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## 🌐 Aspiration of Fluid in Semi-Sealed Chamber V.1

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We use this protocol and it's working

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## Abstract

To outline the standard procedures for post-operative maintenance of implanted electrode chambers, focusing on fluid aspiration and contamination prevention to reduce the risk of infection. Fluid buildup within the chamber cavity can lead to leakage through guide tubes and increase the risk of bacterial contamination. Routine aspiration and cleaning are critical to maintaining asepsis and preventing serious complications such as meningitis.

## Troubleshooting



## Setup Sterile Field and Operating Area

- 1 Ensure maximal sterility by disinfecting work area with 70% isopropanol or other disinfecting agents.
- 2 Place sterile drape on a nearby table where sterile tools and supplies will be organized.

## Accessing the Chamber

- 3 Remove chamber cap to expose electrode implants and aspiration tube and place sterile drapes around chamber and on top of halo ring used to secure head.
- 4 Disinfect the external opening of the aspiration tube with 70% isopropanol.

## Aspiration Procedure

- 5 Use an appropriate size blunt-tipped needle that fits tightly inside the aspiration tube (i.e., 26G for monkey T and 23G for monkey J).
- 6 Attach the selected needle to an empty syringe (3-10 mL). Use a 20 mL syringe for increased negative pressure in cases of viscous fluid.
- 7 Remove the stainless-steel rod plug from the aspiration tube using sterile tweezers.
- 8 Insert the needle into the aspiration tube.
- 9 Pull the plunger to generate negative pressure, withdrawing fluid until only air is drawn.

## Sample Collection

- 10 Collect a portion of the aspirated fluid for microbiological analysis.

- 11 Submit samples for aerobic and anaerobic culture and susceptibility testing.