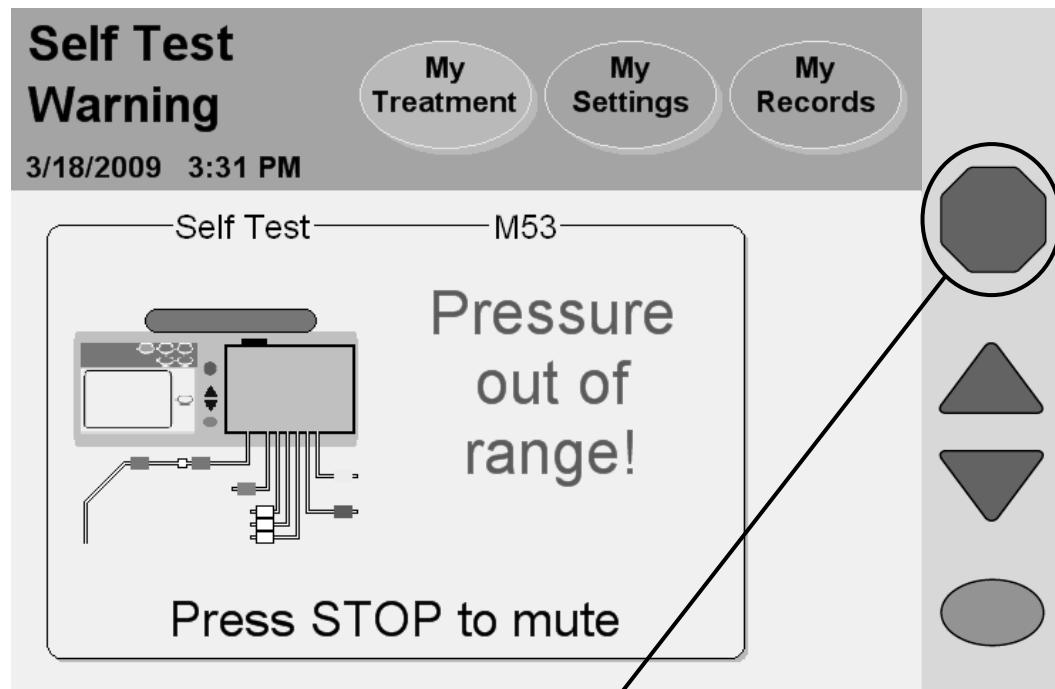
Warnings and Alarms Overview

Your Liberty cycler has an advanced system of features that work for your safety. Electronic sensors and diagnostic software constantly monitor your machine's operation. When problems or possible problems are detected, your machine warns you with Status Bar messages and audible alarms.

⚠️	**Warning**: All warnings and alarms need your immediate attention. Failure to do so could result in complications that may be severe.
⚠️	**Warning:** Contact FMC Technical Support at 1 800 227-2572 if an alarm message is displayed and there is **no alarm sound**.

Warnings

During a warning the Status Bar turns orange and an audible alarm sounds. Press the **STOP** key to silence your cycler. With some warnings, pressing the **OK** key will start a retest and may clear the condition causing the alarm. If available, a **Help** button will appear in the button area (see "Warning: The Help Button" on page 190). You then have the chance to correct the situation by following on-screen instructions. After the problem is corrected, you may continue with your treatment. There are ten different types of warnings:

Heater Warning

The heater temperature is reading too high or too low.

Patient Sensor Warning

The patient sensor is reading incorrectly or is out of range.

Pneumatic Warning

The pneumatic sensor is reading incorrectly or is out of range.

Scale Warning

The scale is reading incorrectly or there is a mismatch in volume pumped versus scale change.

Self Test Warning

A self test has failed but may still be retried.

Sensor Warning

The sensors are reading incorrectly.

Switch Warning

The door or cassette switches are reading incorrectly.

(continued)

Warnings and Alarms continued

Error Code
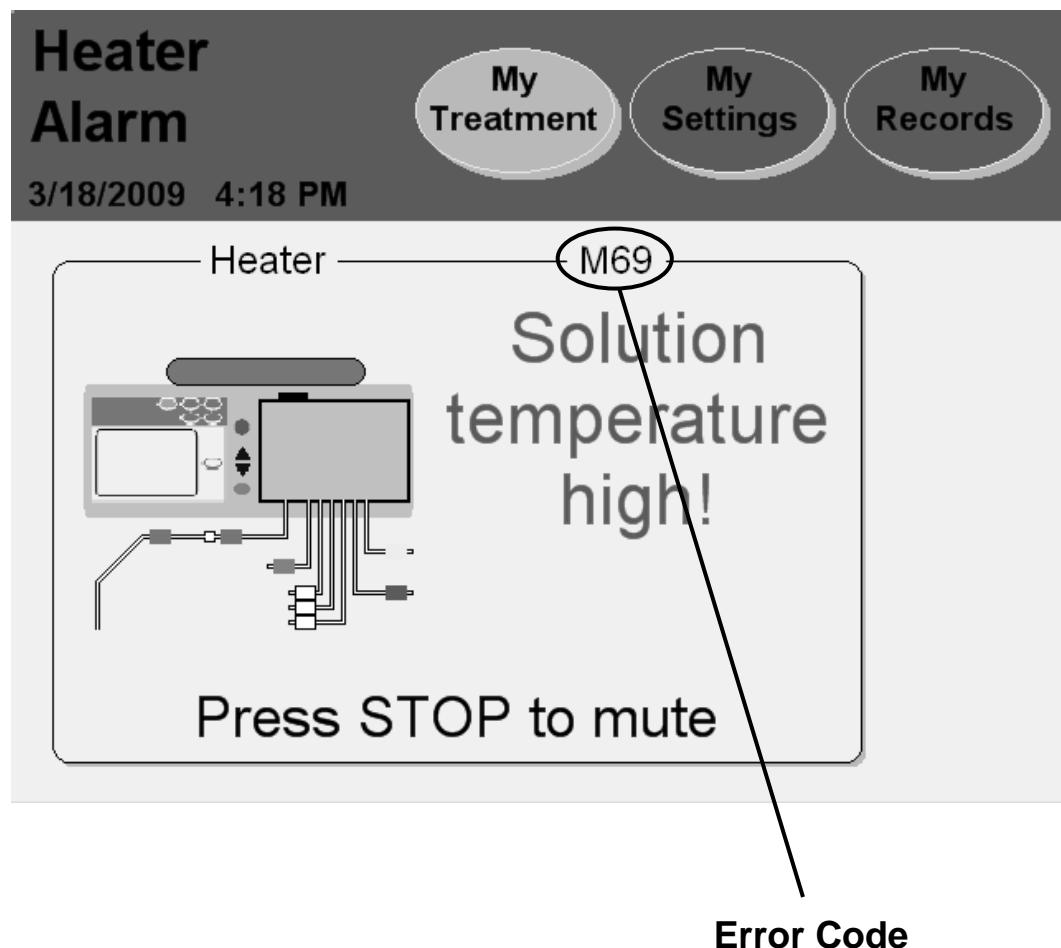
(continued)

Stopped Warning
You have stopped a function longer than ten minutes. You must press the **STOP** key to silence the alarm and then press the **OK** key to continue if necessary.

System Warning
An error has occurred in the system.

Treatment Warning
A resettable error relating to your treatment has occurred.

> **Note**: Many of the command and control features of this device are performed via the touch screen display. In the event the touch screen does not respond, disconnect from the cycler by inserting the PIN, clamping the lines, aseptically disconnecting from the cycler, turning the cycler off, and calling service.

Alarms

During an alarm, the Status Bar background turns bright red and an audible alarm sounds. Press the **STOP** key to silence your cycler. Record the error code and call a qualified technician. The following are alarms:

Battery RAM Alarm
Your cycler cannot access battery RAM.

CRC Alarm
A critical software error has occurred.

EEPROM Alarm
A critical circuit board error has occurred.

Heater Alarm
The heater temperature is reading too high or too low and cannot be corrected.

Pneumatic Alarm
The pneumatic sensor is reading incorrectly or is out of range and cannot be corrected.

Self Test Alarm
A self test has failed after repeated retests.

(continued)

System Error

A critical error has occurred.

Treatment Alarm

A Treatment Warning was not able to be corrected.

Watchdog Alarm

A critical software error has occurred.

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Warning: The Help Button

1

2
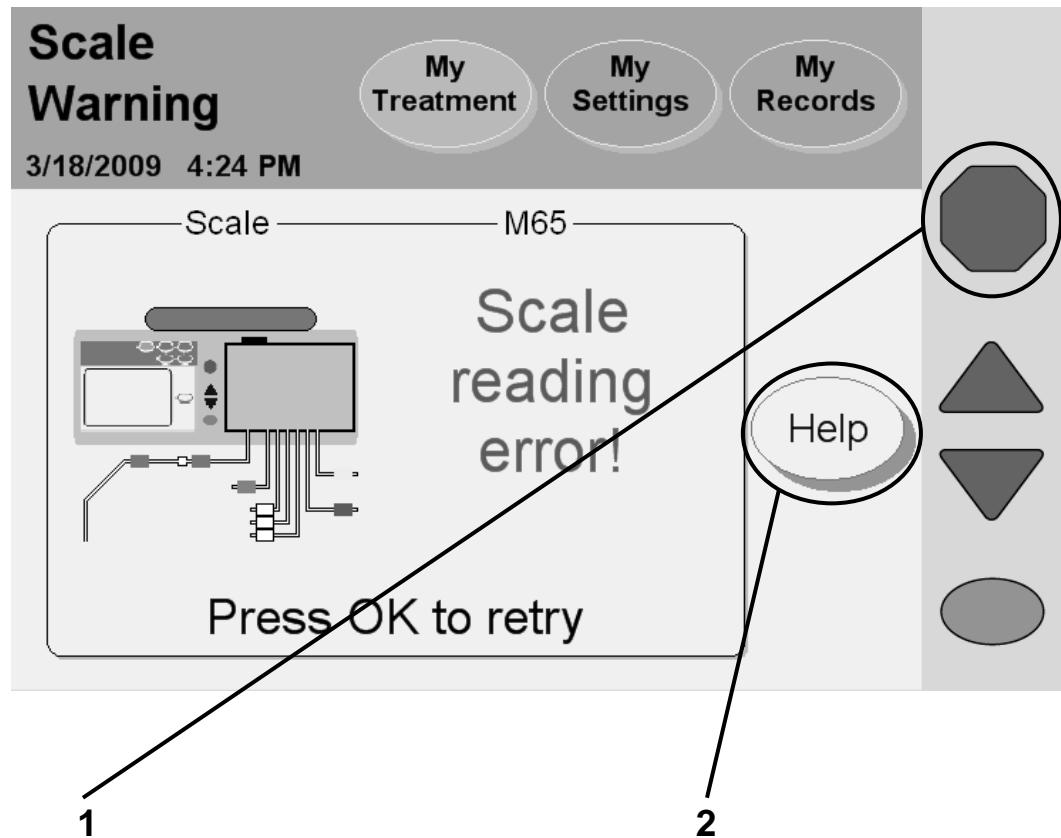
1 Press (STOP)

Press the **STOP** key to silence an audible warning or alarm. If available, a **Help** button will appear in the button area.

