

# Chapter 4.1

## Decontamination Process

It is carried out prior to any kind of sterilisation. This reduces the contamination of the instruments.

### Transport

The reusable items should be collected and taken to the decontamination area in such a way that avoids the contamination of the personnel or any area of the hospital. The equipment collected should be moved in trolleys or containers.

### Attire

Soiled, reusable medical/surgical items are considered to be contaminated with bacteria and other micro organisms, which can cause illness to the staff. The personnel handling these items should wear protective clothing which includes a scrub dress, mask, cap and gloves. In certain areas, goggles, shoe covers and moisture resistant barriers are desirable.

### Sorting

Surgical instruments differ in configuration from plain surfaces to complicated instruments which include locks, hinges; blind holes etc. depending on the type of cleaning, items are to be sorted out. Contaminated instruments must be handles as little as possible. The sorting could be minimized to separating sharp instruments from blunt and discarding disposables or non-usable.

### Soaking

Certain instruments maybe required to be soaked such as lumens or very bloody instruments. Rinsing alone would not suffice.

*At all times, be alert for hazards such as sticks from needles, scalpels and other sharp instruments and glassware in the decontamination area. Never reach into liquid to retrieve items.*

## **Washing**

The detergent used should be used as specified by the manufacturer or a disinfectant like chlorhexidine can be used. The items can be washed in an ultrasonic cleaner and manually cleaned

## **Manual cleaning**

All the items are to be cleaned with disinfectant like chlorhexidine or povidone iodine prior to sterilisation. Four bowls, one with disinfectant and the three with clean distilled water are used for cleaning purposes. The tray of used instruments is emptied out into a bowl of disinfectant. Using soft brush debris deposited is removed from the instruments. This is followed by three rinses of distilled water thoroughly. For hinged instruments such as scissors etc. a lubricant is used after the final rinse. Care should be taken to remove the excess lubricant else steam would not penetrate.

## **Ultrasonic cleaner**

It is used for cleaning instruments which are contaminated with lot of blood and cannulated instruments. The instruments must be completely immersed in cleaning solution. The tank should be filled to one inch above the top of the instruments tray. Suitable detergent, as specified by the manufacturer, is added. Temperature of the water should be 80<sup>0</sup>F to 110<sup>0</sup>F. The temperature of the water further enhances the action of the detergent. The instruments should not overlap when immersed in the water. This is to be followed by manual cleaning.