

Learning Portal Lite: Administration of medicines

This is a one-page summary; see the [full version online](#)

In practice, hospital pharmacists are most commonly asked to solve clinical problems about medicines given intravenously (IV) or by mouth. Other routes include subcutaneous or intramuscular injection and inhaled or topical administration.

Intravenous

- IV medicines are given by direct injection or by infusion.
- Infusions can be intermittent or continuous.
- IV administration can be peripheral or central.
- Complications include phlebitis and extravasation.

Intravenous access

- Peripheral administration is often via a cannula ('Venflon') or sometimes via a midline IV catheter which requires less frequent change.
- Short-term central IV access is typically via a multilumen central line.
- Options for longer-term central IV access include PICC lines, portacaths, and Hickman lines.

Extravasation

- Extravasation is an urgent problem which should be treated quickly. Serious consequences can occur if medicines leaking from a blood vessel are irritant (cause inflammation) or vesicant (cause ulceration or necrosis).
- There are a number of risk factors that increase the chance of extravasation reactions (e.g. patient has small veins, medicine formulated at low or high pH).

Enteral administration

- Patients who are nil-by-mouth (NBM), on enteral feeds or suffering from dysphagia may need to have tablets crushed or capsules opened. But it is not safe to do this for many medicines, so you may need to consider other routes or formulations.
- It's important to know the type of enteral tube before advising that medicines be put down it, and the type of feed because some medicines interact with feeds.

Questions to ask

The questions you need to ask will depend on the type of clinical problem:

- How to give an IV medicine. (e.g. What type of IV access is available?)
- Putting a medicine down an enteral tube. (e.g. Where is the tube positioned?)
- Patient is NBM or dysphagic. (e.g. How long might this problem persist?)

Information sources

These include SmPCs, local policies, the Injectable Medicines Guide, and NEWT guidelines.