2 Touch (Help)

During a warning, your machine may offer a **Help** button to help solve some problems. If you need more information during an alarm, touch the **Help** button.

Warning messages are triggered by conditions and events that occur in your machine during operation. The running function will stop during a warning situation. The messages will reset when the condition causing them is corrected. In some cases, you must reset them yourself.

Note: During an alarm or warning, all the screen-buttons in the Status Bar are unavailable.

Note: For more information on correcting alarms, see "Troubleshooting," page 196.

Warning: Help Screens

3   **4**
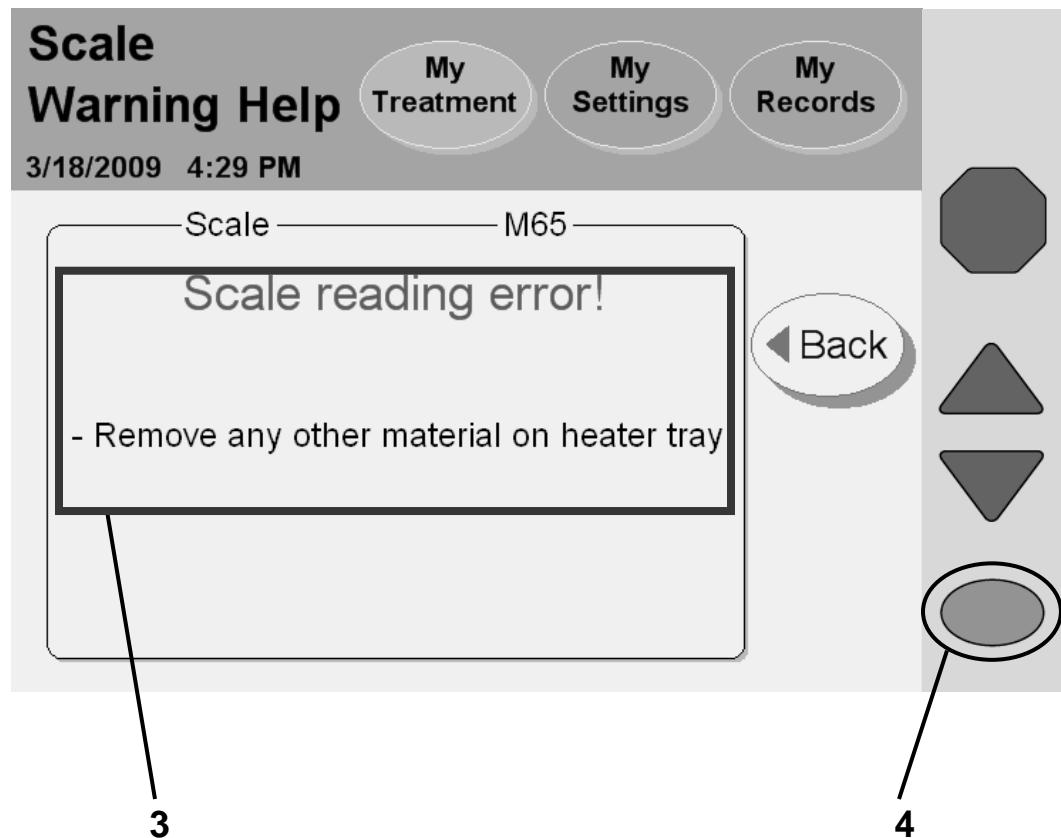
3 Follow steps

Your machine displays specific instructions for each warning. Follow the steps on the screen to correct a warning situation. If you are unable to clear a warning by following the instructions on the screen and in this user's guide, take your machine out of service and call Technical Support at 1 800 227-2572.

> ⚠ **Warning**: Do not continue your treatment until the warning situation has been corrected.

4 Press OK

When you have corrected the warning situation, press the **OK** key (or **Back** first, then **OK**) to resume the function. You will return to the last step you were on before the warning occurred.

Alarm: Red Status Bar

EEPROM
Alarm
3/18/2009   4:42 PM

My Treatment   My Settings   My Records

EEPROM ── S-004

EEPROM Error!

- Record error code
- Press stop to mute

Turn off cycler and call service

Record Error Code   **Press STOP to mute**   **Turn power OFF**

On
0
Off
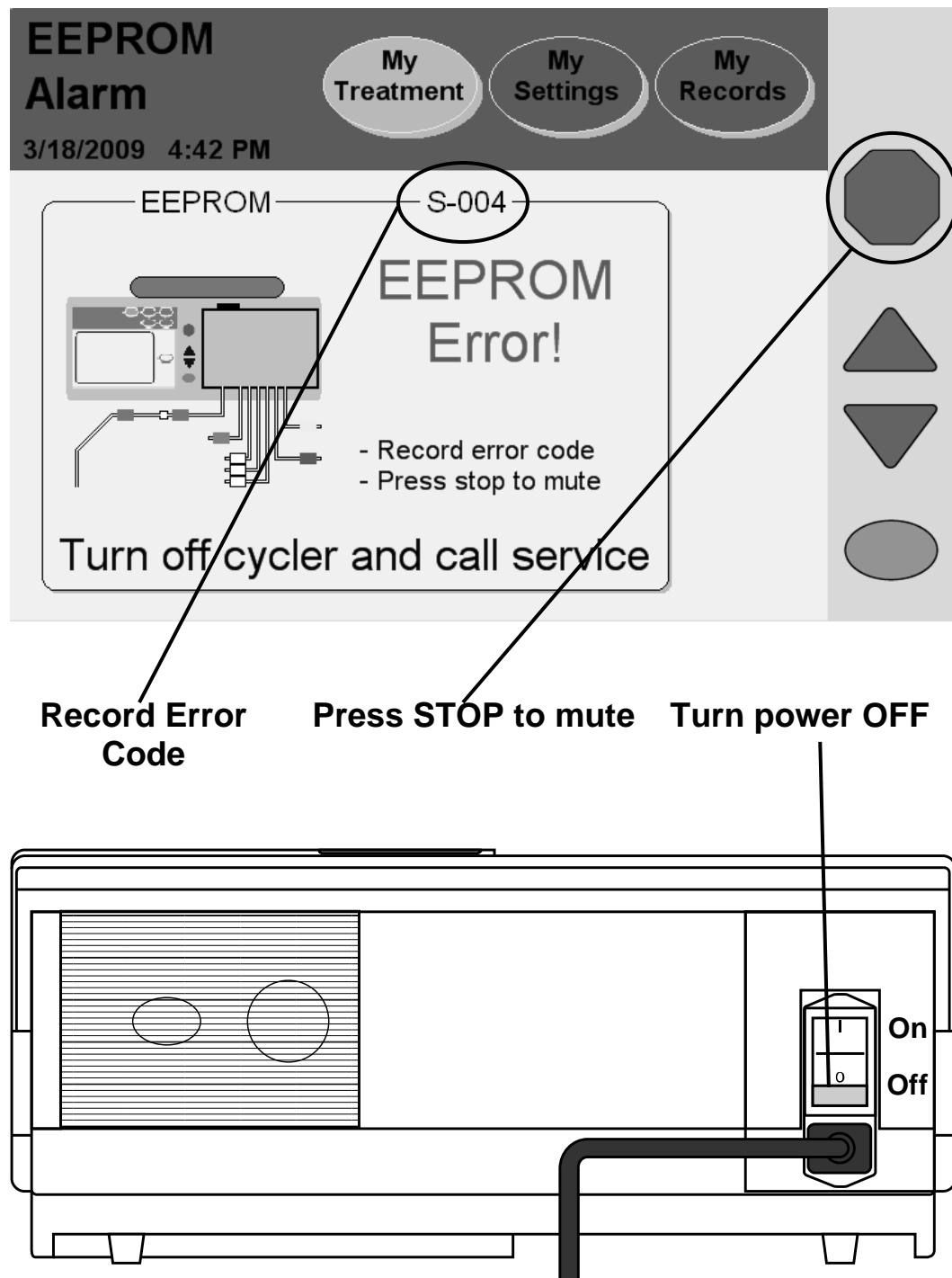
Alarm

During an alarm, the Status Bar turns red. Alarms are not resettable. Record the error code (located on the right side just below the Status Bar), Insert PIN, Clamp Lines, Aseptically disconnect from the Cycler, and turn your machine off using the power switch on the back. Call Technical Support at 1 800 227-2572.

