

What is Operation Theatre?

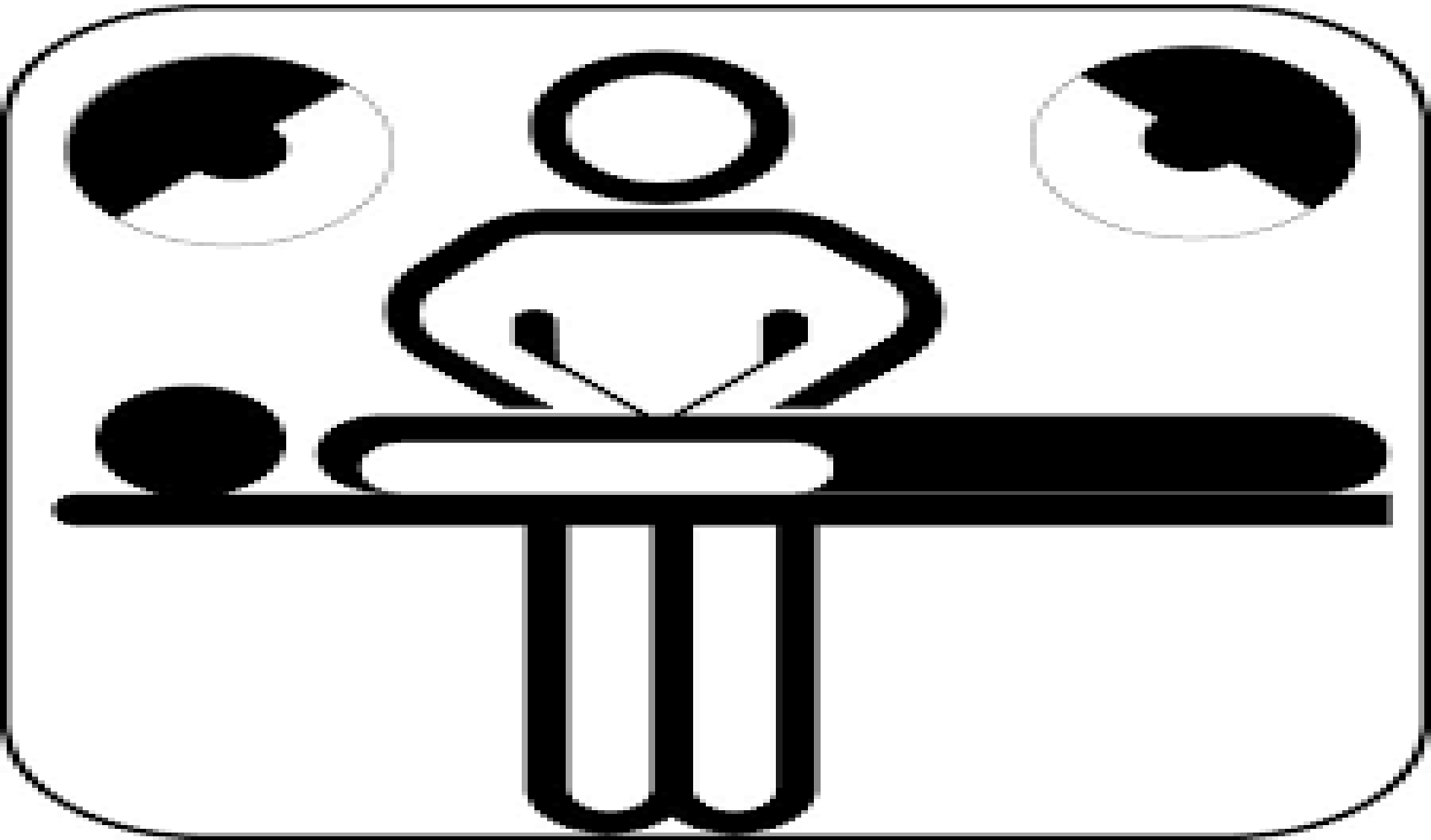
How to describe???



Is It?????



Or.....



Evolution Of OT



Modern OT: inside view



OPERATION THEATRE: WHAT IS IT?

Complex environment of varying degree
of sterility, integrating surgical and
anesthetic equipment
for the safe conduct
of Surgery

Ideal location

Location:

- All OTs in an OT complex
- Emergency
- Blood bank
- Radiology
- Intensive care unit
- Central sterile supply department
- Laboratory

ADVANTAGE OF GROUPING OF OTs



Types of OT

- Based on Sterility
 - Ultra sterile (CTVS, Transplant OT)
 - Sterile
 - Septic
- Based on construction
 - Modular
 - Non modular
- Based on timing of surgery:
 - Routine
 - Emergency

OT DESIGN

- No standard design exists
- Must conform to basic parameters so as to maintain the sterile OT environment
- Zones in the OT based on sterility
 - Sterile/ultra sterile
 - Clean
 - Protected
 - Disposal

