Touch-Test™ Sensory Evaluator

North Coast

The Touch-Test™ Sensory Evaluators (Semmes-Weinstein Monofilaments) provide a non-invasive evaluation of cutaneous sensation levels throughout the body with results that are objective and repeatable. Using Touch-Test™ Sensory Evaluators is indicated in diagnoses including nerve compression syndromes, peripheral neuropathy, thermal injuries and postoperative nerve repair. Each Touch-Test™ Sensory Evaluator is individually calibrated to deliver its targeted force within a 5% standard deviation.

Instructions: These instructions are written for threshold testing with individual Touch-Test™ Sensory Evaluators, and for comparative testing and color mapping with the Touch-Test™ 5 Piece Hand Kit, the Touch-Test™ 6 Piece Foot Kit and the Touch-Test™ 20 Piece Full Kit. Color mapping enables progression or regression of sensory neuropathies to be documented. When worsened sensibility is detected proper intervention can be implemented. Conversely, improved sensibility would indicate effective treatment intervention.

1. Rest the patient's extremity on a stable, padded surface. Testing should be done in a quiet area to help the patient fully attend to the testing procedure. Occlude the patient's vision by using a shield or by having the patient look away.
2. Explain the testing procedure to the patient and instruct the patient to respond when the stimulus is felt by saying "touch" or "yes". Nonverbal patients may tap the table lightly when the stimulus is felt.
3. Note any areas of callus, abrasion, scarring or other blemishes by drawing on the recording form (Hand Screening Form NC12750-1 or Foot Screening Form NC12749). While testing, proceed from distal to proximal and from small to large monofilaments.
4. It is not necessary to test every area of the skin when performing an evaluation. Checks may be done over areas innervated by different nerves. **For the hand**, test the palmar surface of the index finger and thumb to evaluate median nerve function; test the little finger and hypothenar eminence to evaluate the ulnar nerve; and test the dorsum of the hand to evaluate the radial nerve (see Figure 1). **For the foot**, test the sites indicated in Figure 2.
5. Press the filament at a 90° angle against the skin until it bows. Hold in place for 1.5 seconds and then remove (see Figure 3). For monofilaments from 1.65 to 4.08 apply the stimulus in the same location up to three times to elicit a response. A single response indicates a positive response. For filaments 4.17 through 6.65, apply the stimulus one time only.
6. To test with the Touch-Test™ 5 Piece Hand Kit (NC12772), the Touch-Test™ Six Piece Foot Kit (NC12773) or the Touch-Test™ 20 Piece Full Kit (NC12775), begin with the 2.83 filament. If the patient responds to the stimulus in all sites, normal cutaneous sensation can be documented and the examination is complete. If the patient does not respond to the stimulus, choose the next largest monofilament and repeat the process.
7. When the patient indicates a response, record the result using the colored pencil that corresponds to the color on the handle of the Touch-Test™ Sensory Evaluator (Colored Pencils Set NC12756). When representing monofilaments of the same color, notate which monofilament size was used (see Figure 4). Threshold levels indicated in Figure 5 can be used to interpret test results.

   ***If testing with the 5.07 only**, follow instructions #1- #5. Then apply the 5.07 to the test sites shown in Figure 2. Record results using a ✓ to indicate each site with sensation and ✗ for lack of sensation.

   Note: Touch-Test™ Sensory Evaluators are precision instruments. Care should be taken at all times to protect the integrity of the nylon filament. The filament may be cleaned with a mild instrument disinfectant. Substantially bent or kinked monofilaments must not be used for testing and should be discarded.