> ⚠️ **Warning**: If your machine alarms, do not attempt to use it for treatment.

You will also be asked for your Liberty cycler serial number and software version, which is found on the top of your cycler above the cassette door.
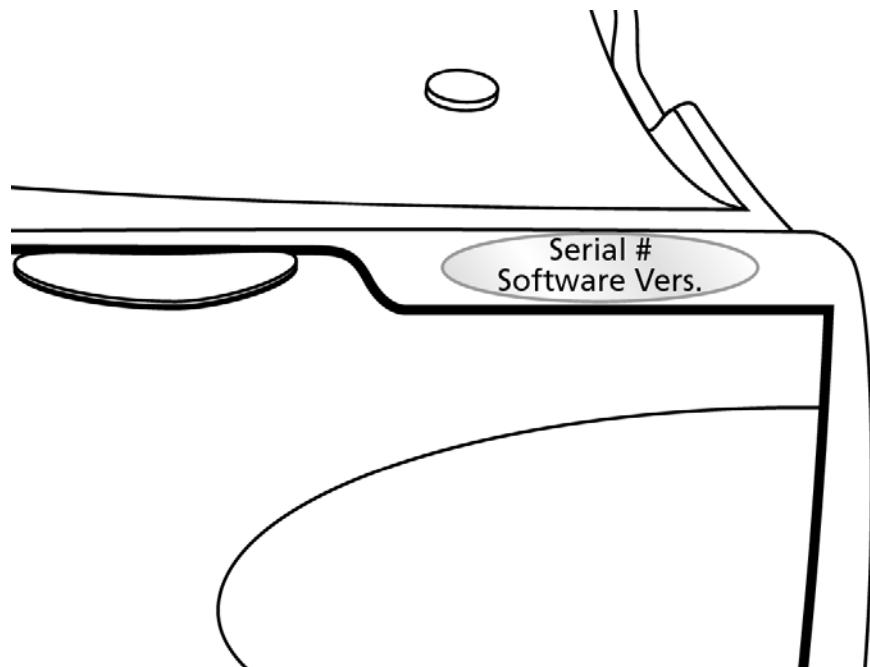
Troubleshooting

The troubleshooting section is a guide to help you troubleshoot machine alarms and messages quickly. These messages are caused by conditions and events that occur in your machine during operation. The messages will reset when the condition causing them is corrected. Some conditions may be reset simply by pressing the **OK** key when prompted. In some cases, you must correct the errors yourself. Alarms in which the Status Bar turns red cannot be resolved; you must call Technical Support at 1 800 227-2572.

> ⚠️ **Warning**: Doing the recommended action may or may not clear the alarm or warning. Do not continue your treatment until the conditions causing these messages are corrected and the messages are cleared.

> ⓘ **Note**: Refer to the "General Warnings" section, on page 16, for additional warnings.

> ⓘ **Note**: **When your cycler displays the message "Press the OK key to retry," try it at least three (3) times before calling your PD nurse or Technical Support at 1 800 227-2572.**

> ⓘ **Note**: Machines taken out of service should be tested and repaired by a qualified technician.

There are two tables that list the meaning of the messages and how the error can be resolved. The first table (page 197) lists every error code and the corresponding alarm or warning message. The second table (page 204) lists all messages in alphabetical order.

Be sure to record the error code so you may look up the alarm message. If you call Technical Support at 1 800 227-2572, they will also need this code. The error code is located below the **My Treatment** button:
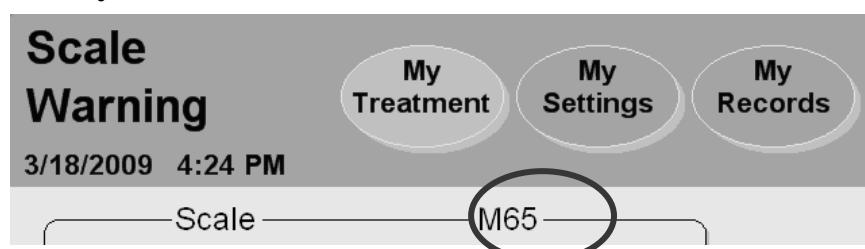
Note: Press the **STOP** key to silence an audible warning or alarm.

Error messages listed by code

Code	Message	Meaning	Action Required
M01 (Subcodes 1 to 20, 22 and 23)	System Error	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M01 (Subcode 21)	System Warning	An unexpected error has occurred.	Press the **OK** key to retry.
M21	Sensor Warning: Invalid sensor readings!	A sensor is reading incorrectly.	Press the **OK** key to retry.
M22	Self Test Alarm: Safety Clamp Error!	The safety clamp self test has failed three times.	Record error code, turn off cycler, and call service.
M30	Self Test Warning: Balloon Valve leak!	The self test has failed due to a possible balloon valve leak during setup.	Press the **OK** key to retry.
M30.1	Pneumatic Alarm: Balloon Valve leak!	The test has failed due to a possible balloon valve leak during treatment.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M31	Treatment Warning: Air detected in cassette!	The test failed due to possible air detection in cassette.	Press the **OK** key to retry.

Code	Message	Meaning	Action Required
M37	Self Test Warning: Patient pressure not constant!	The self test has failed due to an error with one or both of the pressure sensors used to measure fluid pressure in the cassette.	Press the **OK** key to retry.
M38	Treatment Alarm: Treatment data error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M39	Patient Sensor Warning: Patient sensors against vacuum sensors!	An error with a sensor used to measure fluid pressure in the cassette.	Press the **OK** key to retry.
M41	Patient Sensor Warning: Patient sensors too high!	An error with a sensor used to measure fluid pressure in the cassette.	Press the **OK** key to retry.
M42	Patient Sensor Warning: Patient vacuum too high!	An error with a sensor used to measure fluid pressure in the cassette.	Press the **OK** key to retry.
M44	Treatment Alarm: Flowpath error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M44.1	Treatment Alarm: Flowpath error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler.

Code	Message	Meaning	Action Required
			Turn off cycler and call service.
M44.2	Treatment Alarm: Flowpath error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M53	Self Test Warning: Pressure out of range!	The self test has failed due to pressures being out of range.	Press the **OK** key to retry.
M54	Pneumatic Warning: Pressure reading low!	The cycler's pneumatic pressure is reading too low.	Press the **OK** key to retry.
M55	Pneumatic Warning: Pressure reading high!	The cycler's pneumatic pressure is reading too high.	Press the **OK** key to retry.
M56	Pneumatic Warning: Vacuum reading low!	The cycler is reading low vacuum pressure.	Press the **OK** key to retry.
M57	Pneumatic Warning: Vacuum reading high!	The cycler's vacuum pressure is reading too high.	Press the **OK** key to retry.
M58	Self Test Warning: Vacuum out of range!	The self test has failed due to vacuum pressures being out of range.	Press the **OK** key to retry.
M59	Self Test Warning: Pressure leak!	The self-test has failed due to a possible air pressure leak.	Press the **OK** key to retry.
M60	Self Test Warning: Vacuum leak!	The self test has failed due to a possible vacuum leak.	Press the **OK** key to retry.
M61	Self Test Warning:	The self test has	Press the **OK** key

Code	Message	Meaning	Action Required
	Pressure production low!	failed due to low pressures.	to retry.
M62	Self Test Warning: Vacuum production low!	The self test has failed due to low vacuum pressures.	Press the **OK** key to retry.
M63	Self Test Warning: Remove Heater Bag from Heater Tray	The self test detects a heater bag on the heater tray when not expected.	Press the **OK** key to retry.
M65	Scale Warning: Scale reading error!	Unexpected scale change during treatment	Remove anything from the heater tray other than the heater bag. Press the **OK** key to retry.
M66	Self Test Warning: Thermistor reading out of range!	The self test has failed due to a temperature sensor being out of range	Make sure nothing is on top of heater tray. Make sure cycler has cooled down. Make sure cycler is not placed near a heat source. Press the **OK** key to retry.
M67	Self Test Alarm: Fluid temperature out of range!	The solution temperature test has failed.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M68	Heater Warning: Heater temperature too high!	The solution temperature test has failed due to high temperatures.	Remove anything from the heater tray other than the heater bag.

Code	Message	Meaning	Action Required
			Make sure cycler is not placed near a heat source. Press the **OK** key to retry.
M69	Heater Alarm: Solution temperature high!	The solution temperature test has failed three times due to high temperatures.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M70	Heater Warning: Solution temperature low!	The solution temperature test has failed due to low temperatures.	Cold bags will increase warming time, be sure to store your bags at room temperature. Check if heater plate (tray) is warm to touch. Check for external cooling sources: Be sure there are no open windows, drafts, or fans or air conditioners blowing on your cycler. Press the **OK** key to retry.
M71.1	Pneumatic Alarm: Pressure leak!	The cycler has failed due to a possible air pressure leak.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M71.2	Pneumatic Alarm: Pressure leak!	The cycler has failed due to a possible balloon valve air pressure leak.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and

Code	Message	Meaning	Action Required
			call service.
M71.3	Pneumatic Alarm: Pressure leak!	The cycler has failed due to a possible vacuum leak.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M74	Treatment Alarm: Treatment starts error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M75	Treatment Warning: Volume error!	Volume is not being pumped although the pumps are moving.	Press the **OK** key to retry.
M76	Treatment Alarm: Pause time error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
M77	Treatment Warning: Encoder flag error!	Treatment error.	Press the **OK** key to retry.
MWD	Watchdog Alarm: Watchdog timer Error!	An unrecoverable error has occurred.	Record error code. If connected, Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
S_002	CRC Alarm: CRC	The CRC is	Record error code. If connected,

Code	Message	Meaning	Action Required
	Error!	corrupted.	Insert PIN.
			Clamp lines.
			Aseptically disconnect from cycler.
			Turn off cycler and call service.
S_003	Battery RAM Alarm: Battery RAM Error!	The battery RAM is corrupted.	Record error code.
			If connected, Insert PIN.
			Clamp lines.
			Aseptically disconnect from cycler.
			Turn off cycler and call service.
S_004	EEPROM Alarm: EEPROM Error!	During startup, the cycler cannot properly read the EEPROM memory chip.	Record error code.
			If connected, Insert PIN.
			Clamp lines.
			Aseptically disconnect from cycler.
			Turn off cycler and call service.
S_005	System Error	An unrecoverable error has occurred.	Record error code.
			If connected, Insert PIN.
			Clamp lines.
			Aseptically disconnect from cycler.
			Turn off cycler and call service.

