

# HOW IS BLOOD GIVEN TO A PATIENT?

**Transfusion Fact Sheet Volume 4, Number 7**  
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## How do we give blood to a patient?

The only way blood can be given to a patient is into one of their veins.

## How can a transfusion get into a vein?

A soft plastic tube called a cannula is inserted into a vein by a trained health professional. A small amount of pain or stinging may be felt when the cannula is inserted. The cannula is then connected to a long plastic tube commonly called a 'drip' or 'IV'. IV is short for 'intravenous', which means 'into a vein'.

## Connecting it up

The IV tube is connected to a filter, which in turn is connected to a bag of blood ready for transfusion. The filter removes any tiny clots that may be in the bag of blood.

## What happens after all the connections are made?

To give the blood, the bag is placed on a hook above the patient, and gravity is used to run the blood through to the patient. A roller clamp on the connecting tubing is used to control how fast the blood will flow.

## Can machines help administer blood?

Sometimes a simple clamp to slow down or speed up the transfusion is not accurate enough. Some patients need their transfusion given over a particular period of time. There are a number of devices that can be used to administer blood:

- **Pumps:** The plastic IV tubing is placed inside a pump. These can accurately control the rate of transfusion.
- **Syringe drivers:** Transfusions of small amounts of blood, eg to a premature baby needs a special pump called a syringe driver. Blood is drawn from a bag into a syringe which is attached to the pump. This pump can give really small amounts of blood, eg 5 or 10mL over a couple of hours. The blood service makes small blood packs for these patients called paediatric packs.
- **Rapid infusion devices:** During massive blood loss, eg trauma, a patient may need a lot of blood to be given very quickly to save their life. Rapid infusers can administer a unit of red cells in around a minute in extreme cases! Remember a normal transfusion will take about one to three hours.



- **Warmers:** Most of the time red cells can be given at room temperature without causing problems. However, in some circumstances, blood needs to be warmed, eg during a massive transfusion.

## BLOOD FACT

Perspective: It would take up to 30 red cells end to end to reach all the way around one human hair.