Tekscan®

SAM™

Sway & Posture Analysis

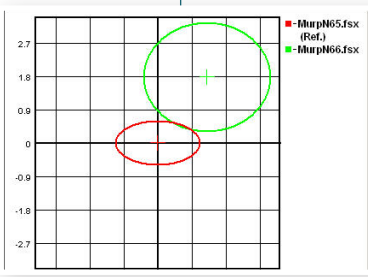
Get the Complete Story

Advance Your Practice with Technology

Get information you need to assess and document pre- and post-treatments in relation to the patient's sway, posture, and/or balance control with Tekscan's Sway Analysis Module (SAM™). SAM is the ideal tool to analyze sway and assess postural stability by detecting and measuring key stability parameters such as center of force (CoF) motion, left/right foot weight distribution and front-to-back weight distribution.

- Monitor the progress of foot function & body sway during treatments
- Assess the human body's ability to maintain equilibrium while standing
- Immediately detect asymmetries with weight bearing

Area of Sway: Pre vs Post

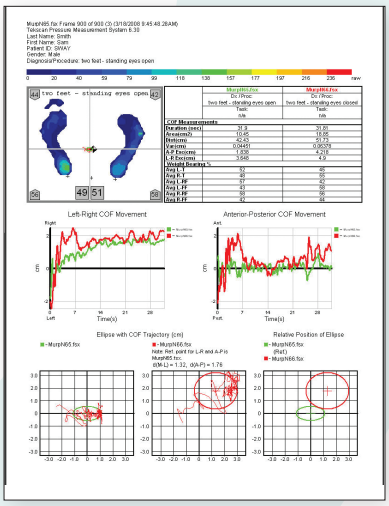


	MurpN66.fsx Dx / Proc: two feet - standing eyes closed Task: n/a	MurpN65.fsx Dx / Proc: two feet - standing eyes open Task: n/a
COF Measurements		
Duration (sec)	31.81	31.9
Area(cm2)	18.85	10.45
Dist(cm)	51.73	42.43
Var(cm)	0.06378	0.04451
A-P Exc(cm)	4.218	1.838
L-R Exc(cm)	4.9	3.648
Weight Bearing %		
Avg L-T	45	52
Avg R-T	55	48
Avg L-RF	42	57
Avg L-FF	58	43

Variance Comparison Table (Weightbearing & CoF Excursion)

Quick and Easy Exams

In under two minutes, you can determine the effectiveness of a treatment. Simply have your subject stand on the Tekscan pressure mat and with the click of the mouse, you get objective, quantifiable data in a clear, easy-to-read format. Print an automated report to document treatment.



CASE EXAMPLE ON BACK!

Sway Analysis in Practice

Background: A 9 year-old boy previously treated using chiropractic manipulations and the MatScan pressure measurement platform.

Known Issues: Displaced cervical vertebra and ribs, and blocked sacroiliac (SI) joint due to falls. Visual body posture assessment also revealed segment misalignments. These included hip and shoulder drops and trunk anterior-posterior rotation.

Treatment Approach

Several manipulations were done to the pelvis, spine, and head. The SAM assessment following the manipulations revealed improvements. By the 2nd week follow-up visit, the patient returned to his pre-treatment asymmetries. X-rays revealed the presence of leg length discrepancy (LLD) with the right side shorter.

A right heel lift was prescribed and manipulations were repeated, resulting in the symmetries and alignments remaining stable. When the patient returned 2 weeks later for follow-up visit, the symmetries and alignments were still present and in effect.

Parameters captured & assessed with the MatScan:

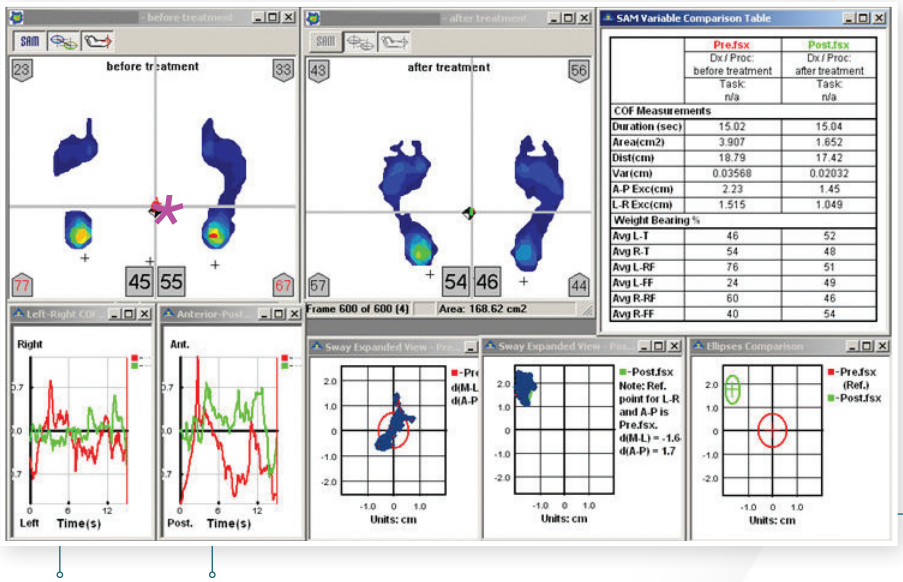
- Plantar pressure profiles
- Percent body weight-bearing
- Percent area of weight-bearing (contact) for left vs. right foot.
- Trajectory for the center of force (CoF)

SAM was then used to calculate and display biomechanical parameters relating to body sway and weight-bearing of the feet.

SAM Data & Analysis

SAM data shows improvement in several parameters:

- Reduction in the area of sway, total distance traveled by the center of force (CoF), reduced variability in distance traveled by CoF, and also reduced anterior-posterior and left-right excursions of the CoF
- Percent weight-bearing and percent contact area left vs. right foot improved with nearly identical pressure distribution post-treatment
- Average (avg) weight-bearing symmetries improved overall, specifically forefoot and rearfoot



The left-right and anterior-posterior displacements (in cm) for the CoF. The post-treatment indicates a smoother (less jerky) swaying pattern.

Zoom of shape and location of the ellipse (sway area) pre-treatment relative to post-treatment. Note that the post ellipse is smaller due to reduced distance traveled by the CoF.

Tekscan®

Call Today for a Demonstration!

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