

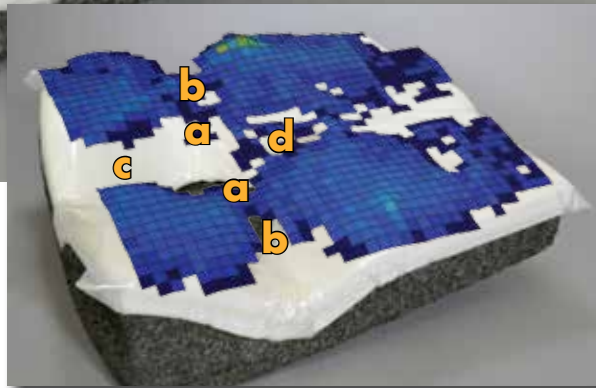
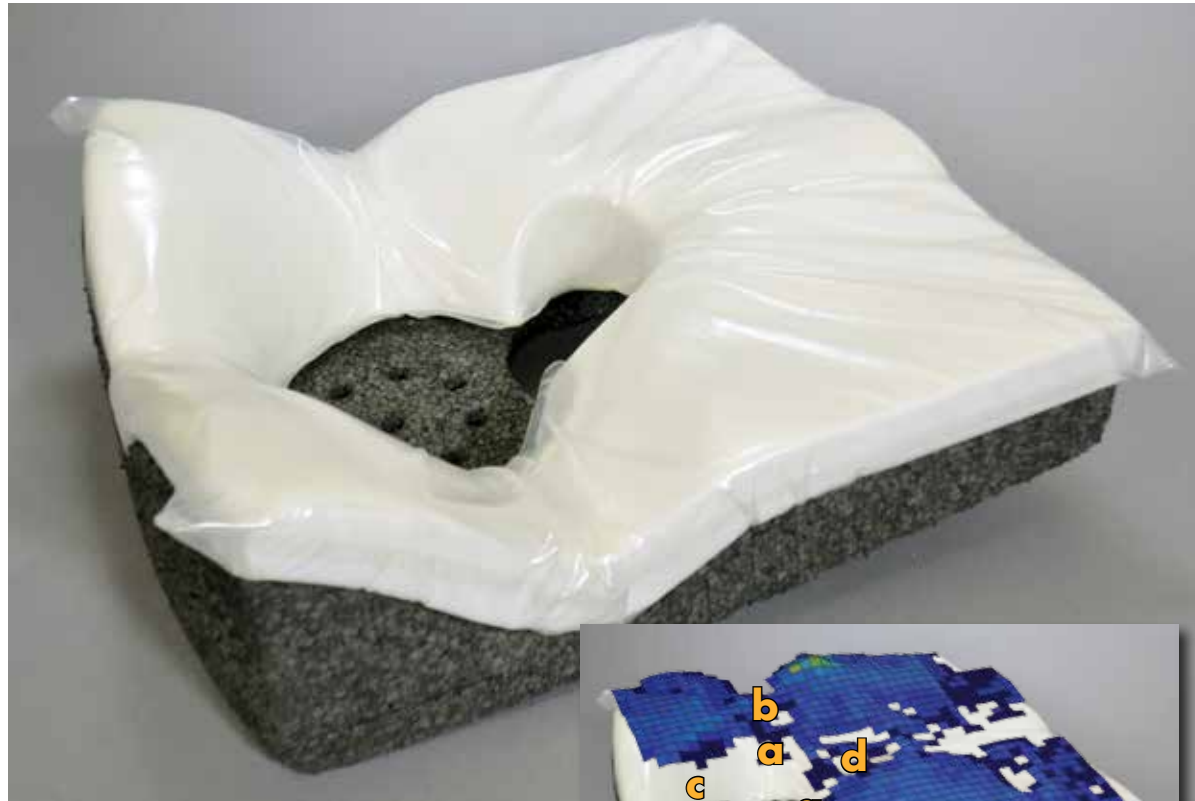
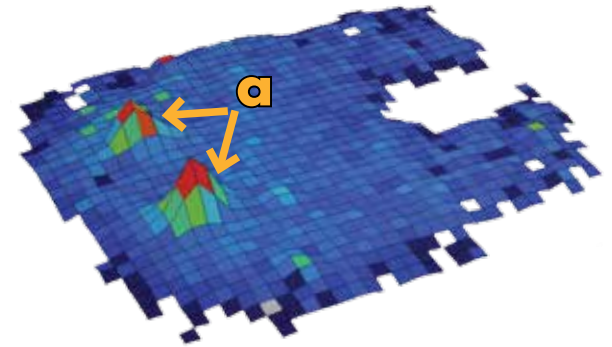
## Java® Cushion Interface Pressure Mapping Research Summary

### The Java® Cushion: Better by every measure

- Greater sitting stability for improved functional performance
- Improved skin outcomes
- Lower tissue distortion
- Lower long-term skin risk

#### AIR ▼

Columns of air lack the stability needed for postural control, and peak pressures tend to be at the high risk bony prominences, especially the ischial tuberosities (a).

