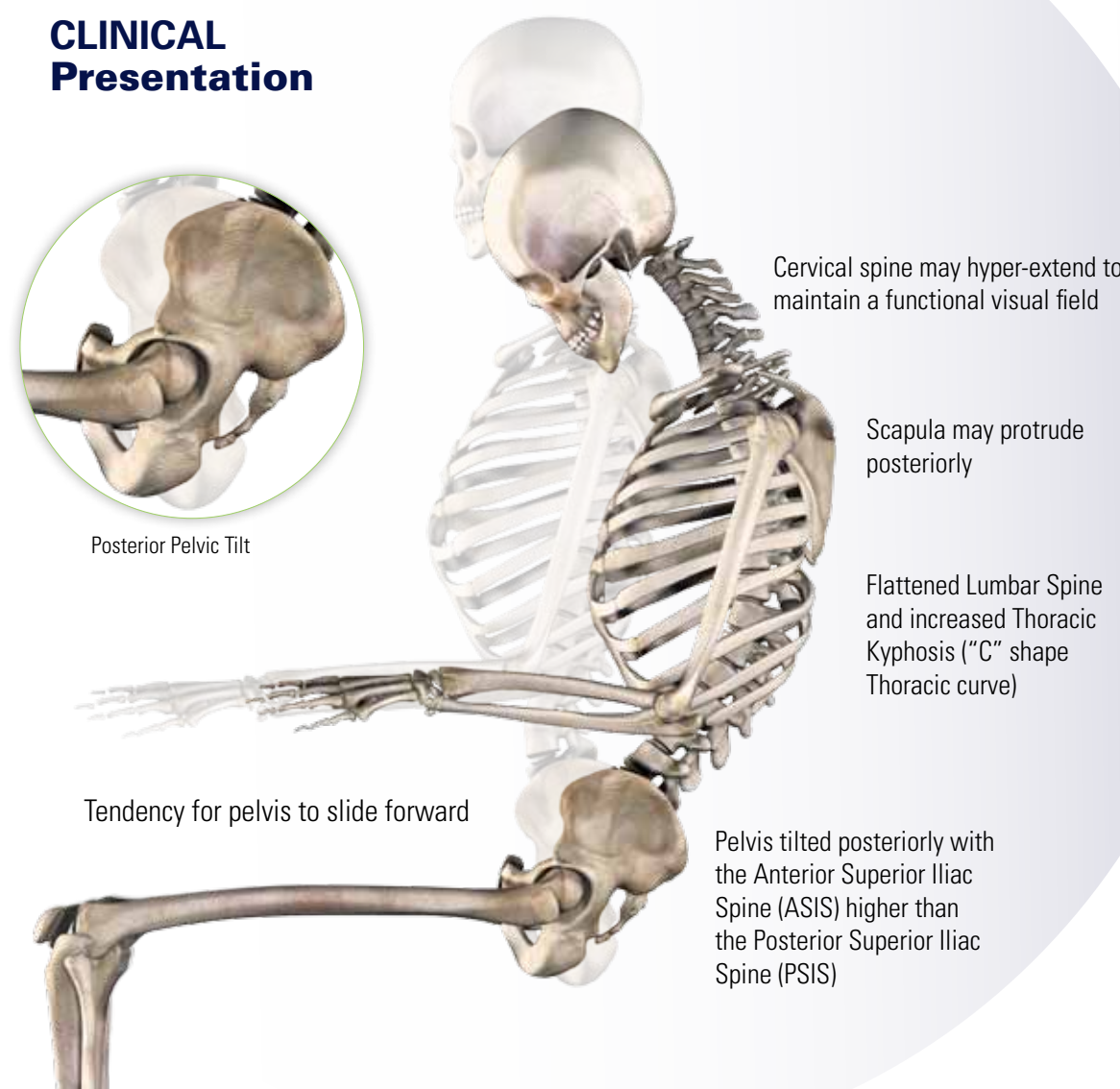


INVACARE® MATRIX® CLINICAL SEATING & POSITIONING GUIDE

POSTERIOR PELVIC TILT WITH KYPHOSIS

CLINICAL Presentation



POTENTIAL Causes

Wheelchair Fit
Seat depth too long/short
Foot support position
No support for PSIS
In manual wheelchair, location of rear wheel not optimal for reach
Seat to floor height too high/low for foot propulsion

