

Continuous Renal Replacement Therapy (CRRT)

What is Continuous Renal Replacement Therapy (CRRT)?

Continuous Renal Replacement Therapy (CRRT) is a form of dialysis therapy used to support Intensive Care Unit (ICU) patients with kidney injury or failure. CRRT can be provided continuously for 24 hours or more as needed. This therapy is done at the bedside and is sometimes better tolerated when blood pressure is low or unstable.

CRRT gently filters one's blood. A special intravenous (IV) catheter is inserted into a large vein in the neck or groin for this treatment. Blood is removed from the body through the catheter and into the CRRT machine. The blood is pumped through a filter which cleans the blood and then returns the clean blood to the body.

CRRT filters blood by removing harmful waste and fluid that would normally be removed by the kidneys. This helps keep the right balance of minerals such as potassium and sodium in your body. CRRT is done in the ICU by specially trained nurses.



CRRT Machine

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Why is CRRT needed?

Kidney injury or failure occurs when the kidneys can no longer remove enough waste and water from the blood. Some conditions can cause the kidneys to fail quickly or can further damage an existing kidney problem.

The goals of CRRT are to:

- Maintain fluid balance.
- Maintain electrolyte balance. Electrolytes are minerals in the body's fluid such as potassium, sodium and magnesium.

- Maintain acid/base (pH) balance.
- Prevent further damage to the kidney tissue.
- Promote healing and kidney recovery.
- Allow for other supportive measures such as nutritional support and infection management.

The intensive care doctor will prescribe and adjust CRRT to meet treatment goals.

What should I expect?

You will be connected to the CRRT machine continuously. CRRT may be interrupted if you need to leave the ICU for tests. You may be given medication to make you comfortable while having CRRT.

You can expect:

- frequent checks of heart rate and blood pressure
- frequent blood tests
- daily weights
- bed rest
- monitoring of fluid status
- filter changes every 12 to 72 hours – the treatment plan will be reassessed at this time

What does it mean when the alarm sounds?

The CRRT machine may alarm for a number of reasons. Often the alarm is alerting the nurse that solution bags need changing. Other alarms alert the nurse that your position needs to be changed so that the machine can work properly. The machine also does frequent self tests.

How long will I be on CRRT?

CRRT is short-term therapy and usually lasts for 3 to 5 days. During this time, the Critical Care team will meet with you to discuss your treatment options and develop a care plan.

Does this mean I will need dialysis forever?

This will depend on your specific condition. Your doctor will discuss your treatment options with you.