Note: Press the **STOP** key to silence an audible warning or alarm.

Error messages listed alphabetically

Message	Meaning	Action Required
Battery RAM Alarm: Battery RAM Error!	The battery RAM is corrupted.	Record error code. If connected, Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
bypass not allowed!	The operator has tried to bypass the current exchange.	None required. You cannot bypass while the heater bag is filling. If your cycler detects that an overfill situation could occur (150% = next Fill + amount not drained from previous Fills), you cannot bypass and the machine will continue to attempt to drain you until it is safe to move on to the next Fill.
CRC Alarm: CRC Error!	The CRC is corrupted.	Record error code. If connected, Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
Drain complication encountered. Please check patient and drain lines. *(continued on next page)*	Your cycler checks halfway through a Drain cycle to see if you have drained at least 35% of your expected drain volume. If not, your cycler will beep to alert you of a low drain rate. If you still haven't drained at least 70% of your previous Fill by the end of the Drain, your cycler will alert you again that you	Check the Drain Line (Yellow clamp) is not kinked, bent, or clamped. Check that your patient line (blue clamp) is not kinked or clamped. Check for fibrin or clots in the drain line. If so, contact your PD nurse for instructions on what to do. Change positions to move fluid within your abdomen. Check that the Drain Line is properly placed in drainage receptacle such as a toilet, sink

Message	Meaning	Action Required
(continued)	are having drain complications.	or bathtub. Check position of drain bags and make sure they are flat and not on top of each other. Are you constipated? If so, contact your PD nurse for instructions on what to do. Check that your catheter/ extension set is adequately secured. Press the **OK** key to retry.
Drain Line is blocked. Please check the drain line.	Your cycler is having trouble pumping used dialysate to the drain.	Make sure that the Drain Line (Yellow clamp) is properly connected, the clamps are open and there is no kink in the line. Press the **OK** key to retry.
EEPROM Alarm: EEPROM Error!	During startup, the cycler cannot properly read the EEPROM memory chip.	Record error code. If connected, Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
Fill complication encountered. Please check heater, patient, and drain lines.	Your cycler is having trouble pumping dialysate to you.	Make sure that the Heater Bag Line (Red clamp) is properly connected, the clamps are open and there is no kink in the line. Make sure that the Heater Bag is properly positioned on the Heater Tray (see page 100). Make sure that the patient line (blue clamp) is properly connected, the clamps are open and there is no kink in the line. Make sure that the Drain Line (Yellow clamp) is properly connected, the clamps are open and there is no kink in the line. Press the **OK** key to retry.
Heater bag not detected. *(continued on next page)*	Your cycler is having trouble pumping dialysate from the heater bag.	Make sure that the Heater Bag Line (Red clamp) is properly connected, the clamps are open and there is no kink in the line. Make sure that the Heater Bag is properly positioned on the Heater Tray (see page 100) and

Message	Meaning	Action Required
(continued)		the cone is broken. Press the **OK** key to retry.
Heater Alarm: Solution temperature high!	The solution temperature test has failed three times due to high temperatures.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
Heater Warning: Heater temperature too high!	The solution temperature test has failed due to high temperatures.	Remove anything from the heater tray other than the heater bag. Make sure cycler is not placed near a heat source. Press the **OK** key to retry.
Heater Warning: Solution temperature low!	The solution temperature test has failed due to low temperatures.	Cold bags will increase warming time, be sure to store your bags at room temperature. Check if heater plate (tray) is warm to touch. Check for external cooling sources: Be sure there are no open windows, drafts, or fans or air conditioners blowing on your cycler. Press the **OK** key to retry.
IQdrive not detected	The IQdrive is either not inserted or not inserted correctly.	Remove the IQdrive and firmly re-insert it to try again. Or press the **OK** key to ignore the message and continue without using the IQdrive.
IQdrive Port Error	Your cycler cannot access the IQdrive.	Turn off cycler, wait 10 seconds, and turn it back on again. If the message is not cleared, call service. If you are not going to use the IQdrive, press the **OK** key to ignore the message and continue without using the IQdrive.
Make sure the heater bag is on the heater tray and the line is not clamped.	Your cycler is having trouble pumping dialysate from the heater bag.	Make sure that the Heater Bag Line (Red clamp) is properly connected, the clamps are open and there is no kink in the line. Make sure that the Heater Bag is properly positioned on the Heater Tray (see page 100) and the cone is broken. Press the **OK** key to retry.

| Message	Meaning	Action Required
Patient line is blocked. Please check the patient line.	Your cycler is having trouble pumping dialysate into your body.	Make sure that the patient line (blue clamp) is properly connected, the clamps are open and there is no kink in the line. Press the **OK** key to retry.
Patient Sensor Warning: Patient sensors against vacuum sensors!	An error with a sensor used to measure fluid pressure in the cassette.	Press the **OK** key to retry.
Patient Sensor Warning: Patient sensors too high!	An error with a sensor used to measure fluid pressure in the cassette.	Press the **OK** key to retry.
Patient Sensor Warning: Patient vacuum too high!	An error with a sensor used to measure fluid pressure in the cassette.	Press the **OK** key to retry.
Please do not insert cassette now. Close Cassette Door.	The cassette is inserted in your cycler before your treatment has started. Or your cassette door is open when it should be closed.	If the cassette is inserted in your cycler, remove the cassette and close the door. Make sure the door is closed securely. Press the **OK** key to retry.
Please wait for solution to cool down	The Drain phase is finished but the heater bag solution temperature is above 38°C. The cycler will not allow Fill to begin until the temperature drops below 38°C.	Wait for the heater bag temperature to decrease. If this message occurs frequently, check for external heating sources and make sure that the room temperature is cooler than 92°F (33°C).
Please wait for solution to warm up	The Drain phase is finished but the heater bag solution temperature is still below 25°C. The cycler will not allow Fill to begin until the temperature reaches 33°C.	Wait for the heater bag temperature to increase. If this message occurs frequently, check for external cooling sources: Be sure there are no open windows, drafts, or fans or air conditioners blowing on your cycler.
Pneumatic	The cycler has	Record error code.

Message	Meaning	Action Required
Alarm: Balloon Valve Leak!	failed due to a possible balloon valve air pressure leak during treatment.	Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
Pneumatic Alarm: Pressure leak!	An air pressure leak has been detected and the cycler cannot recover.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
Pneumatic Warning: Pressure reading high!	The cycler's pneumatic pressure is reading too high.	Press the **OK** key to retry.
Pneumatic Warning: Pressure reading low!	The cycler's pneumatic pressure is reading too low.	Press the **OK** key to retry.
Pneumatic Warning: Vacuum reading high!	The cycler's vacuum pressure is reading too high.	Press the **OK** key to retry.
Pneumatic Warning: Vacuum reading low!	The cycler is reading low vacuum pressure.	Press the **OK** key to retry.
Press OK key to start fill…	The solution temperature is cool (25°C/77°F). The user must choose whether or not to wait for it to reach the set temperature.	To continue Fill with cool solution, press the **OK** key; otherwise, wait until your solution has reached the set temperature to continue. When the set temperature has been reached, it will automatically start the Fill.
Scale Warning: Scale reading error!	The heater bag on the scale is not within allowable limits.	Remove anything from the heater tray other than the heater bag. Press the **OK** key to retry.
Self Test Alarm: Fluid temperature out of range!	The solution temperature test has failed.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler.

Message	Meaning	Action Required
		Turn off cycler and call service.
Self Test Alarm: Safety Clamp Error!	The safety clamp test has failed three times.	Record error code, turn off cycler, and call service.
Treatment Warning: Air detected in cassette!	The test failed due to possible air detection in cassette	Press the **OK** key to retry.
Self Test Warning: Balloon Valve leak!	The self test has failed due to a possible balloon valve leak.	Press the **OK** key to retry.
Self Test Warning: Patient pressure not constant!	The self test has failed due to an error with one or both of the pressure sensors used to measure fluid pressure in the cassette.	Press the **OK** key to retry.
Self Test Warning: Pressure leak!	The self test has failed due to a possible air pressure leak.	Press the **OK** key to retry.
Self Test Warning: Pressure out of range!	The self test has failed due to pressures being out of range.	Press the **OK** key to retry.
Self Test Warning: Pressure production low!	The self test has failed due to low pressures.	Press the **OK** key to retry.
Self Test Warning: Remove Heater Bag from Heater Tray	The self test detects a heater bag on the heater tray when not expected.	Press the **OK** key to retry.
Self Test Warning: Thermistor reading out of range!	The self test has failed due to a temperature sensor being out of range.	Make sure nothing is on top of heater tray. Make sure cycler has cooled down. Make sure cycler is not placed near a heat source. Press the **OK** key to retry.