Clinical
High or low tone in trunk
Lacks true 90° of hip flexion
Weak abdominals/back extensors
Shortened/tight hamstrings
Assumes position for increased postural stability

POTENTIAL Solution Flexible Posture

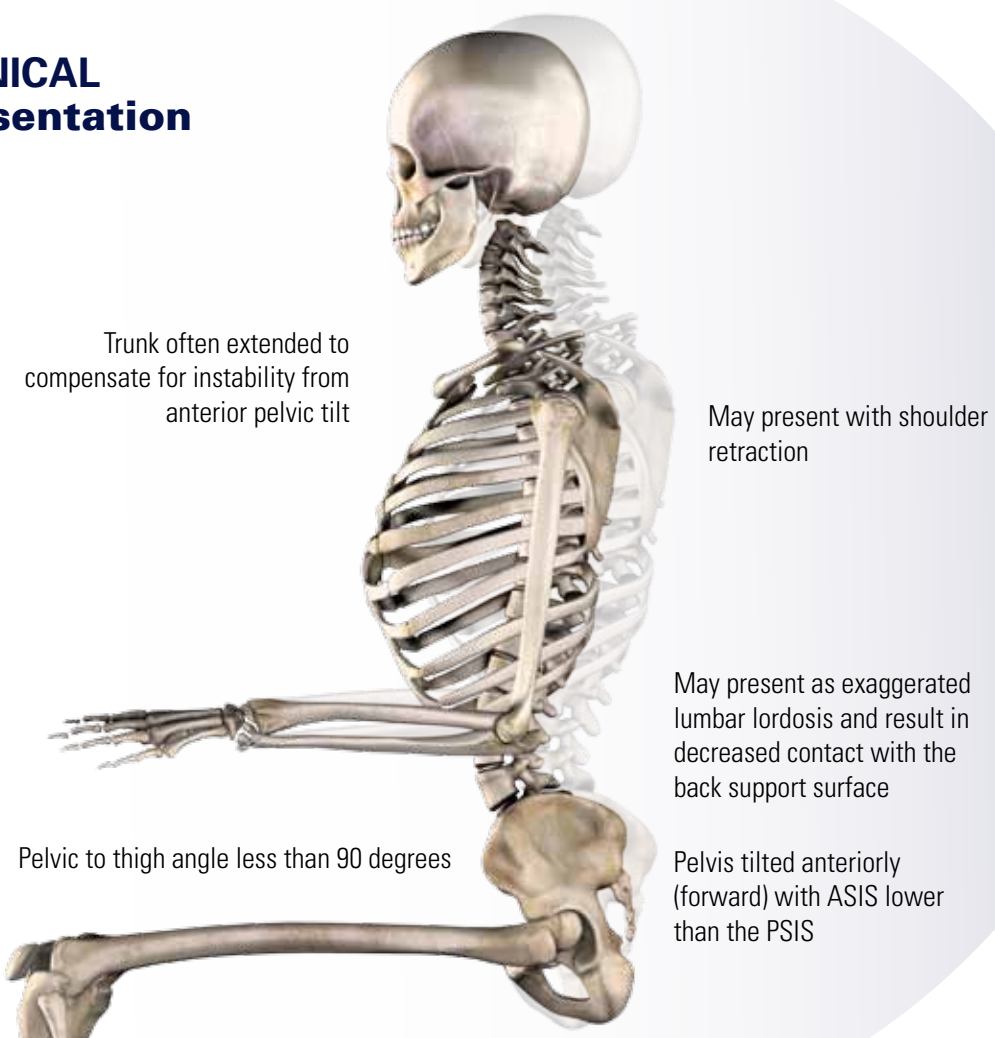


POTENTIAL Solution Fixed Posture



ANTERIOR PELVIC TILT WITH HYPERLORDOSIS

CLINICAL Presentation



POTENTIAL Causes

Wheelchair Fit
Back support too upright
Excessive lumbar contouring

Clinical
Tight quadriceps/hip flexors/paraspinal muscles
Weak abdominal musculature
Obesity

