Computerized Dynamic Posturography (CDP)

Utilizing the Equitest System

Neurocom International

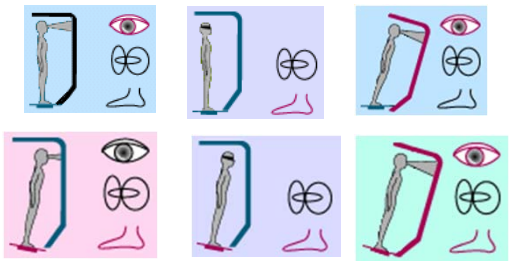
a division of Natus

www.onbalance.com

Computerized Dynamic Posturography Sensory Organization Test (SOT)

- Assess the patient's ability to make effective use of visual, vestibular and kinesthetic or somatosensory inputs separately.
- Assesses the patients ability suppress inaccurate sensory information.

Sensory Organization Test 6 sensory conditions



CDP Testing Procedures

- Each condition is tested over 3 trials and each trial is 20 seconds in duration
- Subjects should be able to stand without assistance for a minimum of 20 minutes.
- Rest is provided if requested by the subject, however, this should be standardized by the researchers.

CDP Testing Procedures

A trial may be stopped at anytime by clicking the mouse or striking any key.

-May record the trial as a fall or

-Discard the data

CDP Testing Procedures

Stop the trial if:

- the subject makes a free fall (no attempt to regain balance) – *mark condition as a fall and continue the remainder of the trials*
- the subject takes a step or changes foot *position—mark condition as a fall and continue the remainder of the trials*

CDP Testing Procedures

- Stop the trial if:

  the subject touches the conflict screen, open their eyes during a condition in which the eyes should be closed or interrupts the condition with a *complaint—may choose to discard the data and repeat the trial.*

CDP Testing Procedures

Any complaints of dizziness, nausea or vertigo should be documented and symptoms should be allowed to subside prior to continuing the test.

Testing Procedures

- Prior to placing the subject on the force platform
- Measure the subjects height
- Enter the subjects demographics including the height and an identification number if desired (the program will assign the subject an ATID #)

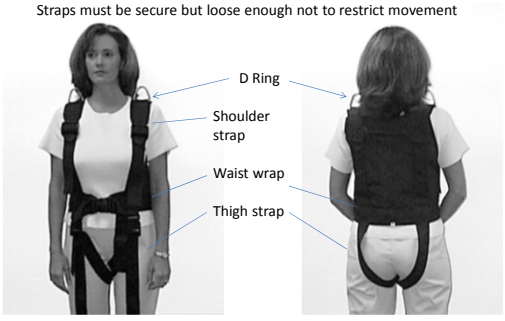
Testing Procedures



- Place the subject securely in the appropriate sized vest (S, M, L). The device has a 300 lb. weight limit.
- The subject is attached to the over head frame with some slack in the cords as pictured.

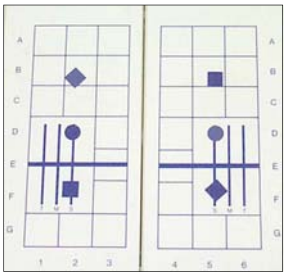
Patient Harness

Straps must be secure but loose enough not to restrict movement

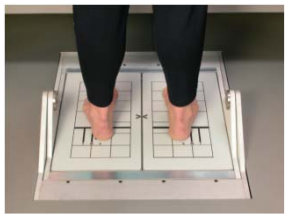


Testing Procedures

- Subjects are tested without shoes and the platform is cleaned between subjects.
- Based on the subjects height the lateral border of the foot is placed next to the T, M or S line on the force platform.



Testing Procedures



It is suggested that patients wear non-skid socks for standardization.

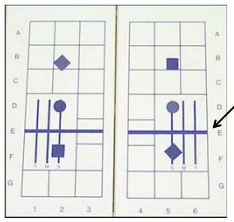
Position the lateral calcaneus is as follows:

(S) Short 30-55 inches/76-140 cm

(M) Medium 56-65 inches/141-165 cm

(T) Tall 66-80 inches/166-203 cm

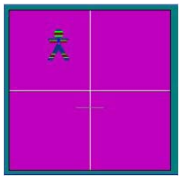
Testing Procedures



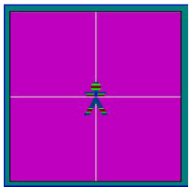
- A pen or straight edge is used to align the medial malleoli directly over the thick "E" line.
- Subjects are allowed to adjust the forefoot in an outward position without changing the position of the rear foot.

Testing Procedures

Check the computer center of gravity display to determine the location of the "balance man"



Poor patient alignment



Good patient alignment

Testing Procedures

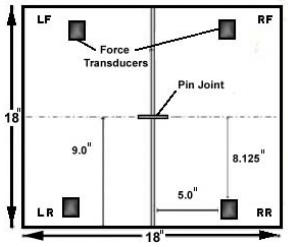
If not centered check the feet for correct placement before proceeding with the test. If foot placement is correct it can be assumed that the patient's COG is truly displaced.

Testing Procedures

- Proceed systematically testing each trial in conditions 1-6.
- Perform each trial once.

COLOR	SIGNIFICANCE
Solid GREEN bar or box	Within normal limits
Solid RED bar or box	Outside of normal limits
Striped bar or box	Trial was repeated
Stippled Grey area	Normative data

Testing Procedures



- The platform has 4 load cells and a center shear transducer.
- Periodically, the calibration should be checked (see manual).