ZONES IN THEATRE

OUTER ZONE – rest of the hospital outside the theatre complex

CLEAN ZONE – theatre complex outside the operating area

ASEPTIC ZONE – Operating area

DISPOSAL ZONE – Separate exit for contaminated / used linen and instruments

Sterile zone

- Operating suite
- Sterile preparation area
- Scrub station
- Gowning area
- Anesthesia induction area

OT attire mandatory in this area

Clean zone

- Sterilization area
- Store area
- Preoperative area/room
- Post operative recovery area/room
- OT Staff & Doctor's rooms

OT attire mandatory in this area

Protective zone

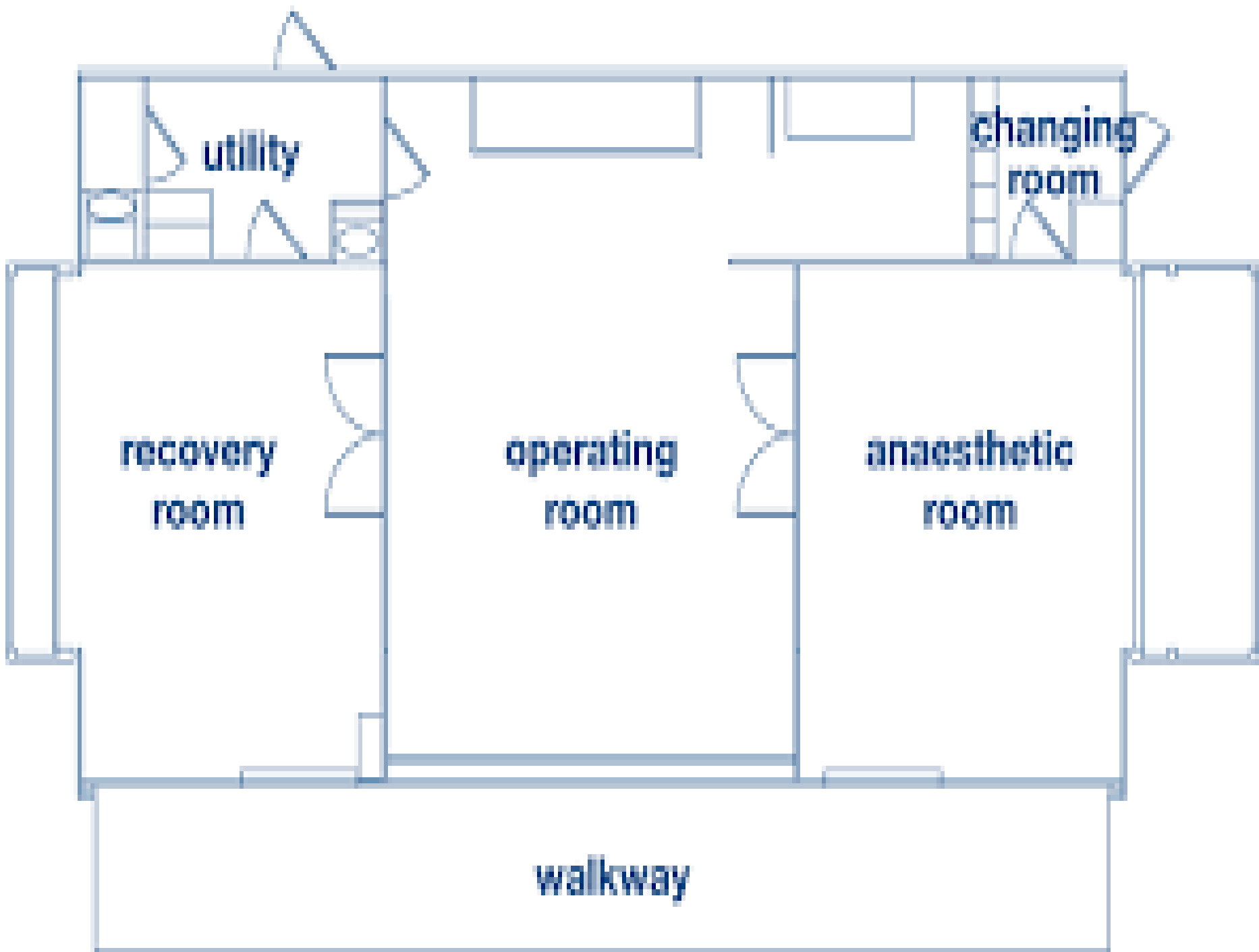
- Changing rooms
- Reception area
- Waiting area
- Trolley bay

OT attire not mandatory in this area

Disposal zone

- Dirty utility area
- Disposal corridor

OT attire mandatory in this area





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OT SUITE REQUIREMENTS

- **Central AC:** 20-22 deg centigrade
- **Humidity:** 50-60%
- **Positive pressure** ventilation
- **Air change:** 20 times/hr with recycled air; of which 5 times with fresh air
- **HEPA** filter of “S” class
- **Laminar** air flow through diffuser
- **General Lighting:** Cold light, even distribution, varying intensity
- **Operating light:** Ceiling mounted, cold light, shadow less focusable beam
- **Medical gas pipeline:** Anesthesia gas, Air, Oxygen & Suction
- **Power supply:** Uninterrupted (UPS) and generator back up (safety)
- **Earthing:** All electrical equipment (safety)
- **Fire safety:** Fire/smoke detectors. Fire hydrants & extinguishers
(Safety)
- **Power switches:** Away from Operating area (Safety)

