

# Continuous kidney replacement therapy (CKRT)



## What is CKRT?

Continuous kidney replacement therapy (also called CKRT) is a form of therapy that is like dialysis. It is a continuous dialysis treatment that takes place at the patient's bedside in the intensive care unit (ICU).

CKRT gently removes fluid and waste products from the blood when the kidneys fail to work as they should. Kidney failure has many causes. Therefore, the length of time your child will need CKRT varies and will depend on how the kidneys heal.

## How is CKRT done?

- Your child will need a large I.V. called a central venous access device or CVAD. This device may also be called a line, vascath or permacath. We will:
  - Place it in a large vein in the ICU, interventional radiology (IR) or the operating room (OR).
  - Give pain and sedation medicines to your child. This will help them feel sleepy, so they will not feel pain or move during the placement of the catheter.
  - Prepare the CKRT machine and fill the tubing with sterile saline.
- Once the CVAD is placed in the correct vein, we will connect the tubing from the CKRT machine to your child's new CVAD at the bedside.
  - The machine will pull blood from the body through one side of the CVAD.
  - Then, it pushes the blood through an artificial kidney (also called a hemofilter). This removes extra fluid and waste products from the blood.
  - The pump will return the "clean" blood to the body through the other side of the CVAD.
- We will use medicine to help the blood move smoothly through the tubing. Citrate, epoprostenol (Veletri) or heparin are some of the medicines that we may use to help prevent the blood from clotting while it is in the tubing.
- CKRT may lower the natural calcium levels in the blood, so we may give calcium to your child through an I.V. to replace what is lost.

## Who will care for my child while they receive CKRT?

- A dedicated group of nurses who have had special training will care for your child while getting CKRT.
- During CKRT, a nurse will be assigned to your child only.
- A member of the Advanced Technologies team, a team of expert technicians in CKRT, will also be available at all times to help with CKRT as needed.
- Your child's ICU doctors and kidney doctors (nephrologists) will work together to adjust the CKRT settings based on your child's needs.

**In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.**

# Continuous kidney replacement therapy, continued

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## What tests does my child need while they receive CKRT?

We may test:

- Small amounts of blood from the CKRT tubing and your child's I.V. This will help us monitor the machine, as well as your child's calcium levels.
- Other labs that tell us how well the CKRT is working, such as levels of waste products or electrolytes in the body. This will help us adjust the CKRT to fit your child's exact needs.

## How long will my child need CKRT?

Your child will need CKRT until:

- The kidneys begin working again, **or**
- Enough fluids and waste products have been removed from the blood.

This may take only a few days, but it could take longer.

- Sometimes the kidneys may not completely return to normal. When this happens, the kidney doctors (nephrologists) will talk with you about other treatment options for your child.
- Being on CKRT does not cause more injury to the kidneys, but it also does not help the kidneys get better faster. CKRT just does the work of the kidneys while your child's kidneys are trying to heal and get better.

## Are there any side effects?

Your child may have:

- Lightheadedness
- Nausea (upset stomach)
- Vomiting (throwing up)
- Tingling in the mouth, fingers, chest, feet or legs

Although not as common, your child may also have:

- Fever
- Chills
- Back pain
- Trouble breathing
- Itching
- Hives

## How can I help keep my child safe?

To help keep your child safe:

- We ask that you wait to give your child any food or drink until after the doctor or nurse says it is OK.

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# Continuous kidney replacement therapy, continued

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- **It is very important that we know everything your child is eating and drinking.**
- Please help us by telling us what and how much your child eats or drinks at any time – no matter how small.
- The nurse will check your child and the CKRT machine every hour – even during the night.
- Sometimes the CKRT machine works best when your child is positioned in a certain way in bed. If your child's movement limits the machine's ability to work as it should, we may ask you to help us keep them positioned in a different way.

## What else do I need to know about CKRT?

- The CKRT machine makes noise.
- It alarms at least 1 time every hour. This is to alert the nurse.
- The machine's noises and alarms play an important part in keeping your child safe.
- They cannot be silenced.

**This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.**

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