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Aseptic technique: key principles

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The term ‘asepsis’ means an absence of potentially pathogenic microorganisms (Loveday *et al.*, 2014). The term ‘aseptic technique’ can be defined as a set of practices and procedures for ensuring asepsis and for preventing the transfer of potentially pathogenic microorganisms to a susceptible site on the body, or to sterile equipment/devices (Loveday *et al.*, 2014), or as the practice of carrying out a procedure using a method that minimises the risk of introducing contamination into a vulnerable area or onto an invasive device (Dougherty & Lister, 2015). An aseptic technique ensures that susceptible body sites (such as an open wound or insertion site for an invasive medical device) and the sterile parts of devices in contact with susceptible sites, are not contaminated during procedures such as wound dressings, urethral catheterisation or insertion of an intravenous cannula (Loveday *et al.*, 2014).

An effective aseptic technique requires strict application of guidance on hand hygiene and correct use of personal protective equipment (for detailed guidance on these aspects, see clinicalskills.net procedures on “Routine hand hygiene” and “Standard precautions: use of personal protective equipment”). When deciding whether to wear sterile or non-sterile gloves for aseptic technique, assess the risk of your gloves being in contact with non-intact skin or mucous membranes during the procedure, as well as the potential for exposure to blood, body fluids, secretions and excretions (Loveday *et al.*, 2014). A clean rather than sterile procedure may be sufficient for dressing chronic wounds, which are likely to be colonised with bacteria (Ashton, 2014). However, a sterile technique must be used if the patient is immunocompromised or has undergone surgery, which carries a high infection risk (Ashton, 2014). When using a sterile technique, the equipment, fluids and dressings used are sterile, whereas for a ‘clean technique’, clean but non-sterile single-use gloves are used with tap water (that is safe enough to drink) for cleansing (Fernandez & Griffiths, 2012). (See procedure on ‘Cleaning chronic wounds’).

The principles of aseptic technique can be applied to many different procedures. See, for example, the clinicalskills.net procedures on catheterisation and intravenous cannulation. Refer to these procedures for more specific guidance.

This guideline focuses on the key principles of aseptic technique. Note that individual organisations may have their own guidelines on aseptic technique: always follow local policy. Loveday *et al.* (2014) recommend that organisations should provide education to ensure that healthcare workers are competent in aseptic technique. Contents of sterile packs vary according to the manufacturer, so you will need to adapt the procedure shown accordingly.

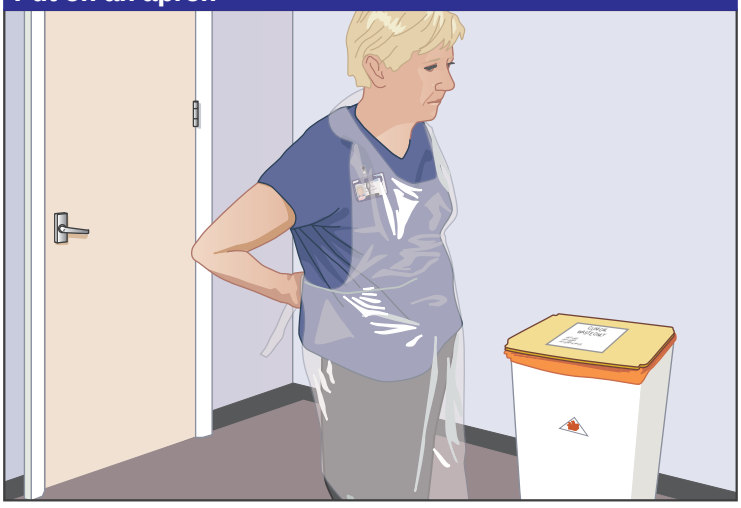
Explain the procedure to the patient

Explain the procedure to the patient and gain consent. Refer to the patient’s notes as necessary. For example, read the wound dressing plan.

Perform hand hygiene

Wash and dry your hands, or use alcohol-based hand sanitiser if your hands are visibly clean. Dispose of the paper towel in the general (black) waste bag (see clinicalskills.net procedure on “Routine hand hygiene” for guidance on washing and drying hands).

Put on an apron



Put on an apron. Put the neck strap over your head and then tie the straps up at the back (see clinicalskills.net procedure on “Standard precautions: use of personal protective clothing”).

Do not undertake or attempt any procedure unless you are, or have supervision from, a properly trained, experienced and competent person. Always first explain the procedure to the patient and obtain their consent, in line with the policies of your employer or educational institution.