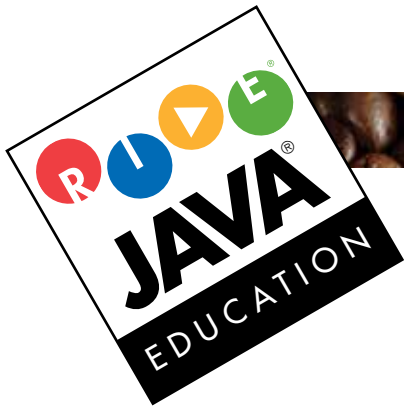


#### ◀ JAVA

Safe and stable support of low risk areas and off-loading of high risk areas:

- a. Ischial Tuberosities
- b. Greater Trochanters
- c. Coccyx/Sacrum
- d. Perineum(Groin)

Aids in greater sitting stability and skin outcomes.



# Java® Cushion Interface Pressure Mapping Research Summary

## Interface Pressure Characteristics of an Orthotic Off-Loading Cushion Design\*

**Methodology:** Ten subjects, all with SCI, Paraplegia. Nine males, one female, average age 45 years, average time since onset was 20 years. Interface pressure measurements were performed using the Xsensor pressure mapping system. Five 2-minute trials were completed with each cushion and cushions were completely unweighted between trials.

**Objective:** Compare interface pressure mapping (IPM) dispersion index between Java® Cushion (three different configurations) and a properly inflated air cushion (4). Dispersion index (DI) is the sum of pressure distributed over the IT and sacral regions divided by the sum of pressure readings over the entire interface pressure mat, expressed as a percentage.

**Results:** Interface pressure mapping results indicate effective “off-loading” of Ride Java Cushion. The dispersion index is significantly lower on the Java Cushion compared to air cushion, particularly among chronic SCI subjects.

Authors:

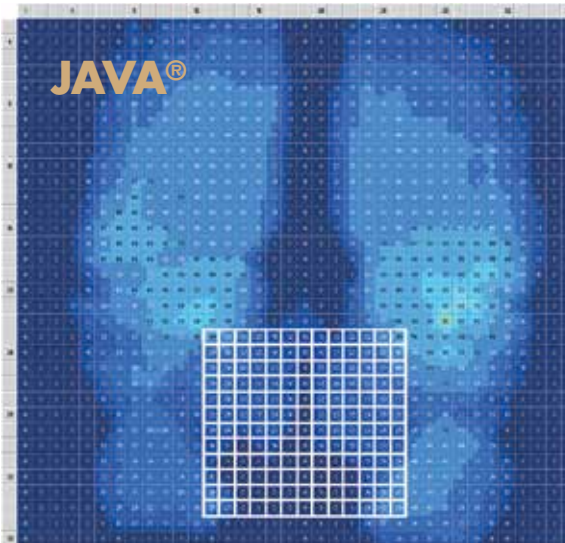
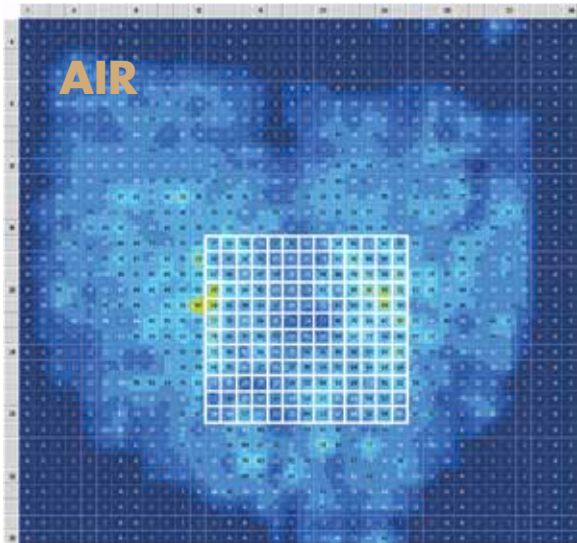
Barbara Crane, PhD, PT, ATP/SMS<sup>a</sup>

Evan Call, MS, CSM (NRM)<sup>c</sup>

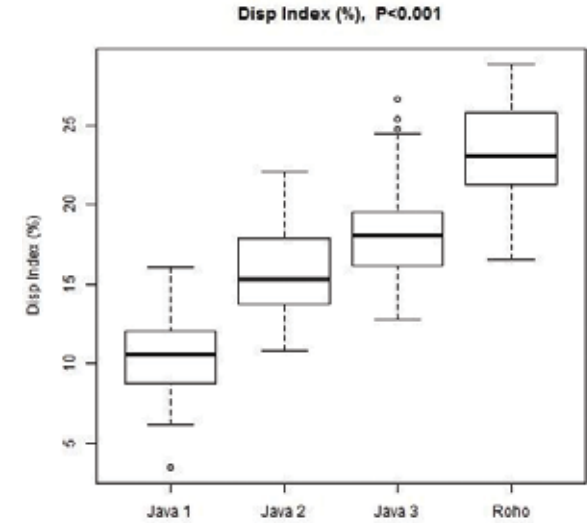
Michael Winger PhD<sup>b</sup>



\* The full study, published in the Archives of Physical Medicine and Rehabilitation (April 2016) is titled “Orthotic-style off-loading wheelchair seat cushion reduces interface pressure under ischial tuberosities and sacrococcygeal regions.”



The lower the dispersion index, the more successful the off-loading of the pelvis.



Java Cushion configurations:

- 1) Off-loaded with or without additional CAM® wedges
- 2) With top well insert
- 3) With top well insert and spacer

Air cushion configuration:

- 4) Properly inflated air cushion



Top well insert, spacer, Java Cushion, CAM wedges.

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