Microbiology Lab Notes: **Sterile Procedure**

Overview

Joseph Lister (1860's) pioneered the practices of aseptic techniques. He was an English Surgeon who was searching for a way to keep microorganisms out of incisions during surgery. He used dilute solutions of phenol to soak surgical dressings in and spray the operating room.

Aseptic Techniques are the precautionary measures taken to prevent contamination of pure cultures and sterile laboratory equipment.

1. Treat all organisms as potential pathogens. Even though none of the organisms we use are opportunistic in their abilities to cause infection, get into the habit of handling them as if they are.
2. Disinfect lab top thoroughly before and after each lab period. Microorganisms in the lab atmosphere may come to rest on the desktop between classes and overnight. This is accomplished by spraying the lab top down with the cleaning solution in the spray bottles and allowing this to stand for a minute. You may then wipe down the table with the sponge in your drawer.
3. Keep petri dishes covered as much as possible. If top must be removed completely DO NOT LAY IT ON THE LAB TOP. This lowers the probability of contamination and prevents "false positive" results.
4. It is important to use a new cotton swab or toothpick for each sample taken or removed because once a swab or toothpick is used it is no longer sterile.
5. Wash hands before and after lab. The human skin flora is diverse and omnipresent.
6. Always reflame your inoculating needle or loop after each use and before laying the loop or needle down on the desktop.
7. To remove a sterile pipette from its package: 1. Do not open the packaging until you are prepared to use the pipette immediately. 2. Open the packaging at the end indicated and only enough to get the pipette out. 3. Gently shake the package to bring the ends of the pipettes outside of the mouth of the package. 4. Remove ONE pipette and exercise caution not to TOUCH any of the other pipettes inside the package. 5. When inserting the pipette into the pump, hold it as far from the tip as possible. Never lay the pipette on the table, either before or after is has come in contact with any cultures. 6 Dispose of used pipettes immediately . This also works with swabs.
8. It is also recommended that you work close to the flame of your Bunsen burner. The heat of the Bunsen burner will create and air current around the working area and repel any airborne microorganisms.
9. When a bottle or test tube is opened, prior to placing a swab or inoculating loop /needle into the package it is important to flame the neck of the item. This ensures that any microorganisms that were on the surface of the package are destroyed.
10. Pay strict attention to the disposal of used laboratory material. When placing items in the Lab Material trash can in the back of room, it is important to gently lay the materials in, do not drop or toss them. This prevents any microorganisms on the materials from being aerosolized into the laboratory atmosphere.
11. Avoid placing things in your mouth (fingers, pen tops, etc…) and then laying them on your desktop.