

## Patient information factsheet

# Going home with a CADD pump

We have given you this factsheet because you are due to receive your chemotherapy treatment at home via a computerised ambulatory delivery device (CADD) pump. It explains what a CADD pump is, how it works and how to use it. We hope it will answer some of the questions you may have. Please read it carefully and keep it in a safe place. If you have further questions or would like more information, please speak to your systemic anti-cancer therapy (SACT) nurse.

### What is a CADD pump?

A CADD pump is a small infusion device which is linked to your central line. It allows you to receive high dose chemotherapy, medications and other fluids safely at home. The pump can deliver chemotherapy continuously, or as required at a certain time.

Before you go home, your SACT nurse will explain how to use the pump. They will make sure that you understand how it works and that you feel confident using it. Your partner or carer should also be familiar with how the pump works. If you are on the teenage and young adult (TYA) cancer care ward, we can show your parent, guardian or partner how to use the pump.

### How does a CADD pump work?

The CADD pump is attached to an infusion bag or 'reservoir' (also known as a cassette) which contains chemotherapy, medication or fluids as required. This is attached to your central line and will be placed into a backpack which you can wear or place near to you, as required.



Your SACT nurse will program the CADD pump to deliver the chemotherapy, medication or fluid at the exact dose your doctor has prescribed. The keypad will then be locked so the programming cannot be changed accidentally.

The CADD pump will have a fully charged battery before you take it home. When the battery needs changing you will see an indicator on the screen. Instructions on how to change the batteries are on page 5.

## If you have any problems with your CADD pump

If there are any problems with your CADD pump, please call the acute oncology 24-hour emergency phone line on **023 8120 1345**. You may need to return to the hospital to have the pump checked or replaced.

## Day-to-day life with your CADD pump

Following the advice below will help ensure your CADD pump stays in good working order to deliver your treatment safely.

### Bathing

When you have a bath or a shower, put the CADD pump on a stool or chair near to you. Water can damage the CADD pump so make sure that it does not get wet.

### Sleeping

When you go to sleep, put the CADD pump on a chair next to your bed. Make sure that the pump and bag holding the fluid are upright. This will allow the treatment to continue uninterrupted. If the bag is not upright, an air bubble or kink in the line can occur. This will stop the CADD pump from working.

### Exercise

You should not play any contact sports (such as rugby or football) while you are using the CADD pump. This is because there is a risk that you could hurt yourself or damage the pump.

### Small children and pets

The CADD pump should not be dropped or hit. If you have small children and pets at home, make sure the CADD pump is always out of their reach. You must also make sure that your central line does not get pulled or damaged.

## How to check that your CADD pump is working correctly

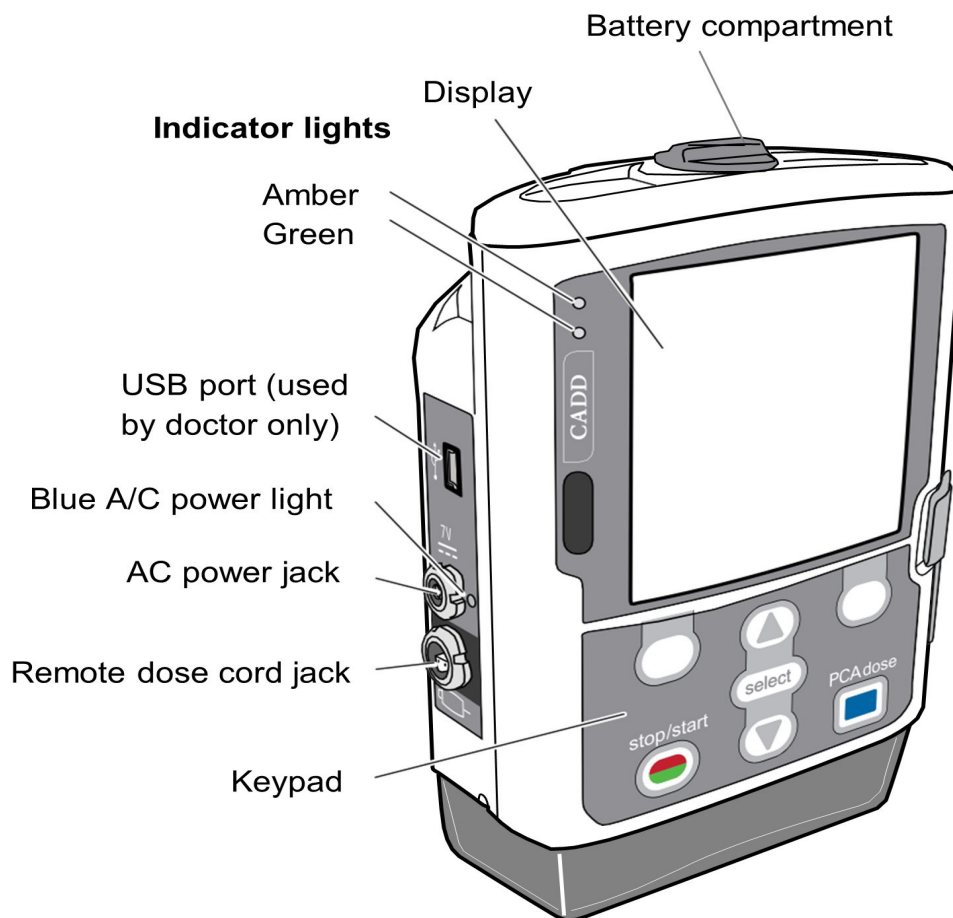
There are some signs you can look out for to make sure your CADD pump is working.

