

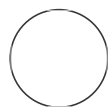


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QST: Pressure Pain Threshold Assessment

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RE-JOIN



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ABSTRACT

This protocol describes the use of an algometer device to collect pressure pain threshold measurements at the trapezius and the lateral epicondyle.

OPEN ACCESS

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We use this protocol and it's working

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QST: Pressure Pain Threshold Assessment

- I. PURPOSE:** To provide feedback to the clinical examiner by using a pressure-measurement device, the algometer as a dynamic measuring tool to have a more uniform level of measuring pain intensity on all subjects as standard of care.

II. SCOPE: Applies to trained designee involved in the algometer process for all standard of care subjects.

III. DEFINITIONS:

Trapezius: The trapezius is a three part (tripartite) muscle of the upper back extending from the base of the skull all the way to the lower thoracic spine and laterally from the clavicle to the entire length of the spine of the scapula. Together the two trapezii form a diamond or kite-shaped trapezoid from which the muscle derives its name.

Algometer: An instrument for measuring the threshold of perception of touch or pressure stimuli and the strength of such stimuli needed for the perception of pain.

2 Trapezius Algometer Measurement Assessment:

Finger pressure is calibrated (1.0 kg) using a simple hand-held algometer prior to palpation examination of the trapezius. Note that a single finger is calibrated, and that the palpating finger of each must be calibrated if using both hands during the examination.



Analog algometer device with rubber tip.

Body palpation responses will be obtained from direct contact of the Wagner algometer with skin or through clothing, as appropriate to the body region. If possible, the clothing will be pushed to the side (e.g., lower arm, upper shoulder). The examiner will determine if the clothing is too thick to prevent assessment.

Explain use of Wagner algometer for applying pressure at each location on each side of the body. Inform the subject that he/she should say "stop" if pain is reached before you stop applying pressure.

To measure the trapezius muscle, locate the area midway between the lateral neck and the acromial process of the scapula, and on the superior border of the trapezius muscle.

Place the algometer tip at this point.

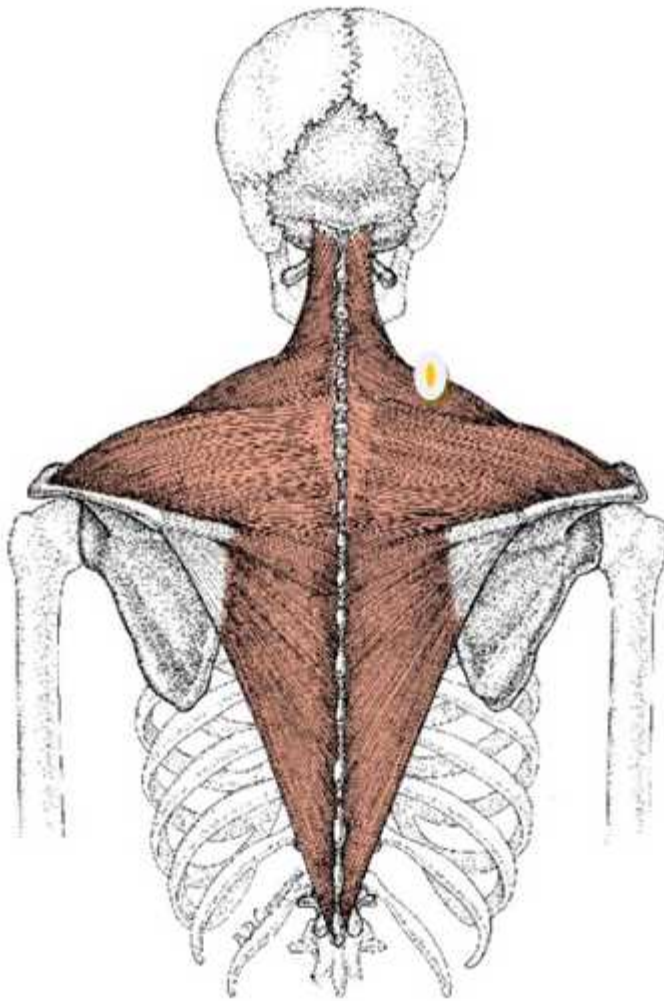
Other hand grasps the trapezius muscle, preferably medial to the algometer placement, with fingers toward clavicle and thumb on posterior aspect of the trapezius, slightly squeezing the muscle for support as needed.

Apply the algometer tip at this site, with the instrument shaft oriented perpendicular to the superior surface of each trapezius.

The examiner will use the algometer to measure PPTs at each site. Up to 5 measures are collected at each site, until any 2 measurements are within 0.2 Kpa of each other or until all 5 measurements have been performed.

The pressure is applied by using the Wagner FPK-20 algometer held in the palm of the hand. The pressure is increased at 1 kg/cm²/sec up to a maximum of 6.0 kg/cm². If the subject reports pain during the pressure application, the examiner stops, records the response. If the pressure reaches 6.0 kg/cm² and the subject has not reported pain, then the pain field is recorded as 6.0 kg/cm².

If the examiner is unable to perform the algometer assessment on the subject due to pain sensitivity, paralysis, or other medical condition, the lateral epicondyle should be measured.



Location of placement on the trapezius muscle.

3 Lateral Epicondyle Algometer Measurement Assessment:

The subject should be in a seated position with hands initially on lap. The examiner should be beside the subject and facing the opposite direction.

Cradle the subjects forearm between the forearm and body of the examiner. Ask subject to hold the examiner's elbow. Palpate the elbow and identify the lateral epicondyle, move fingers distally (toward the hand), and locate a slight depression about 2 cm anterior to a bony prominence. Use fingers to stretch the subject's skin inferiorly (with subject's forearm in a horizontal orientation) over the identified site.

Place algometer tip at this location.

Supporting hand maintains contact with medial forearm.

Apply load toward supporting hand on the other side of the forearm.

The examiner will use the algometer to measure PPTs at each site. Up to 5 measures are collected at each site, until any 2 measurements are within 0.4 Kpa of each other or until all 5 measurements have been performed.

The pressure is applied by using the Wagner FPK-20 algometer held in the palm of the hand. The pressure is increased at 1 kg/cm²/sec up to a maximum of 6.0 kg/cm². If the subject reports pain during the pressure application, the examiner stops, records the response. If the pressure reaches 6.0 kg/cm² and the subject has not reported pain, then the pain field is recorded as 6.0 kg/cm².