Message	Meaning	Action Required
Self Test Warning: Vacuum leak!	The self test has failed due to a possible vacuum leak.	Press the **OK** key to retry.
Self Test Warning: Vacuum out of range!	The self test has failed due to vacuum pressures being out of range.	Press the **OK** key to retry.
Self Test Warning: Vacuum production low!	The self test has failed due to low vacuum pressures.	Press the **OK** key to retry.
Sensor Warning: Invalid sensor readings!	A sensor is reading incorrectly.	Press the **OK** key to retry.
Supply Lines are blocked. Please check the supply lines.	Your cycler is having trouble pumping out of the solution bags.	Make sure that the solution lines (White and Green clamps) are properly connected, the clamps are open and there is no kink in the lines. Make sure the cones are all broken. Make sure that the bags are not empty. Press the **OK** key to retry.
System Error	An unrecoverable error has occurred.	Record error code. If connected, Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
System Warning	An unexpected error has occurred.	Press the **OK** key to retry.
Treatment Alarm: Flowpath error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
Treatment Alarm: Pause time error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler.

Message	Meaning	Action Required
		Turn off cycler and call service.
Treatment Alarm: Treatment data error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
Treatment Alarm: Treatment starts error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.
Treatment Warning: Volume error!	Volume is not being pumped although the pumps are moving.	Press the **OK** key to retry.
Treatment Warning: Encoder flag error!	Treatment error.	Press the **OK** key to retry.
Watchdog Alarm: Watchdog timer Error!	An unrecoverable error has occurred.	Record error code. Insert PIN. Clamp lines. Aseptically disconnect from cycler. Turn off cycler and call service.

Different People Drain Differently
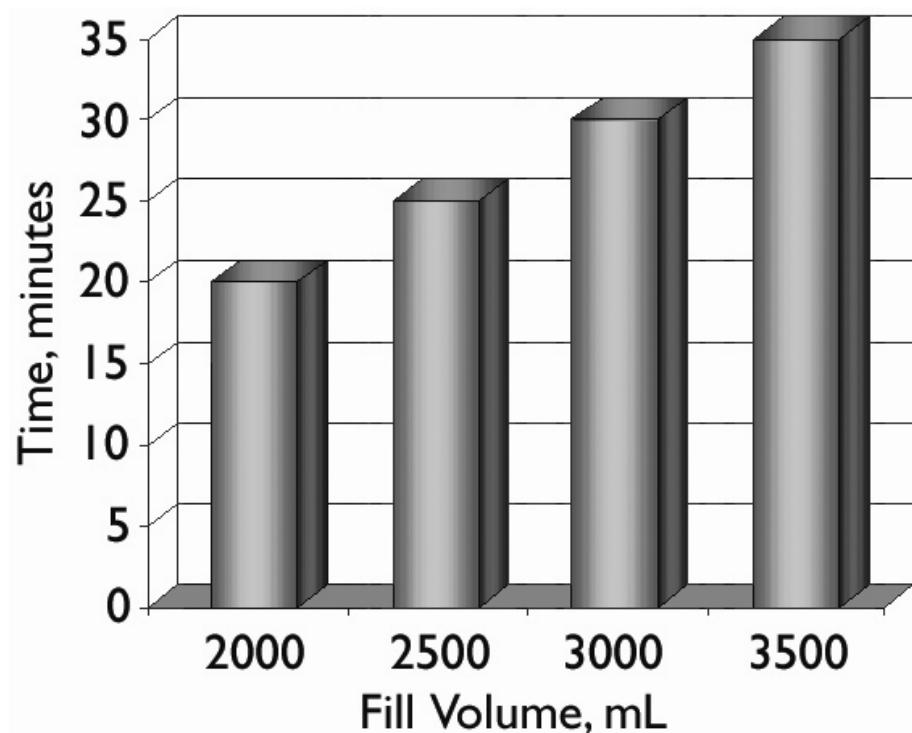
Different People Drain Differently

The way your body and your PD catheter extension set respond to your pumping cycler may be different. If you've already been doing dialysis as CAPD or on another type of cycler, the amount of time that you need to drain may not be the same as before. Your Liberty cycler is designed to drain at a rate of 100 mL per minute for most Drain cycles. This means that if you program your cycler to drain your peritoneal cavity in a shorter time, the rate would have to be faster and you may have problems with drain alarms.

To help eliminate drain alarms, you and your PD nurse should program your Drain Time to correspond with the amount of fluid you have filled. The graph to the left shows the amount of time in minutes to program into your cycler for your drain times depending on the fill volume that you use.

According to this graph for example, if you have filled with 2000 mL of fluid, you will need 20 minutes to drain.

(i)	**Note:** Patients may experience fewer drain complication alarms in Treatment Based than Cycle Based therapy. If you are in Cycle Based therapy and experiencing drain complications, you should discuss changing your therapy with your doctor or PD nurse.

Power Failure

Turn power back ON
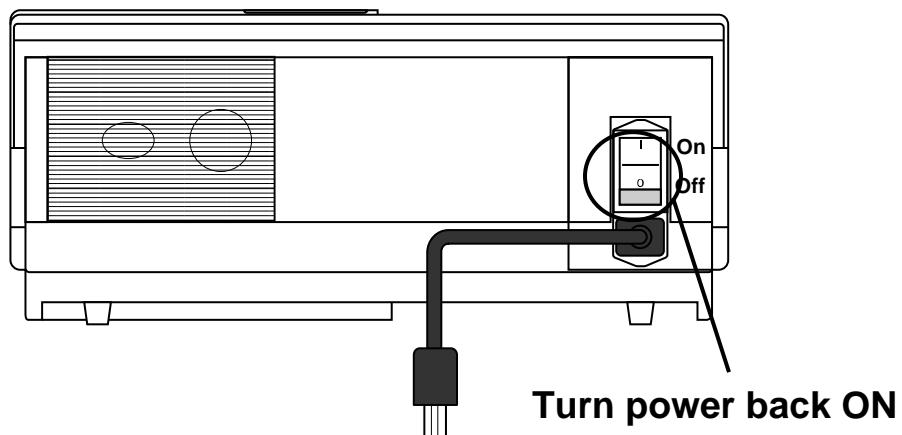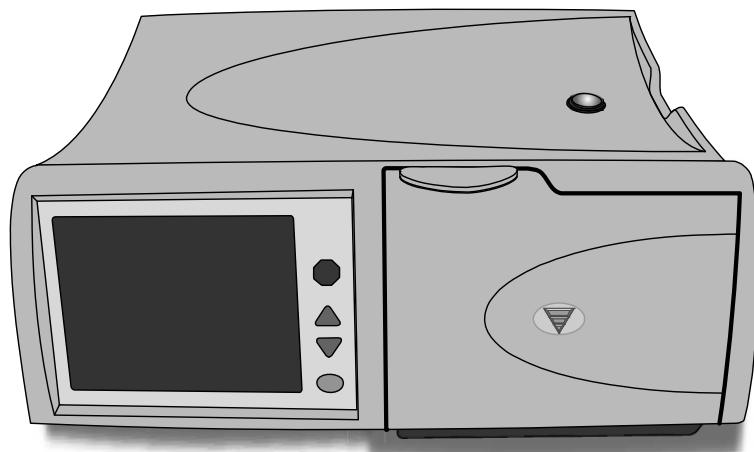
Power failure

During a power failure (or if the power switch was turned off), all valves close, the pump stops, and the Touch Screen goes blank.

> (i) **Note**: If the power failure occurs during a Drain, Fill, Dwell, or Pause, your cycler will keep track of your current location and progress.

You may still continue your same treatment if the power returns within eight hours. Depending on how long the power failure lasts, you may wish to disconnect from your cycler.

To disconnect from your cycler:
- Push in the PIN—twist the PIN ¼ turn and then push it in to make sure that a new PIN is inserted in the line
- Close patient line (blue clamp)
- Close catheter extension set clamp
- Carefully disconnect the patient line from your extension set and cap off with a new sterile stay•safe cap

Power restored

When the power is restored to your cycler, turn the Power Switch on the back of your machine ON if it is not already on. Your machine will then go through a series of self-tests before you may choose whether or not to continue with your treatment.

(continued)

Power Failure continued

Power Fail Recovery | My Treatment | My Settings | My Records
2/7/2007   2:08 PM

Power Fail Detected

Recovery Check in progress...

Please wait

Press STOP to mute

(continued)

Press (STOP)
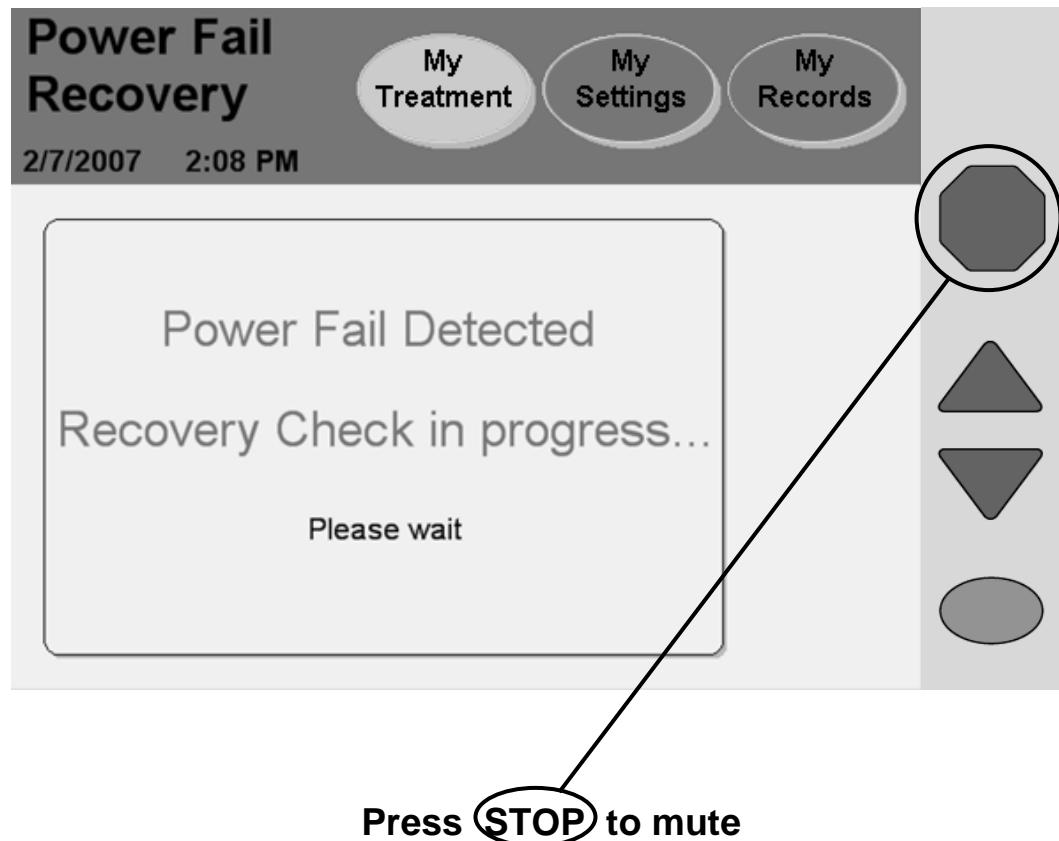
Press the **STOP** key to silence the audible warning. Your cycler will perform a safety systems check. If the Power Fail Recovery is successful, your machine will beep again. Press the **STOP** key to silence the alarm again. Then you may select the **Resume Treatment** button to continue your Drain, Fill, Dwell, or Pause where you left off.