### Sounds

If your treatment has been programmed to run continuously, you should hear an intermittent whirring sound. This means it is working correctly.

If your chemotherapy or fluid has been programmed to start later in the day, for example 9pm, you will not hear this whirring sound until this time. The CADD pump has a clock so it will start on time.

## Front of the CADD pump



### Indicator lights

The green and amber indicator lights can flash at the same time. This means that the pump is running, but that something will need to be looked at soon. This could be:

- a low battery
- a low reservoir volume (meaning the treatment bag will soon be empty)

### Green light

The green light flashes when the pump is running and delivering medication.

### Amber light

When the amber light is flashing, it is because one or more of the following apply:

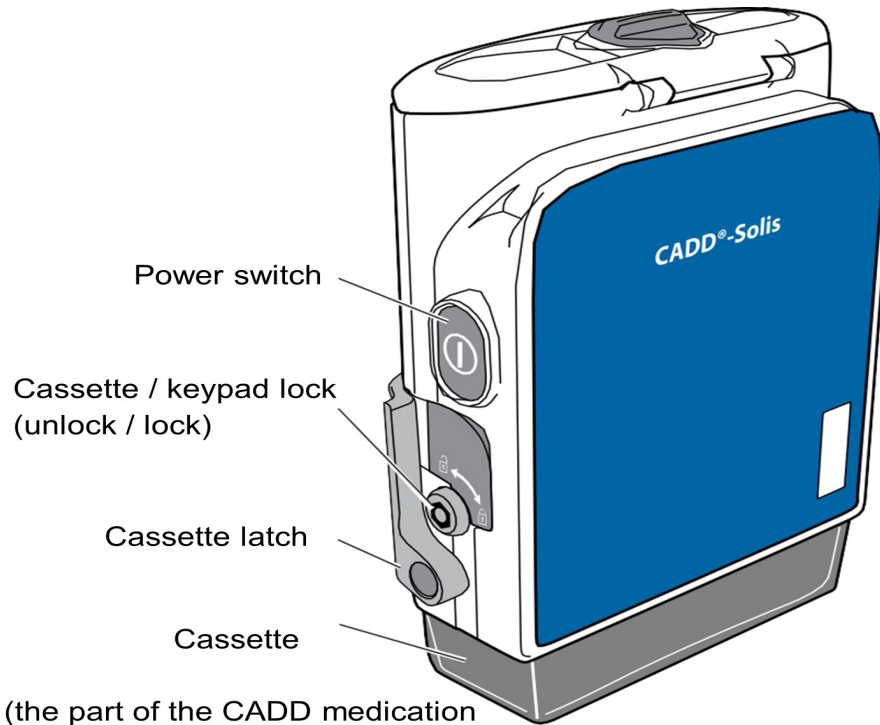
- the pump has stopped
- there is an alarm
- the battery is low
- the reservoir volume is low (the treatment bag is empty)