Figure 1

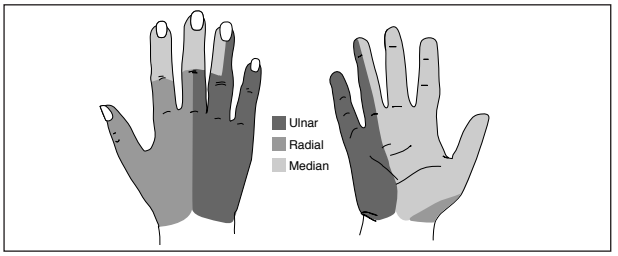

Figure 2

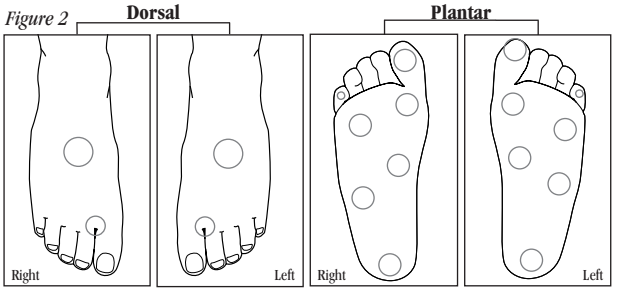

Figure 3

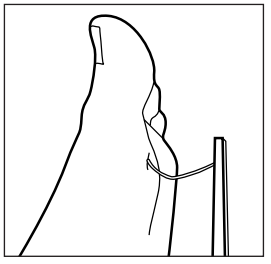

Figure 4

Sample of Documented Progression

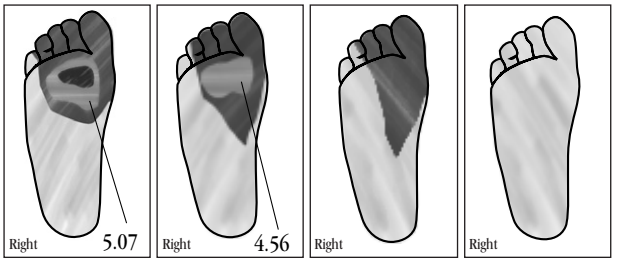

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Figure 5—Touch-Test™ Sensory Evaluator Chart

Product Number	Evaluator Size	Target Force*	Representation	Hand & Dorsal Foot Thresholds	Plantar Thresholds
NC12775-01	1.65	0.008	Green	Normal	Normal
NC12775-02	2.36	0.02			
NC12775-03	2.44	0.04			
NC12775-04	**2.83**	0.07			
NC12775-05	3.22	0.16	Blue	Diminished Light Touch	
NC12775-06	**3.61**	0.4			
NC12775-07	3.84	0.6	Purple	Diminished Protective Sensation	Diminished Light Touch
NC12775-08	4.08	1			
NC12775-09	4.17	1.4			
NC12775-10	**4.31**	2			
NC12775-11	**4.56**	4	Red	Loss of Protective Sensation	Diminished Protective Sensation
NC12775-12	4.74	6			
NC12775-13	4.93	8			
NC12775-14	**5.07**	10			Loss of Protective Sensation
NC12775-15	5.18	15			
NC12775-16	5.46	26			
NC12775-17	5.88	60			
NC12775-18	6.10	100			
NC12775-19	6.45	180			
NC12775-20	**6.65**	300		Deep Pressure Sensation Only	Deep Pressure Sensation Only

* Individually calibrated within a 5% standard deviation.

Touch-Test™ Sensory Evaluators and Accessories:

Product Number	Description
NC12775	**Touch-Test™ 20 Piece Full Kit**
NC12774	**Touch-Test™ Complete Foot Kit (6 Piece Kit, Screening Forms, Colored Pencils)**
NC12773	**Touch-Test™ 6 Piece Foot Kit (2.83, 3.61, 4.31, 4.56, 5.07, 6.65)**
NC12771	**Touch-Test™ Complete Hand Kit (5 Piece Kit, Screening Forms, Colored Pencils)**
NC12772	**Touch-Test™ 5 Piece Hand Kit (2.83, 3.61, 4.31, 4.56, 6.65)**
NC12775-14	**Touch-Test™ Sensory Evaluator 5.07 (10 grams of force*)**
▲ See NC12775-01 thru NC12775-20 for Individual Replacement Touch-Test™ Sensory Evaluators ▲	
NC12749	**Foot Screening Forms (pad of 100)**
NC12750-1	**Hand Screening Forms (pad of 100)**
NC12756	**Colored Pencils Set**
NC12780	**Touch-Test™ Training Video-FREE**

The following reference can be used for more detailed instructions:

Rehabilitation of the Hand: Surgery and Therapy; Mosby; ed. Hunter, Macken, Callahan; Vol I, 4th Edition; Chapter 9. 1995.

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