Follow your PD nurse's power failure instructions to reconnect to your machine if you have disconnected. If you are instructed to, you may continue with your treatment.

> (i) **Note**: The letter 'F' will be displayed next to your treatment details in the "My Records" screen to show a power failure occurred during that treatment. For more information, see "Treatment Details" on page 159.

Recovery failure

If the Power Fail Recovery test fails, you must select the **Cancel Treatment** button and start a new treatment. Follow the instructions on the screen:
- Push in the PIN—twist the PIN ¼ turn and then push it in to make sure that a new PIN is inserted in the line.
- Close patient line (blue clamp)
- Close catheter extension set clamp
- Use aseptic technique to carefully disconnect the patient line from your extension set and cap off with a new sterile stay•safe cap.
- Check that your catheter/extension set is firmly anchored in place
- Press the **Next** button to continue
- Close all clamps
- When prompted, open the door and remove the cassette
- Restart your entire treatment with fresh dialysate bags and a new cassette

> (i) **Note**: If your power failure lasts longer than eight hours, you may not resume your treatment.

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P/N 480088 Rev D

Cleaning, Specifications, Index, and Glossary

Cleaning Your Cycler

Heater Tray

Front Panel Apparatus

Cabinet

Outer Door
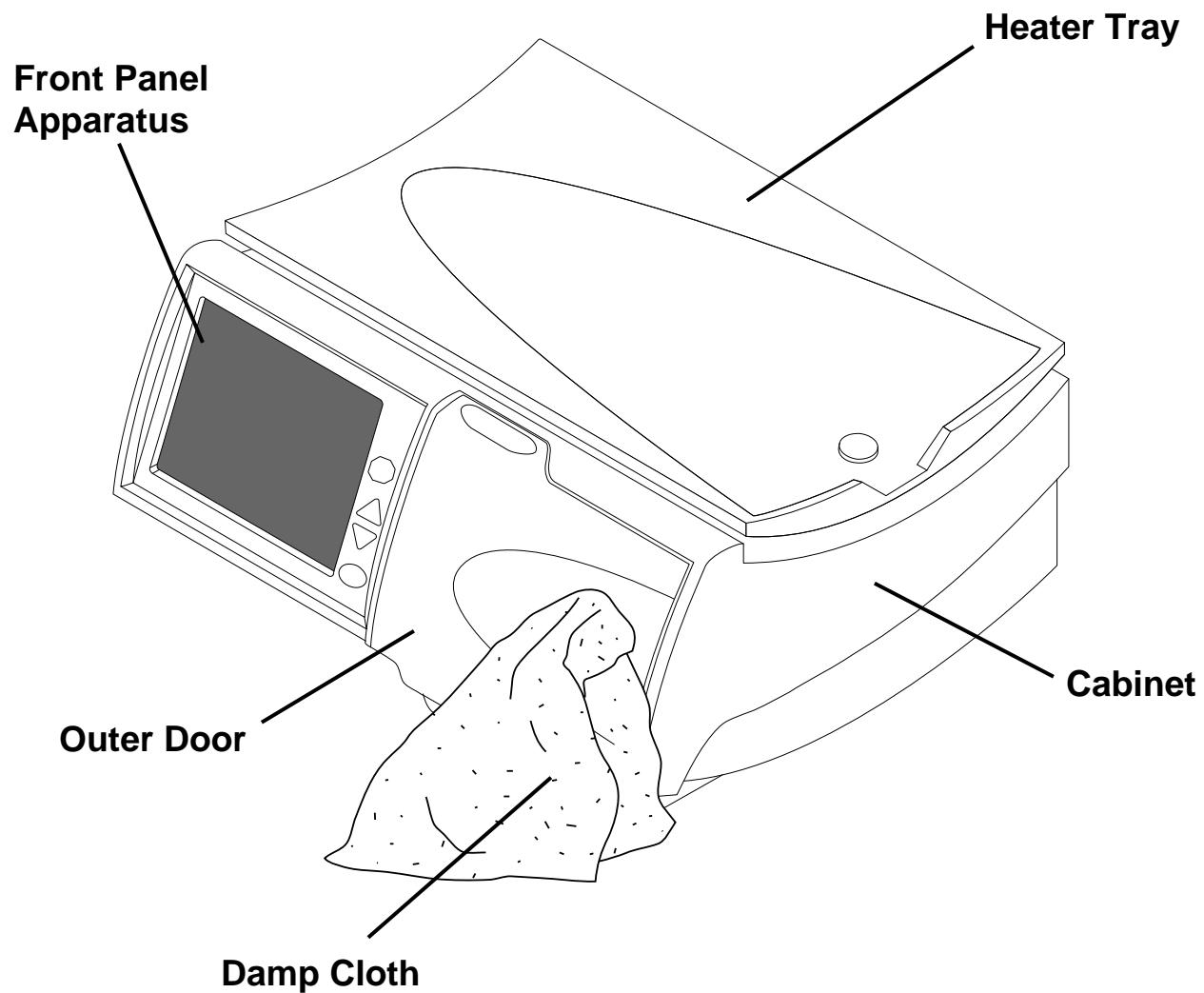
Damp Cloth

Cleaning your cycler

The Liberty cycler is not sterile equipment, however, you should keep your Liberty cycler clean and dry at all times. Clean the exterior surface of your machine using a damp cloth and a diluted (1:100) bleach solution or other suitable hospital disinfectant. See adjacent illustration for areas to be cleaned.

Use surface cleaner in small amounts to avoid excess cleaner from entering the interior of your machine. <u>Rinse off cleaning solutions with a water-dampened cloth</u>, especially if a corrosive cleaner such as bleach is used.

If you need to clean your stay•safe organizer, you may wash it with warm soapy water or place it in the top rack of your dishwasher.

Caution: Do not allow any fluid to drip into your cycler or onto the pump module. The cycler must be OFF when you are cleaning it to prevent fluid from entering the pump module. If any fluid gets inside your cycler, you must contact Technical Support immediately at 1 800 227-2572. Clean fluid spills immediately to prevent moisture from possibly damaging your machine. Your machine should be placed on a water-tolerant surface, and spills should be cleaned up immediately.

Caution: Do not touch the white pressure sensors in the pump module. Pressing on the pressure sensors may damage them.

Caution: Do not use foaming type cleansers or disinfectants containing alcohol or quaternary ammonium compounds like N-alkyl (C12-C18) dimethyl benzyl ammonium chloride. These chemicals attack the polycarbonate plastics used in your machine. Read the product labels and follow the instructions. Do not use spray bottles.

Periodically check your Liberty cycler for:
- Damage to the cabinet
- Loose or missing pieces

There is no other preventative maintenance for your cycler.

Any service must be performed by an FMC service technician. If your cycler needs service, call Technical Support at **1 800 227-2572**.

Machine Specifications

Overall	
Dimensions	21.5 cm H x 41.28 cm D x 47.63 cm W
Weight	Approximately 14.5 kg (32 lbs.)

Operating Conditions	
Temperature	15-33°C (59 – 92°F)
Rel. Humidity	30-75% (EN 60601-1-2)
Atmospheric Pressure Range	70 kPa to 106 kPa
Noise Level	Does not exceed 40 dBA

Transportation and Storage Conditions	
Temperature	-31 to 54°C (-25 to 130 °F)
Rel. Humidity	Non-condensing
Atmospheric Pressure Range	50 kPa to 106 kPa

Electrical	
Power Supply	Single phase or two phase center-tapped AC 100-240 V, 50/60Hz
Power consumption	480 Watts at 100V 700 Watts at 240V
Circuit Breaker	6 Amp. breaker contained in Power Entry Module
External Connections	USB Port IEC 60601-1:1988, A1:1991, A2:1995 Clause 6.8.2a, 6.8.2c (Accessories, SIP/SOP connections) Accessories equipment connected to the analog and digital interfaces must be certified to the respective IEC standards (i.e. IEC 60950 for data processing equipment and IEC 60601-1 for medical equipment). Furthermore all configurations shall comply with the system standard IEC 60601-1-1. Persons who connect additional equipment to the signal input part or signal output part configure a medical system, and are therefore responsible that the system complies with the requirements of the system standard IEC 60601-1-1. If in doubt, consult the Technical Support department at 1 800 227-2572 or your local representative.

| Electro-magnetic compatibility | See EMC Declaration on page 226 |

Electrical Safety (UL 60601-1)

Protection against electric shock	Type: Class I equipment
	Degree: Type BF Applied Part
IP Rating	IPX0. Meets the requirements of IEC 60601-2-39 (Clause 44.3) regarding degree of protection against ingress of water.
Mode of Operation	Continuous Operation

Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.