**When the amber light is continuous, it means that the pump is not working. You should call the acute oncology 24-hour emergency phone line for advice.**

### Display

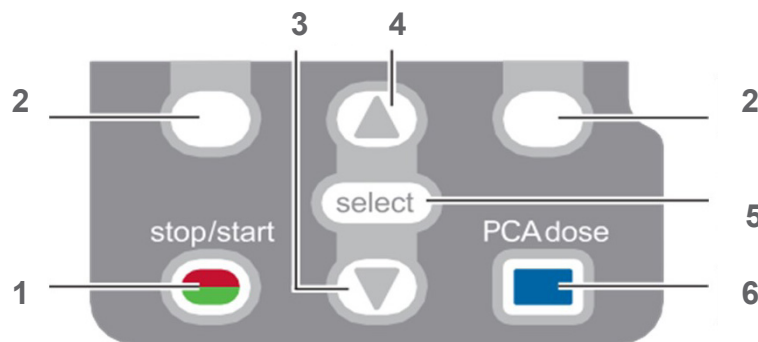
The display shows information and messages. The display will turn itself off to save power. You can press any key on the keypad to turn the display on.

## Back of the CADD pump



(the part of the CADD medication cassette reservoir or CADD administration set that attaches to the pump)

## Keypad keys



1. Starts and stops pump delivery
2. "Soft keys" let you answer a question on the pump's display. They also let you move through some of the pump screens
3. Lets you scroll down menus or decrease values
4. Lets you scroll up menus or increase values
5. Selects a menu item
6. **This key is not used for your therapy**

The keys on the keypad may beep when they are pressed. This is normal.

## Replacing batteries

You should change the CADD pump batteries as soon as possible when the screen displays:

- battery low
- battery depleted

You should always replace old batteries with new ones. Don't mix new and used batteries as this may affect the low battery alarm times.

To install batteries:

1. Make sure the pump is stopped and powered off.
2. Turn the knob on the battery door to the left (anticlockwise) to open the battery door.
3. Hold the pump at an angle to remove the old batteries.
4. Insert four new AA batteries (matching the + and – markings on the batteries with the markings on the pump).
5. Close the battery door and turn the knob on the battery door to the right (clockwise). This will lock the battery door.
6. Press the power button to turn on. The display will ask if you want to start a new patient. Select 'No'. Press 'Start pump'.

Remember to dispose of old batteries safely.

If we have given you a rechargeable pack, you should attach this to the power adapter (AC cord) and plug it into a mains plug overnight. This will recharge the CADD pump's battery pack.

If you have any questions or concerns, call the acute oncology 24-hour emergency phone line for advice.

## Using a CADD pump

### Visual checks

We would recommend you visually check your CADD pump once a day.

You should be able to see the amount of liquid in the bag or cassette gradually go down. This is a visual check you can do to make sure the CADD pump is working.

You can also look at the top left-hand corner of the CADD pump screen. This displays the amount of fluid that still needs to be given. If you have an intermittent infusion, the number will only go down at the time the infusion is programmed to start.

In the top right-hand corner of the CADD pump, a message should be displayed. If the message is green and says 'Running' then the pump is working normally. If the message is red and says 'Stopped' then the pump is not running. If you are having an intermittent infusion, the pump will display a countdown telling you when your infusion will start (for example, 'Delayed start – infusion will start in 6 hours 30 minutes').

### CADD pump alerts

Before you leave hospital, your SACT nurse will show you what to do if your CADD pump alarm sounds.

If your CADD pump is sounding an alarm, please look at its display screen. This will show you what the problem is. There are two alarms that we expect to happen:

## **Reservoir low volume**

This notifies you that your infusion is almost finished. Please press the 'acknowledge' button. The pump will continue to deliver the last of the infusion.

## **Reservoir volume is zero**

This alarm sounds to advise you that your infusion has been completed. You should turn the CADD pump off completely using the power switch on the right-hand side of the pump. The screen will display the message 'Power down?'. You should select 'Yes'.

You should then come to the hospital immediately for the next steps in your treatment.

Sometimes other messages or alarms can happen. The pump will provide step-by-step instructions for you to follow. Whatever alarm or message is displayed, remember that you should not disconnect yourself from the infusion line.

