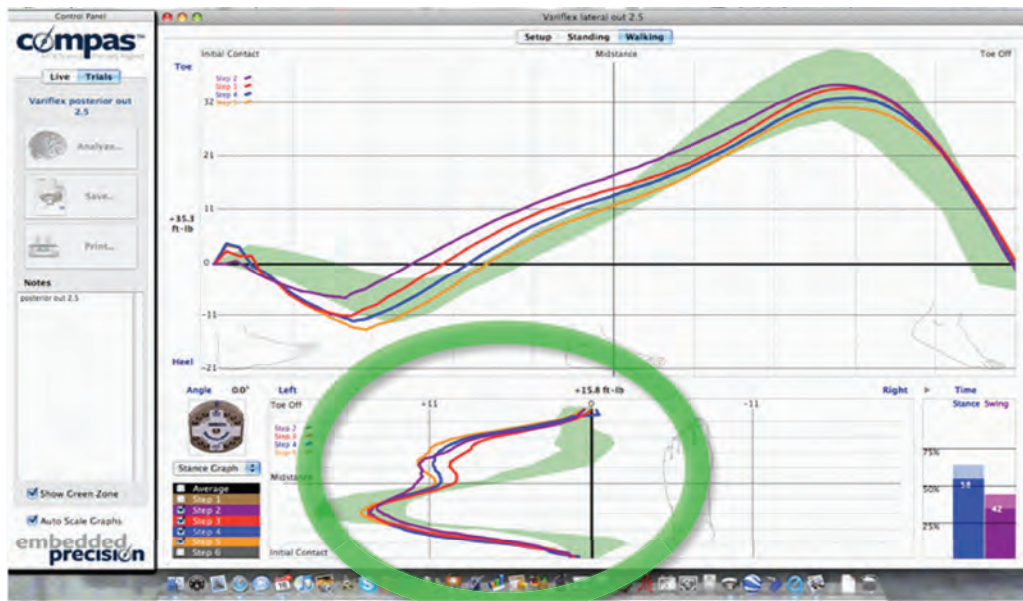


Lesson 3: Varus at Terminal Stance

This lesson will help you recognize when the Smart Pyramid™ wearer's gait has excessive varus at terminal stance.



It is important that torque forces in the prosthetic socket approach zero prior to terminal stance. When the socket's torque forces continue with excessive varus from midstance to terminal stance, the Compas graph will resemble the example above. Excessive varus at terminal stance decreases gait efficiency and may be caused by the foot being positioned too medially or by the axial rotation of the foot being too "toed-in"

Clinically, Compas trials have shown that the torque moments found in delivered, visually aligned prostheses are often sub-optimal, being unbalanced or injurious. Seemingly subtle alignment deviations such as those described above can significantly increase dangerous torque and have significant effects on long term comfort, limb tissue health, stability, and overall success on a prosthesis. Alignment deviations that Compas can display and are undetectable with visual dynamic alignment are often most evident in the medial/lateral or coronal planes.

When relying solely on visual dynamic alignment, it is difficult to see the torque moments that take place during ambulation. Typically, a good prosthetist can detect many of the macro-alignment deviations and some subtle ones that occur; however, few can see torque moments that do not present with significant visual cues. Though a patient may be able to walk effectively on a given prosthetics setup, it is important to remember that the patient may still be compensating for significant deviations from their "optimal" alignment and socket torques.