User Interface

Language	The operating screens may be set to either English (USA), French (Canada), or Spanish (Mexico)
Touch Screen	LCD display reacts to fingertip pressure
Keys	Up ▲, Down ▼, STOP, OK

Hardware Settings

Alarm Loudness	1-20 (50-90 dB)
Key Loudness	0-20
Screen Blanking Delay	10 minutes
Screen Brightness	1-10

Solution

Bag Sizes	2000, 3000, 5000, 6000 (v2.8.5 software or later) mL
Initial Fill Volume Range	500 to 4000 mL
Temperature	Fixed at 37°C ±1°C (98.6°F ±1.8°F)
	Minimum 25°C bag temperature in order to start treatment
Maximum Total Volume	30,000 mL
Drain Time	1-59 minutes
Fill Volume	500-4000 mL
Pause Volume	0-4000 mL
Last Fill Volume	0-4000 mL
Pressures Generated	-250 mbar to 650 mbar (pressures that can be generated to assist the transfer of dialysate solution to and/or from the peritoneal cavity of the patient)

Therapy

Total Therapy Time	10 minutes to 47 hours, 59 minutes
Number of Fills	1-99 (Exchanges)
Dwell Time	Variable from 0 minutes to 9 hours, 59 minutes
Pauses	Variable from 0 to 1 less than # of Fills

Safety Systems

Air Infusion Protection	Controlled by software: cycler measures air volume in three consecutive strokes coming from source. Any air volume over the set limits (see below) is pumped to drain and M31 (Air Detected in Cassette) warning is displayed. **Air Detector Sensitivity Limits** Fill: air volume coming from heater bag ≥ 3 mL Drain: air volume coming from patient bag ≥ 3 mL Dwell: If air volume coming from supply bag ≥ 6 mL
Dialysate Solution Overfill Protection	Controlled by software: Drain bypass is prevented when overfill is 1.5 or 150% of prescribed Fill (150% = next Fill + amount of previous Fill not yet Drained)
Over Temperature Protection	Over temperature protected by two thermostats opening at 104° ± 4°F and 120° ± 4°F

Options

Add diurnal UF	SI Units
Last bag option	Personal data
> 24 hr tx (disabled in V2.4.7)	USB enabled
Language	

Accessories

IQdrive (P/N 180202)	Liberty Cart (P/N 180080)

Modem Model MTCBA-G2 (P/N 180291)
FCC Part 15 Class B, EN 55022 Class B
FCC Part 22, 24, RSS 132, 133
Safety Approval: UL/cUL 60950-1, IEC60950-1

Modem Model MTCMR-C2-N3 (P/N 180292)
FCC Part 15 Class B, EN 55022 Class B
FCC Part 22, 24, RSS 132, 133
Safety Approval: UL/cUL 60950-1, IEC60950-1

MEDICAL EQUIPMENT
WITH RESPECT TO ELECTRICAL SHOCK, FIRE AND MECHANICAL HAZARDS ONLY
IN ACCORDANCE WITH 60601-1 and 60601-2-39
CAN/CSA – C22.2 No. 601
CAN/CSA – C22.2 No. 601.2.39
Control No. 36CT

Manufacturer's EMC Declaration

The Liberty cycler has been certified to the requirements of ANSI/AAMI/IEC 60601-1-2 within the scope of equipment intended to be used in the home and institutional environments, such as hospitals.

Emissions testing of the machine was performed using the limits for CISPR 11 Group 1, Class B which are specified for equipment intended to be used in homes. However, use of the Liberty cycler in residential environments may result in interference with some types of broadcast receivers such as televisions and radios. Should such interference occur, it will not permanently affect those receivers and can be reduced or eliminated by repositioning of the receiver or the Liberty cycler.

In order to assure the safety of the Liberty cycler as well as other medical devices when used with the Liberty cycler in the home environment, a detailed technical analysis was performed. This analysis has shown that the emissions levels of the Liberty cycler are significantly below the immunity requirements of ANSI/AAMI/IEC 60601-1-2 and therefore are not likely to impact the safe operation of other medical devices used within the proximity.

Guidance and manufacturer's declaration – electromagnetic emissions		
The Liberty cycler is intended for use in the electromagnetic environment specified below. The customer or user of the Liberty cycler should ensure it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
RF Emissions CISPR 11	Group 1	The Liberty cycler uses RF energy only for its internal functions. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF Emissions CISPR 11	Class B	The Liberty cycler is suitable for use in all establishments including domestic, and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity			
The Liberty cycler is intended for use in the electromagnetic environment specified below. The customer or the user of the Liberty cycler should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±2 kV, ±4 kV, ±6 kV contact ±2 kV, ±4 kV, ±8 kV air	±6 kV contact ±8 kV air	Can be used in a dry location (minimum 30% relative humidity)
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines	±2 kV for power supply lines	Mains power quality should be that of a typical low-voltage power supply network that supplies hospitals or buildings used for commercial or domestic purposes.
Surge IEC 61000-4-5	±0.5 kV, ±1 kV differential mode ±0.5 kV, ±1 kV, ±2 kV common mode	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical low-voltage power supply network that supplies hospitals or buildings used for commercial or domestic purposes.
Voltage Dips, short interruptions, and voltage variation on power supply input lines IEC 61000-4-11	<5 % U_T (>95 % dip in U_T) for 0.5 cycles 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 seconds	<5 % U_T (>95 % dip in U_T) for 0.5 cycles 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 seconds	Mains power quality should be that of a typical low-voltage power supply network that supplies hospitals or buildings used for commercial or domestic purposes. If the user of the Liberty cycler requires continued operation during power mains interruptions, it is recommended that the Liberty cycler be powered from an uninterruptible power supply.
Power-Frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical public low-voltage power supply network that supplies hospitals or buildings used for commercial or domestic purposes.
NOTE U_T is the a.c. mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration – electromagnetic immunity			
The Liberty cycler is intended for use in the electromagnetic environment specified below. The customer or the user of the Liberty cycler should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
			Portable and mobile RF communications equipment should be used no closer to any part of the Liberty cycler, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = [3.5 / 3] \sqrt{P}$ $d = [3.5 / 3] \sqrt{P}$ 80 MHz to 800 MHz $d = [7 / 3] \sqrt{P}$ 800 MHz to 2.5 GHz
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2.5 GHz	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2.5 GHz	where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range. [b] Interference may occur in the vicinity of equipment marked with the following symbol:

NOTE 1   At 80 MHz and 800 MHz, the higher frequency applies.

NOTE 2   These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a]   Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Liberty cycler is used exceeds the applicable RF compliance level above, the Liberty cycler should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Liberty cycler.

[b]   Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distances between			
portable and mobile RF communications equipment and the Liberty cycler			
The Liberty cycler is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Liberty cycler can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Liberty cycler as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter (Watts)	**Separation distance according to frequency of transmitter (meters)**		
	150 kHz to 80 MHz $d = [3.5 / 3] \sqrt{P}$	**80 MHz to 800 MHz** $d = [3.5 / 3] \sqrt{P}$	**800 MHz to 2.5 GHz** $d = [7 / 3] \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.2	1.2	2.3
10	3.7	3.7	7.4
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.			

Caution: In order to prevent potentially hazardous conditions and ensure the safe operation of the Liberty Cycler, Radio Frequency Identification (RFID) Equipment must be kept at least 3 meters from the system while in operation.

Product Improvement Policy

Your Fresenius Medical Care Liberty cycler machine was designed and built to comply with these product specifications. It is the intention of Fresenius Medical Care to continuously improve products, a process that may result in modifications to specifications or equipment produced in the future. Such product improvements shall not incur any obligation to make similar changes or improvements to equipment previously produced. Where possible, improvements will be made available at reasonable prices. Any such improvement shall not be construed as corrections of any deficiency in previously produced equipment.

Warranty

REFURBISHMENT POLICY
It is the policy of Fresenius USA, Inc. to refurbish medical devices so that they meet the same performance specification as new products. Controlled procedures are used and the refurbishment is carried out at the same manufacturing location under the same quality management system as new medical devices.

REPLACEMENT
Fresenius USA, Inc. sells both new and/ or refurbished medical devices. Refurbished medical devices meet the same performance specification as new medical devices (see above) and either may be supplied by the company as warranty replacements.

PERITONEAL CYCLERS
Liberty® cyclers that are rented or leased may be either new or refurbished units. History files on new and refurbished medical devices are maintained by Fresenius USA, Inc. at its Concord, CA manufacturing facility.

Preventive maintenance of peritoneal cyclers is not required. Service is performed at the factory only. Cyclers requiring service or investigation are replaced, generally with refurbished equipment, so that investigation and/or service can be performed at the factory. No user service records are required.

In cases where the Liberty cycler is sold, SALE of the machine or parts described or referenced herein is expressly conditioned upon the terms and conditions set forth below. Any additional or different terms or conditions set forth by the Purchaser to Fresenius Medical Care, Inc., (herein called "the Company") shall not be effective or binding, and the terms set forth herein shall not be modified or amended, unless assented to in writing by an authorized official of the Company located in Waltham, Massachusetts.

LIMITED WARRANTY*: The Company warrants to the Purchaser that the equipment delivered is free from defects in material or workmanship for the periods specified below, provided the equipment is used and maintained in accordance with the original manufacturer's operating instructions:*

A. Mainframe chassis, and electronic components, lamps, etc. shall be warranted for ninety (90) days from the date of initial installation or one hundred and eighty (180) days from the shipment, whichever occurs first.

