

## Normally Sterile Sites: Invasive Bacterial Diseases

Normally sterile sites are those in which bacteria are not present in a healthy person. Below is a list of the common normally sterile sites and disease specific exceptions.

Examples of normally sterile sites:

- Blood (excluding cord blood)
- Cerebrospinal fluid (CSF)
- Pleural fluid, including
  - Chest fluid
  - Thoracentesis fluid
- Peritoneal fluid, including
  - Abdominal fluid
  - Ascites
- Pericardial fluid
- Bone, including
  - Bone marrow
  - Synovial tissue
- Joint fluid, when the joint surfaces is intact (no abscess or break in skin) including
  - Synovial fluid
  - Fluid, needle aspirate, or culture of any specific joint:
    - Knee
    - Ankle
    - Elbow
    - Hip
    - Wrist
- Internal body sites
  - If specimen obtained aseptically from surgery or aspirate/biopsy from at least one of the following:
    - Lymph node
    - Brain
    - Heart
    - Liver
    - Spleen
    - Vitreous fluid
    - Kidney
    - Pancreas
    - Ovary
    - Vascular tissue
    - Muscle
    - Gall bladder

Sites that are not considered sterile are anatomical body areas that harbor either resident or transient flora (bacteria) including lung tissue, mucous membranes (e.g., throat, vagina), sputum, bronchial wash, bronchoalveolar lavage (BAL), eye, stool, urine, middle ear, skin, wound/abscess/localized soft tissue infection (see streptococcal disease, group A invasive exception), placenta or amniotic fluid from intact amnion (see Listeria exception)

## Normally Sterile Sites: Disease Specific Exceptions

In addition to the above normally sterile sites, several diseases have criteria where samples collected from non-invasive sites may qualify as invasive disease. These include:

### Listeria

- For maternal isolates
  - In the setting of pregnancy, pregnancy loss, intrauterine fetal demise, or birth, isolation of *L. monocytogenes* from products of conception (e.g. chorionic villi, placenta, fetal tissue, umbilical cord blood, amniotic fluid) collected at the time of delivery;
- For neonatal isolates
  - In the setting of live birth, isolation of *L. monocytogenes* from a non-sterile neonatal specimen (e.g., meconium, tracheal aspirate, but not products of conception) collected within 48 hours of delivery.

### Streptococcal disease, group A invasive

- Isolation of group A Streptococcus (*Streptococcus pyogenes*) by culture from a wound culture accompanied by necrotizing fasciitis or [streptococcal toxic shock syndrome](#)
- Note: If an individual meets the case definition for both invasive group A strep and streptococcal toxic shock syndrome, an investigation for each condition should be started.

### Meningococcal invasive disease

- Isolation of *N. meningitidis* from purpuric lesions