Intravenous Fluid (IV) Preparation and Management.

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## Aseptic Technique and IV Therapy

Aseptic Technique must be implemented during the preparation and administration of all IV therapies, including IV fluids and medications. Principles of Aseptic Technique when preparing and administering IV therapy include:

* Hand hygiene must be performed before handling supplies, medications and IV solutions, and before preparing and administering medications.
* Storage and preparation of IV therapies must happen in a clean area and on a clean surface.
* Catheter hubs, needleless connectors and injection ports must be disinfected and allowed to dry prior to each episode of access, using a disinfectant swab1 (see *active disinfection* below).
* Infusion supplies (e.g., needles, syringes, and administration sets) must not be used for more than one patient.
* Needles and syringes must be removed from the packaging by opening the packaging as designed and never tearing/ripping the packaging.

## Preparation of IV fluids

Pre-packaged IV fluid bags may be safely prepared and used within 24 hours, without risk of infection or contamination to the patient2-4.

* Hand hygiene must be performed prior to preparing/spiking an IV bag.
* IV solutions must only be used for one patient and then discarded.
* IV fluid bags must not be used to obtain solutions for more than one patient.

## Administration of IV medications

Hand hygiene and aseptic technique must be adhered to during catheter site care and when accessing the system1. Principles include:

* Hand hygiene must be performed prior to accessing the IV line or hub.
* Catheter hubs, needless connectors and injection ports must be scrubbed using a disinfectant swab and allowed to dry, prior to accessing or attaching another line1.
* Avoid disconnection of primary and secondary administration sets whenever possible.
* Administration sets must be replaced when disconnected from the hub or the catheter is changed.
* The rubber stopper on medication vials must be disinfected before inserting a needle2.
* Needles and syringes must be removed from the packaging by opening the packaging and never tearing/ripping the packaging.

## Active disinfection

Active disinfection is the use of a disinfectant to physically scrub the needleless hub or site prior to access, this is often referred to as “scrub the hub”5. To minimise the risk of microbial contamination a 70% alcohol wipe is the preferred application for active disifnection1. Studies have demonstrated variable times of decontamination between 5 – 15 seconds5. Drying time is essential to reduce the microbial load of the needleless hub, and has been observed to be 5 seconds for 70% alcohol, and 20 seconds for chlorhexidine and alcohol preparations, however, drying time is dependent on the temperature and humidity of the environment5.

**References**

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3. Stedman JL, Yarmush JM, Joshi MC, Kamath S, Schianodicola J. How Long Is Too Long? The Prespiked Intravenous Debate. *Anesth Analg*. May 2017;124(5):1564-1568. doi:10.1213/ane.0000000000001951

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