# Standard Operating Procedures for

**Brief Peripheral Neuropathy Screening**

**Appendix 2. Brief Peripheral Neuropathy Screening Guide (from endTB Clinical Guide)**

**Step 1. Grade Subjective Symptoms**

Ask the subject to rate the severity of each symptom on a scale from 01 (mild) to 10 (most severe) for right and left feet and legs. Enter the score for each symptom in the columns marked R (right lower limb) and L (left lower limb).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Normal | Mild ------------------------------------------------------------------------------------------ Severe | | | | | | | | | |
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |

|  |  |  |
| --- | --- | --- |
| Symptoms | R | L |
| a. Pain, aching, or burning in feet, legs |  |  |
| b. "Pins and needles" in feet, legs |  |  |
| c. Numbness (lack of feeling) in feet, legs |  |  |

Use the single highest severity score above to obtain a subjective sensory neuropathy score.

|  |  |
| --- | --- |
| Subjective Sensory Neuropathy Score | Severity grade |
| 00 | 0 |
| 01 – 03 | 1 |
| 04 – 06 | 2 |
| 07 – 10 | 3 |

**Step 2. Evaluate Perception of Vibration In The Great Toes**

Compress the ends of a 128-Hz tuning fork just hard enough that the sides touch. Place the vibrating tuning fork on a bony prominence on the subject's wrist or hand to be sure that he/she can recognize the vibration or "buzzing" quality of the tuning fork. Again, compress the ends of the tuning fork just hard enough that the sides touch. Immediately place the vibrating tuning fork gently but firmly on the top of the distal interphalangeal (DIP) joint of one great toe and begin counting the seconds. Instruct the subject to tell you when the "buzzing" stops. Repeat for the other great toe. The diagram below illustrates where to place the tuning fork (adapted from International Working Group on the Diabetic Foot, Practical guidelines on the management and prevention of the diabetic, 2007).



|  |  |  |
| --- | --- | --- |
| Vibration perception | Result | Score |
| Felt > 10 seconds | Normal | 0 |
| Felt 6-10 seconds | Mild loss | 1 |
| Felt <5 seconds | Moderate loss | 2 |
| Not felt | Severe loss | 3 |

**Step 3. Evaluate Achilles Tendon Reflexes**

With the subject seated, the examiner uses one hand to press upward on the ball of the foot, dorsiflexing the subject's ankle to 90 degrees. Using a reflex hammer, the examiner then strikes the Achilles tendon. The tendon reflex is felt by the examiner's hand as a plantar flexion of the foot, appearing after a slight delay from the time the Achilles tendon is struck. Use reinforcement by having the subject clenching his/her fist before classifying the reflex as absent.

| Ankle reflexes | Score |
| --- | --- |
| Absent | 0 |
| Hypoactive | 1 |
| Normal deep tendon reflexes | 2 |
| Hyperactive | 3 |
| Clonus | 4 |

A diagnosis of peripheral neuropathy can be made with the combination of a subjective neuropathy grade greater than 0 and at least one bilateral objective finding (abnormal vibratory sense or abnormal deep tendon ankle reflex).