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Acute insertion of Myomatrix injectable arrays in monkeys

Access to the set of surgical videos associated with this protocol must be requested at <u>camber@emory.edu</u>.

PRE-INSERTION ELECTRODE CHECK

1. Refer to THIS DOCUMENT for step-by-step instructions for impedance testing..

PREPARING THE ELECTRODE

Sterilization Procedure

- Prepare the electrode: Load the "tail end" of the electrode into the cannula, which should be a 23-25 gauge hypodermic needle. Cap the needle and place it into a self-sealing sterilization pouch.
- 2. Sterilize the Pouch: Sterilize the pouch using either Ethylene Oxide Gas (EOG) or Hydrogen Peroxide (H_2O_2) Plasma gas. Follow the standard protocol provided by the facility for the available sterilization method.



(Figure above is from Chung et al., 2023)

Prepare Animal for Procedure

- 1. Setting up: see video '1 Preparation'
- 2. Inserting the tail: see video '2 Tail insertion'
- 3. Continuing to insert the tail: see video '3 Closeup electrode preparation'
- 4. Finish preparation: see video '4 Final electrode preparation'



Properly loaded electrode

Inserting the electrode

- 1. Picking up the electrode: see video '5 Insertion prep'
- 2. Inserting the electrode: see video '6 Insertion demo'
- 3. Actual insertion in human subject: see video '7 Insertion (human)

Removing the electrode

- 1. Connecting the electrode: see video '8 Electrode connection' and '9 Electrode connection 2'
- 2. Removing the electrode: see video '10 Electrode removal'

Cleaning the electrode

- 1. Rinse all parts of the electrode other than the omnetics connector with isopropyl alcohol for up to a minute to remove residue.
- 2. Gently rub the surface of the electrode with an alcohol-soaked q-tip if necessary to remove additional residue.
- 3. Leave the electrode to dry in the air.
- 4. If impedance measurements are low and the tail is not overly bent electrodes can be reused (typically 2-5 times) following resterilization.