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**Асептика
(ASEPSIS)**

ASEPSIS – the measures
to prevent an infection
from entering a wound.

The sources of surgical infection

- **exogenous (from outside)**
- **endogenous (from within the body)**

- **The main sources of exogenous infections include patients with purulent inflammation or «healthy» carriers of the microbes, and occasionally animals.**

The modes of transmission from exogenous sources:

- **airborne,**
- **direct contact**
- **implantation**

- **The major sources of endogenous infections incorporate chronic infections outside the area of the operation (e.g. skin diseases, dental or tonsillar conditions) or of the organs operated on as is (e.g. appendicitis, cholecystitis, osteomyelitis), as well as the oral, intestinal and respiratory saprophytes.**

- **Among the modes of transmission, of endogenous infections are direct contacts, lympho - and haematogenous spread.**

- **A surgical hospital contains the main functional blocks which are as follows:
a surgical block, surgery departments, plaster and treatment rooms and dressing-rooms.**

**To provide the regimen of sterility,
there are the four special functional
zones in the surgical block:**

- 1. The sterile zone.**
- 2. The clean zone.**
- 3. The technical zone.**
- 4. The dirty zone.**

ASEPSIS including:

- 1. Sterilisation of instruments,**
- 2. Sterilisation of dressing materials, operating sheets and suturing materials,**
- 3. Control of sterility,**
- 4. Preparation of the hands for operation.**

The compounds that have antibacterial effects fall into two main groups chemotherapeutic agents and chemical agents for disinfection and sterilisation.

Sterilising instruments, operating sheets, towels and dressing materials involves the following stages:

- **stage 1** - preparation of the materials,
- **stage 2** - preparing for sterilisation itself,
- **stage 3** - sterilisation,
- **stage 4** - safe-keeping of the materials sterilised.

**Dressing materials and
operation sheets are packed
in special containers
(dressing boxes).**

- **Sterilisation of optical instruments (laparoscopes, thoracoscopes, duodeno- and choledochoscopes) can be done in alcohol solutions of chlorhexidine and pervomur.**

Materials can stay sterile in a dressing box, which has not yet been opened for 72 hours.

For preparation of the hands for operation use:

AHD solution, Lokasept and Eurosept

These solutions contain the antiseptics such as ethanol, chlorhexidine, and polyiolic fatty acid ether.

Preparation of the operative field

- **1.** Hygienic baths and a change of underwear (in the day preceding the operation).
- **2.** Dry-shaved and cleaned with alcohol, the skin of the expected place of incision (in the day of operation).
- **3.** On the operating table, the operative field is abundantly smeared with 5% alcohol solution of iodine.

- **In a patient allergic to iodine the skin can be prepared with brilliant green (Bakka's method). On the operating table, the operation site can be prepared with derivatives of iodine such as iodonate, povidon-iodine, betadin.**