The most common alarms that can occur are:

## **Downstream occlusion. Clear occlusion between pump and patient**

If this message appears on your pump, press 'Silence'. Then press the 'Help' button and follow the instructions. The screen may ask you to adjust the position of your arm, check that there are no kinks in the line and that all the clamps are open.

## **Upstream occlusion**

If this message appears, press the 'Silence' button and contact the acute oncology 24-hour emergency phone line for further support.

## **Air in-line detected**

If this message appears, immediately clamp the line. **Do not follow the instruction to prime the tubing.**

Call the acute oncology 24-hour emergency phone line immediately. Unfortunately, air in the line cannot be fixed at home. You will need to come to our hospital so that a SACT nurse can assess and resolve the problem.

If you are unsure about any alarms or alerts, contact the acute oncology 24-hour emergency phone line.

## **Cleaning the CADD pump**

While you are using a CADD pump, you should not:

- put the pump in cleaning fluid or water
- allow solution to:
  - soak into the pump
  - build up on the keypad
  - enter the battery compartment, USB port, remote dose cord jack or power jack areas
- let moisture build up inside the pump
- clean the pump (the nurse will do this in between patients)

## What should I do if my chemotherapy infusion spills or leaks?

It is possible to spill chemotherapy infusions. This can happen if the connection between the pump and your line comes loose, or if the line becomes damaged while the infusion is running.

We will give you a spillage kit and instructions on how to use it. Your kit will include:

- gloves
- an absorbent pad or towels
- a face mask
- a protective gown
- yellow waste bags

You should keep the kit nearby when you have your CADD pump attached. You should also make sure that your family members or carer know how to use it.

If your chemotherapy infusion leaks or spills, you should:

- keep people (especially children and pregnant women) and animals away from the spillage area
- turn off the CADD pump (press the power button on the right-hand side of the pump. It will display a 'Stop pump?' message. Select 'Yes'. It will then display 'Power down?'. Select 'Yes'.)
- call the acute oncology 24-hour emergency phone line for further instructions

You should then clean up the spillage by following these instructions.

1. Stay connected to your CADD pump and chemotherapy line.
2. Open the spillage kit (away from the spillage) and put on the disposable gloves and personal protective equipment.
3. Soak up the spillage using the absorbent pad and towels provided.
4. Allow the area to dry.
5. Clean the area with water and leave to dry again.
6. Remove the personal protective equipment and put these in the yellow bag provided.
7. Put new gloves on and place the CADD pump and rucksack into the second yellow bag. You will still be connected to the CADD pump.
8. Remove the gloves and put these into the yellow bag. Tie the top of the bag loosely.
9. When it is safe to do so, return to the hospital with the yellow bag. Someone should drive you to the hospital to prevent further spillage, as you will need to hold the bag upright to prevent further spills.

The chemotherapy infusion can cause irritation if it touches your skin. If you touch any of the chemotherapy infusion, you must hold the skin under warm, running water for five minutes. If the chemotherapy infusion touches your eyes, you should rinse them with running water immediately for 10 minutes.

## Care of your central line

You must check your central line (PICC or Hickman) site regularly. You must report any problems to the acute oncology 24-hour emergency phone line.



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Problems may include:

- the waterproof dressing lifting away from the skin
- visible fluid leaking under the dressing
- visible swelling under the dressing
- leaking from the tubing
- redness, pain, heat or swelling at the line site (these are all signs of infection)

## In an emergency

You must call **999** if you experience:

- chest pains
- difficulty breathing (wheezing or shortness of breath)
- swelling of your throat or face

These symptoms may mean that you are having a very serious allergic reaction and need urgent medical attention.

## Contact us

**Acute oncology 24-hour emergency phone line**

Telephone: **023 8120 1345**

## Useful links

[www.macmillan.org.uk](http://www.macmillan.org.uk)

[www.cancerresearchuk.org](http://www.cancerresearchuk.org)

Images and text adapted with permission from Oxford University Hospital's "Going home with a CADD pump" patient information leaflet and Smiths Medical "Continuous Delivery Mode CADD-Solis VIP Ambulatory Infusion Pump" patient information guide.

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For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit **www.uhs.nhs.uk/additionalsupport**