

# Quantitative Sensory Testing (QST)

Name: Steve Brown

Age: 39

Date of exam: June 4, 2024

Condition being tested: Peripheral Neuropathy

## Test equipment and setup

Equipment to be used:

Equipment calibrated

## Test procedures

### I. Thermal testing

Test done

**Equipment:** Thermode with element and cooling water system

**Nerves tested:** A-delta fibres and C-fibres

**Instructions:** Place the thermode on the skin to measure heat and pain & cold and pain detection between 0 and 50 degrees Celsius.

#### Measurement:

Average of three consecutive measures: Heat 45 C, Cold 10 C

Normal

Abnormal

### II. Mechanical detection

Test done

**Equipment:** Von Frey Filaments

**Nerves tested:** A-beta fibres

**Instructions:** Contact with skin for 2 seconds to determine at what point the patient detects tactile input.

#### Measurement:

Average of five above and below-threshold stimulus intensities:

Normal

Abnormal

### III. Mechanical pain threshold

Test done

**Equipment:** Needle stimulators

**Nerves tested:** A-delta fibre subtypes

**Instructions:** Needle applied perpendicular to the skin in ascending and descending stimulus intensity with skin contact time of 1-2s.

**Measurement:**

Average of five above and below-threshold stimulus intensities: 15 mN

Normal

Abnormal

### IV. Mechanical pain sensitivity

Test done

**Equipment:** Needle stimulators, Q-tip, soft brush, cotton pad

**Instructions:** Gentle stimuli applied to the 2cm of skin (stroking) with the various instruments.

**Measurement:**

Subjects are asked to rate the perception of the stimulus using a pain scale of 0-100: needle 70

Normal

Abnormal

### V. Vibration detection threshold

Test done

**Equipment:** Tuning fork

**Nerves Tested:** A-beta fibre

**Instructions:** Place fork over bony prominence until subject cannot feel vibration anymore.

**Measurement:**

Disappearance threshold taken on 3 repetitions: 2 seconds

Normal

Abnormal

### Pressure pain threshold

Test done

**Equipment:** Pressure gauge device (Wagner instruments)

**Instructions:** Apply gradually increasing pressure over muscle area.

**Measurement:**

3 series of ascending stimulus intensities: 40 N

Normal

Abnormal

**Test findings and notes**

Overall interpretation:

The patient exhibits abnormal cold pain detection, mechanical detection threshold, mechanical pain sensitivity to needle stimulation, vibration detection threshold, and pressure pain threshold, indicative of potential peripheral neuropathy.

Examiner's observations and comments:

Patient reported increased sensitivity to cold and needle stimulation. Reduced detection threshold and vibration detection could indicate nerve damage. Recommend further neurological evaluation and possible referral to a pain specialist.

**Healthcare professional's information**

Examiner: Jenna McKenzie

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