B. Consumables shall not be warranted.

*The Company will repair or replace, at its option, using new or reconditioned parts and/or assemblies, any parts subject to this warranty which are proven defective in materials or workmanship. Such repair and replacement will be made without cost to the Purchaser, and the Company reserves the right to determine the location at which the repair or replacement will be accomplished. The Warranty does not apply to any equipment which is misused, abused, neglected, tampered with, damaged by accident, flood, fire, or other hazard, subjected to abnormal or unusual electric or fluid stress, improperly installed or operated, or not maintained in accordance with the routine maintenance schedule set forth in the operating manual for the equipment. **Routine maintenance is not covered under warranty.** Modifications, alterations, installation, and service by other than a FRESENIUS MEDICAL CARE authorized representative may void the warranty.*

WARRANTIES APPLICABLE TO EQUIPMENT EXTEND ONLY TO THE PURCHASER, AND ARE NOT ASSIGNABLE OR TRANSFERABLE, AND SHALL NOT APPLY TO AUXILIARY EQUIPMENT, DISPOSABLE ACCESSORIES, OR LIGHT SOURCES. THE FOREGOING WARRANTY SHALL BE IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED, IMPLIED, OR STATUTORY, RESPECTING THE EQUIPMENT OR ANY PARTS OR COMPONENTS THEREOF, AND THE COMPANY MAKES NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY IN CONTRACT, TORT, OR UNDER ANY OTHER THEORY AGAINST THE COMPANY RESPECTING THE EQUIPMENT AND ITS USE SHALL BE THE REPLACEMENT OR REPAIR OF THE EQUIPMENT AND ITS PARTS AS DESCRIBED ABOVE, AND NO OTHER REMEDY (INCLUDING, WITHOUT LIMITATION, CONSEQUENTIAL DAMAGES) SHALL BE AVAILABLE TO THE PURCHASER. The Company shall have no further obligation or liability with respect to the equipment or its sale, operation and use, and the Company neither assumes, nor authorizes the assumption of, any obligation or liability in connection with such equipment.

TERMS*: Net 30 days, FOB shipping point plus sales and similar taxes. The Company's prices do not include sales, use, excise, or similar taxes. Consequently, in addition to the prices specified herein, the amount of any present or future sales, use, excise, or other similar tax applicable to the or use of the equipment hereunder shall be paid by the Purchaser, or in lieu thereof, the Purchaser shall provide the Company with a tax exemption certificate acceptable to the taxing authorities. Purchase price will include operation training of Purchaser's personnel when a complete system is purchased. Installation for replacement parts will be charged to the Purchaser on a time, material, and expense basis unless covered under the limited warranty or a service contract.*

SHIPPING*: The Company will use its own judgment in determining the most effective method of shipping unless otherwise specified by the purchaser.*

For additional servicing and information contact:

Fresenius Medical Care   (800) 227-2572
Attention: Service Department
4040 Nelson Ave
Concord, CA 94520

The Liberty cycler is manufactured by :

Fresenius USA, Inc.
4040 Nelson Ave
Concord, CA 94520

Glossary

Abdomen—Area of your body below the chest and above the hips, also called the belly.

Ambulatory—Moving or walking around.

APD—Abbreviation for Automated Peritoneal Dialysis, the use of a machine for peritoneal dialysis.

Aseptic Technique—A series of steps used to keep an area as germ free as possible, including putting on a mask, thoroughly washing and drying your hands, and remembering which parts of your supplies are sterile.

Button—Certain identified sites on the Touch Screen that, when touched, will cause a specific action.

CAPD—Abbreviation for 'Continuous Ambulatory Peritoneal Dialysis.' CAPD requires a manual exchange.

CCPD—Abbreviation for 'Continuous Cycling Peritoneal Dialysis.' CCPD is a continuous therapy with exchanges occurring throughout the night and sometimes during the day. CCPD requires a cycler.

CCPD Volume—The amount of dialysate delivered during exchanges.

Clean—You have removed most, but not all of the germs. Good hand washing makes your hands clean, not sterile. Your work surface is clean, not sterile.

Cone—Plug at the inside end of a dialysate solution bag. Breaking the cone opens the bag and allows the flow of solution to the connected tubing.

CRC—Abbreviation for Cyclic Redundancy Check. CRC is an error-detecting code used to check the integrity of the data.

Dextrose (Glucose)—A form of sugar used in dialysate to remove fluid.

Diastolic Pressure—The lower blood pressure number, it describes the blood's pressure on arteries just before the next heartbeat.

Dialysate—Dialysis solution used to clear waste fluid from your body.

Diurnal—Daytime, opposite of nocturnal.

Drain—Process of emptying your peritoneal cavity of dialysate which carries waste and fluid out of the body.

Drain Time—The amount of time available to drain your peritoneal cavity of used dialysate.

Dry Day—Term for having very little fluid left in your abdomen as a result of no programmed Last Fill for your treatment.

Dwell—Stage of peritoneal dialysis treatment in which the dialysate remains in your peritoneal cavity for a specified amount of time. The dwell time is the time allowed for actual dialysis to take place during each exchange.

Effluent—The used dialysate that your cycler drains out of you.

ESRD—Abbreviation for 'End Stage Renal Disease.'

Exchange—Act of replacing the dialysate in your peritoneal cavity. An exchange or cycle consists of three steps: Fill, Dwell, and Drain.

Fibrin—White protein strands that are sometimes found in your drained dialysate.

Flush—Procedure to remove air and potential contaminates from bag line and connections.

Fill—Process of filling your peritoneal cavity with fresh dialysate.

Fill Volume—The prescribed amount of dialysate to fill your peritoneal cavity during an exchange.

Fill Time—The amount of time available to fill your peritoneal cavity with fresh dialysate.

Increased Intraperitoneal Volume (IIPV)—see *Overfill*

IPD—Abbreviation for 'Intermittent Peritoneal Dialysis.' Exchanges usually take place at night with a dry day.

Keys—Located on the Control Panel, keys work outside the Touch Screen to scroll, confirm selections, and stop functions.

Last Bag Fill Volume—This is the volume of dialysate for the last fill. It is in the bag connected to the green clamp line.

Last Fill Volume—The amount of dialysate left in your peritoneal cavity before disconnecting from your machine.

MR— Refers to MRI, Magnetic Resonance Imaging.

Overfill—Also known as Increased intraperitoneal volume (IIPV) is when you have too much fluid in your abdomen. IIPV/overfill may result in serious injury or death from conditions such as: abdominal wall and/or diaphragmatic hernias, hydrothorax, heart problems including chest pain and heart failure, high blood pressure, pulmonary edema, decreased pulmonary function and pericardial effusion. Patients and caregivers should watch for the potential signs of IIPV. These include: difficulty breathing; vomiting or spitting up; feeling full, bloated, or overfilled after treatment; abdominal pain or discomfort; expanded or tense abdomen; chest pain, increased blood pressure, change in mental status, and leakage of fluid from the PD catheter exit site.

Parameter-Button—A button on the Touch Screen that displays the changeable value it controls.

Pause—An exchange that allows you to Dwell while either connected to or disconnected from your cycler. It differs from other Dwells because it is not a timed function, meaning you may pause for as long as you like.

Pause Volume—The amount of dialysate delivered during the Pause portion of the exchanges.

PD—Abbreviation for 'Peritoneal Dialysis.'

PD+—Abbreviation for 'Peritoneal Dialysis Plus,' a therapy that features pauses prior to nighttime therapy. See *Pause* for more information.

Peritoneal Cavity—Area of your body containing your stomach, liver, intestines, spleen, and pancreas. See also *Abdomen*.

Peritoneal Dialysis—The procedure carried out by your body that pulls the waste products and excess water from your blood stream.

Peritoneum—Smooth semi-permeable membrane which lines the cavity of the abdomen covering internal organs.

Pillow—A clear chamber in the drain line. The pillow lets you check the clarity of your dialysate fluid as it drains. See page 127 for a picture.

Pneumatic Pressure — Compressed air used by the cycler during its operation.

Prime—Procedure to remove air from the tubing line that connects to the patient's catheter extension set.

Screen-button—Any of the buttons located in the Status Bar on the Touch Screen. Touching one of these buttons will display its screen.

SI units—Abbreviation for 'System, International.' This is a set of measuring standards that uses the metric system including kilograms (kg), Celsius degrees (°C), and millimole per liter (mmol/L). The Liberty cycler can display values in either SI units or US standard units (lbs., °F, or mg/dL).

Status Bar—Top section of the Touch Screen that shows your machine's operational mode. It is color coded to show your machine's status. The Status Bar also alerts the operator to any warning or alarm event.

Sterile—Sterile means completely free of germs. Some of the supplies are packaged to keep them sterile. Some parts of the supplies must remain sterile after opening the package.

Systolic pressure—The higher blood pressure number, it is the blood's pressure on arteries during a heartbeat.

Thermistor— A type of temperature sensor that is used to measure temperature.

Tidal fill volume—The amount of dialysate to fill your peritoneal cavity during a Tidal therapy exchange. This amount is typically less than CCPD and IPD volumes.

Tidal drain volume—The amount of dialysate that is drained during each Tidal Exchange. Drain 0 and the last Drain of the treatment will drain completely.

TPD—Abbreviation for 'Tidal Peritoneal Dialysis.'

Total sleep time/Total therapy time—The estimated sum of all Drain, Fill, and Dwell time during a treatment.

Total Volume—The total amount of dialysate you need for your treatment.

UF—Abbreviation for 'Ultrafiltration.'

Ultrafiltration—Ultrafiltration is the process of drawing off excess fluid from the bloodstream during treatment.

Unrecoverable Error—Alarms in which the Liberty Cycler Display Status Bar turns red and cannot be resolved; contact Technical Support at 1 800 227-2572.

Urea—Dissolved protein waste product.

USB—Abbreviation for 'Universal Serial Bus.' This is a type of connection used to transfer data. The IQdrive connects to the USB port on the back of your Liberty cycler.

Index