CONTROL
Single window offering for Medical Gas

✓ *Medical Gas System*



Engineering Services for Hospital
Electrical and Fire fighting Systems

✓ *Air Conditioning*



✓ *Electrical and Controls*



✓ *Fire Fighting Systems*



Floor/Wall/Ceiling

- Floor:
 - Non slippery, antistatic, non reflective, non porous, water, stain and fire resistant.
 - Seamless
- Walls:
 - Same quality as the floor
 - Seamless
 - Usually stainless steel
- Ceiling
 - Same quality as floor
 - Usually stainless steel
 - Diffuser for laminar air flow
 - Mounting for lights

Advantages?



OT doors

- Wide doors:
 - sound proof,
 - non reflective surface,
 - radiation resistant
 - fire resistant.
- Sliding type of door
- Glass cut out for visibility

Scrub station

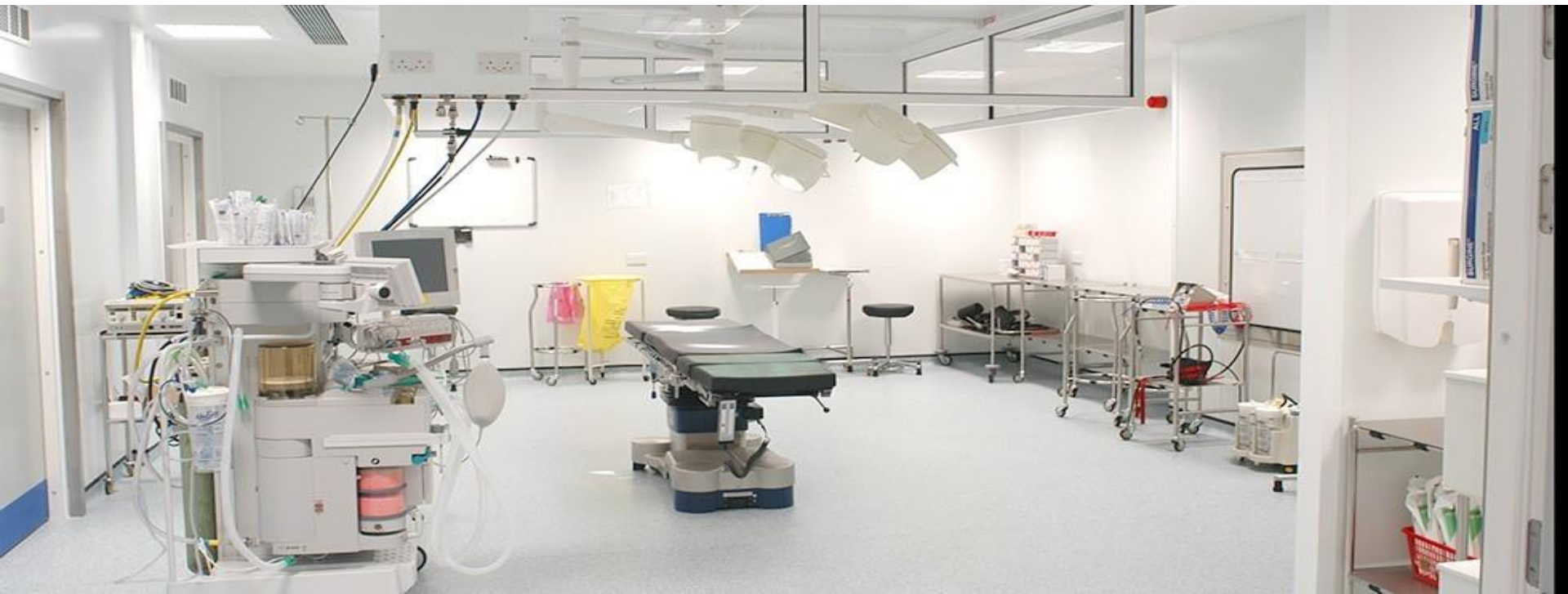
- For sterile hand wash
- Types: Stainless/ Granite/Marble/ Cement
- Gradient of basin forward and downwards
- Gradient towards outlet
- Hot water mixing: automatic or manual
- Non splashing taps; possible to change direction
- Elbow/ Foot or Infra Red operated taps
- Soap dispenser: Manual/automatic

Scrub Station



Sterile preparation area

- Sterile bins storage
- Sterile instrument tray storage
- Preparation of operation sets



Thank u



"Nurse, get on the internet, go to SURGERY.COM, scroll down and click on the 'Are you totally lost?' icon."