SCHOOL OF MEDICINE
Neuromuscular Lab
UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

CU Neuromuscular Pathology Office
12631 E. 17th Ave
Room 5113C/MS B-185
Aurora, CO 80045
303-724-2188

Method for Sending Muscle or Nerve Biopsy

1. Please notify the Neuromuscular Pathology Office ON THE DAY you plan to send a biopsy, Jacob Bockhorst, **303-724-2188**. **We are available to receive specimens between the hours of 8 a.m. and 4:30 p.m. Monday thru Friday.** After hours specimen can be delivered to Gross Room drop off.

2. **Providers have a couple of options for sending biopsy.** For the best result, we prefer same day delivery. If this is not possible, please keep biopsy in the refrigerator overnight & courier to us the next morning. Another option is to send the biopsy via FedEx overnight to be arrive the following morning.

   Address for delivery via courier service:

   University of Colorado Hospital – AIP
   Surgical Pathology - Gross Room Drop-off
   12605 E. 16th Ave.
   3rd Floor, Window 3.124
   Aurora, CO 80045

   Address for delivery overnight by FedEx:

   UC Denver at AMC
   Attn: CU Neuromuscular Pathology Lab
   12700 East 19th Ave.
   P15-5450A
   Aurora, CO 80045

3. **Please provide a clinical question and enclose a clinical summary**, information about history and clinical, electrophysiological and laboratory evaluations to help us more fully evaluate the patient's tissue.

4. Indicate who should receive the final report (**referring physician,** hospital, pathologist) along with a mailing address and telephone number. The full battery takes 10 days to complete.

5. **University Hospital's policy has changed to bill patient's insurance directly. Please ensure that you have the patient insurance, demographics, and specimen submission form to accompany the muscle/nerve biopsy.**

6. **MUSCLE biopsy procedure and handling:**
   For optimal results, we recommend following these steps:

   a. Identify a muscle which is mildly to moderately weak (MRC grade 4- to 4+) since weaker muscle often only show nonspecific end stage changes. Muscles which are commonly biopsied and have normative histopathological data include the deltoid (posterior division), biceps, quadriceps (vastus lateralis) and gastrocnemius muscles. The gastrocnemius has more variation and often wound healing is more difficult compared to other sites. Please contact us if you are unable to decide on which muscle to biopsy before beginning biopsy and we will try to assist you.

   b. Relative contraindications to having a muscle biopsy include patients with a bleeding diathesis or receiving anticoagulation are best assessed by the surgeon performing the procedure.

   c. When anesthetizing the skin and subcutaneous tissue, do not infiltrate the muscle with the anesthetic, this causes artifacts.

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d. Isolate a 15 mm long specimen with a diameter of 7-10mm **(roughly 1 cm^3)**. Sutures around the width of the specimen helps us orient it correctly.

e. **Please submit 7-10 mm diameter** of the muscle biopsy if possible.

f. ****<u>Put muscle biopsy directly onto the specimen cup</u> without saline or gauze****

DON'T SOAK OR FLOAT THE SPECIMEN IN SALINE

g. We strongly discourage the use of muscle clamps, as this induces trauma and consequently, unacceptable levels of artifact.

h. If the specimen is to be delivered within the hour (cab, courier) it can be sent at room temperature. If overnight delivery is necessary, place the container in a Styrofoam box and surround it with coolant packs (Blue Ice). Do not send on wet ice, as it tends to melt through the box. Request priority overnight delivery. It is important to notify our office that a biopsy is expected, so that we can trace missing packages quickly.

7. **NERVE biopsy procedure and handling:**

a. Relative contraindications to having a muscle biopsy such as a hypocoagulable state are best assessed by the surgeon performing the procedure.

b. **Please submit one 20 mm long specimen**s of the sural nerve for full interpretation.

c. Wet gauze with saline and **wring out excess saline**. Place nerve biopsy in moist gauze and put it in a specimen cup. **DON'T SOAK OR FLOAT THE SPECIMEN IN SALINE.** Too much saline causes disruption and freeze artifact.

d. If the specimen is to be delivered within the hour (cab, courier) it can be sent at room temperature. If overnight delivery is necessary, place the containers in a Styrofoam box and surround it with coolant packs (Blue Ice). Do not send on wet ice, as it tends to melt through the box. Request priority overnight delivery. It is important to notify our office that a biopsy is expected, so that we can trace missing packages quickly.

Please contact us with questions that you have at the Neuromuscular Pathology Laboratory at (303) 724-4342.

Varun Sreenivasan
CU Neuromuscular Pathology Lab Director
Neuromuscular Division, Department of Neurology
University of Colorado School of Medicine
Anschutz Medical Campus
Phone: (303) 724-2188
Fax: (303) 724-2202

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Specimen Submission Form

Sending Institution: _____

Date Obtained: _____

Date Received: _____

- ☐ **Muscle, Quadriceps** **L** **R**
- ☐ **Muscle, _____** **L** **R**
- ☐ **Sural Nerve** **L** **R**
- ☐ **Other_____**

Patient Name: _____ **DOB:** _____/_____/_____

Referring Physician: _____ **Phone: (_____)** _____

Pathologist Name: _____ **Phone: (_____)** _____

Clinical History: (please attach clinical notes, EMG, and laboratory testing)

_____

_____

Office/Person to contact with questions and results:

Institution: _____

Attn: _____

Address: _____

_____

Phone #: _____ **Fax #:** _____

Please include a Hospital Face Sheet or provide the following billing information

Patient Name: _____ **DOB:** _____/_____/_____

Patient Address: _____

_____ **Phone: (_____)** _____

Insurance Name: _____

Insurance Address: _____

_____ **Phone: (_____)** _____

Group #: _____ **Subscriber #:** _____