Cleveland Clinic
Laboratories

INFORMATION SHEET

Nerve Biopsy Specimens

Introduction

Nerve biopsies are performed in the evaluation of patients with neuromuscular or metabolic disease. The procedure is requested by the treating physician, usually a neurologist or rheumatologist, and performed by a surgeon.

These specimens require highly-specialized tissue handling and staining procedures and interpretation by a neuromuscular pathologist. A comprehensive panel of special stains and light microscopic evaluation of glutaraldehyde-fixed resin-embedded tissue is performed on all specimens.

Additional studies, including electron microscopy and immunohistochemistry, will be performed at the discretion of the neuromuscular pathologist based upon the light microscopic findings and clinical information provided.

The best value for the patient is achieved when the treating physician provides pertinent clinical information, the surgeon removes an adequate specimen, and the local pathology laboratory packs the specimen properly and ships it promptly.

Muscle biopsies are often performed at the time of nerve biopsy. Muscle biopsies have different handling requirements and are described on the sheet entitled "Information Sheet for Muscle Biopsy Specimens".

Treating Physicians and Surgeons

Prior to requesting a biopsy, the treating physician should obtain a Muscle/Nerve Requisition from the local pathology laboratory or online at **clevelandcliniclabs.com**.

Fill it out completely and provide it to the surgeon prior to the date of surgery. Whenever possible, biopsies should be scheduled Monday–Thursday. If the biopsy must be performed on a Friday, or if the specimen is originating from outside the continental United States, ask the local pathology laboratory to contact the Surgical Pathology Desk for additional information.

Nerve Specimen Requirements

The specimen should be a portion of whole nerve (not a single fascicle) measuring 2 cm or longer.

The surgeon should be instructed to place the specimen on Telfa gauze moistened with saline and deliver promptly to the Pathology Laboratory. The specimen **MUST NOT** be immersed in saline. The Muscle/Nerve Requisition should accompany the specimen.

Pathology Laboratory Handling and Shipping Instructions

For your convenience, we can provide shipping kits containing all supplies needed for the following steps:

1. The specimen should be handled by the ends with fine forceps. Take care not to pinch. Delicately lay the specimen onto a piece of "card-stock" weight paper that is a few mm larger than the specimen. Wait one to two minutes to permit adherence of the nerve to the paper. Use a sharp blade to cut nerve perpendicular to the long axis into two segments of equal length. Use firm pressure to cut through the nerve and paper.
2. If you have 2-4% buffered glutaraldehyde on hand, place one segment in glutaraldehyde and the other in a container of 10% neutral buffered formalin. If you do not have glutaraldehyde, place both segments in formalin, and we will post-fix upon receipt. A minimum of two of three identifiers (patient's name, date of birth, social security number) must be present on both the specimen containers and requisition.
3. Place specimen containers in sealable plastic bag with absorbent pad. Place in a rigid cardboard shipping container with padding to prevent jostling during shipment.
4. Place completed requisition into shipping container. If a muscle biopsy was performed during the same procedure and is being shipped separately, indicate this on the requisition.
5. Seal box. Address air bill for overnight courier service (UPS/FedEx) as follows:

   Surgical Pathology
   Cleveland Clinic Laboratories, L15
   2119 East 93rd Street
   Cleveland, OH 44106
   Phone: 216.444.4767

Cleveland Clinic Laboratories Contact Information

Client Services
800.628.6816
For general inquiries and shipping kits.

Surgical Pathology Desk
216.444.2836
For technical tissue handling and shipping questions.

Neuromuscular Pathology Secretary
216.444.2843
To speak to a neuromuscular pathologist regarding medical pathology questions, including specific tests offered, their indications, and interpretation.

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