

UNIT-6  
Operation Theatre Technique

Physical Environment  
(physical setup).

OT Zone and Area :-

Restricted  
zone and  
sterile zone

Semi Restricted  
zone or sub  
sterile zone

Unrestricted zone  
or clean area.

Restricted zone or sterile area

- Scrub person / staff wear sterile gown and gloves and get ready for surgery.
- Sterile trolleys are set and sterile article, equipment, instrument.
- Surgery is done in this phase and also have facility of storage sterile article.

Semi Restricted and sub sterile zone :-

OT team with clean gown cap and OT slipper change to semi restricted area this zone consist of the following.

- Pre-operative patient, waiting room with attached washroom.
- Nurses stations and nurse working desk or counter.
- Scrub area.
- Store room
- Anaesthesia room
- Conference room
- Lecture Rooms
- X-Ray Room
- Pantry
- Recovery room.
- Pantry.

### Unrestricted Zone :->

- Entrance and Exit
- Dressing room
- Waiting room
- Visitor gallery
- Utility room
- Disposal room.

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# OT shape Size Construction

- OT should be rectangular / square in shape and should be 20x20x10 feet in size.
- OT should be spacious enough to allow free movement of person, trolley, stretchers, wheel chairs etc.
- OT for endoscopy / Minor surgery should small in size of 324 sq. feet.
- The walls and floor space should be made for hard fibre - resistant and smooth material.
- Easy washable surface.
- The wall of the floor junction should be curved to minimized collection of dust and easy to clean.
- The color of the floor should be white, if needle is drop on the floor.

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# OT ventilation

No open window in OT  
 Sliding door  
 No fan in OT to prevent air born contamination of surgical wound.

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## OT Temperature and humidity

OT temperature should be maintain in between 18 to 22°C.

Humidity Maintain level 50 to 55% to provide optimum comfort.

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## OT lighting

- light should be fluorescent lamp.
- light should be adjustable and moveable.

## OT electric Generator

Should have electric generation to ensure interrupted electricity supply in case of electricity failure.

## Oxygen supply and suction system

Proper oxygen supply and suction apparatus.

## Other essential Requirement

Light alarm to call for assistance in emergency.  
Wall clock in OT for monitoring time

- Store Room
- Skive preparation room
- Sterilization room for autoclaving.
- Attendant lobby
- procedure lab room.

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# Setup of Anesthesia Trolley

Instrument for spinal anesthesia

Endotracheal intubation tray

Endotracheal connector

Suctioning

Pulse oximeter.

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## Theatre Technique

Scrubbing (Handwashing)

Medical

Surgical

Blowing

Scrubbing.

Gowning.

## Maintenance of Equipments and Instrument

Rinsing

Cleaning

Auto cleaning.

Manual cleaning

ultrasonic cleaning

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## Sterilization

Sterilization is the process by which an articles or a solution or surface is made free of microbes as well as their spores.

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## Methods of sterilization

Autoclave

Dry heat  
oven

Boiling

Chemical  
solutions.

Fumigation → To sterilize the operation theatre formaldehyde gas. formaldehyde kills the microbes by alkylating the amino acid.

## Sutures

Sutures are the thread use to close interrupted surgical wound because of injury, known as surgical incision until healing occur.

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# Types of suture

Absorbable suture

Non-Absorbable suture

## On the basis of Raw material

Natural

Synthetic.

## On the basis of Material

Monofilament

Multifilament.

## Surgical Needle

There are several shape of surgical needle

Straight



1/2

Circle 135°



3/8

Circle 180°



5/8

Circle 225°



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# Carbolization

It is a process of cleaning equipment articles with antiseptic solutions are called wet mopping.

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