POTENTIAL Solution Flexible Posture

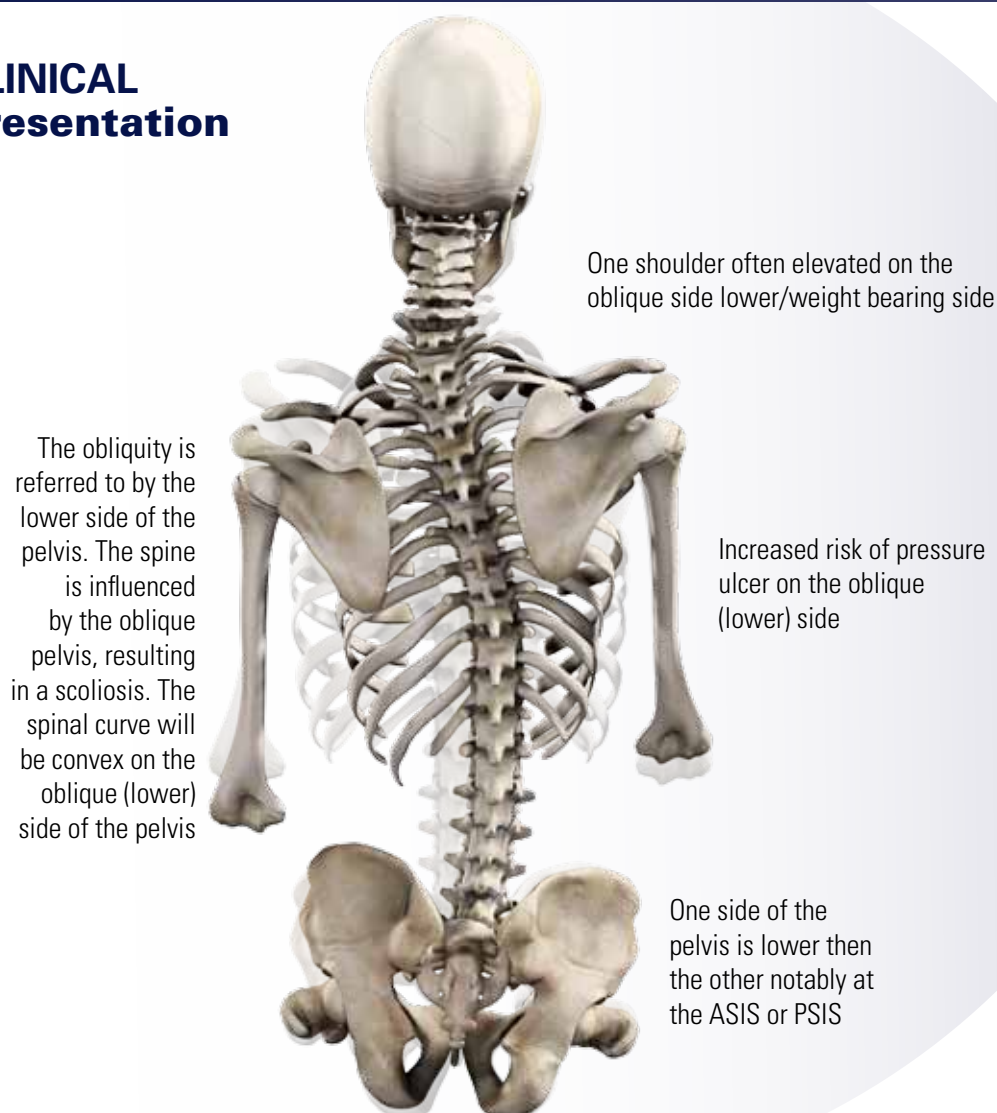


POTENTIAL Solution Fixed Posture



PELVIC OBLIQUITY AND SCOLIOSIS

CLINICAL Presentation



POTENTIAL Causes

Wheelchair Fit
Sling or stretched seat upholstery
Seat width too wide and/or arm supports too low to support upper extremities
Cushion does not provide effective support for greater trochanters
Wheelchair seating angles and/or foot support position does not accommodate hip range limitations
Power wheelchair joystick or manual wheelchair rear wheel location not optimal for reach
Back support too wide

Clinical
Asymmetrical pain or discomfort
Asymmetrical Tonic Neck Reflex (ATNR)
Asymmetrical muscle tone/weakness in trunk and/or lower extremities
Limitations of hip flexion, abduction, adduction, internal or external rotation
Structural bony deformity in spine or surgery
Asymmetrical upper extremity strength with manual propulsion

POTENTIAL Solution Flexible Posture

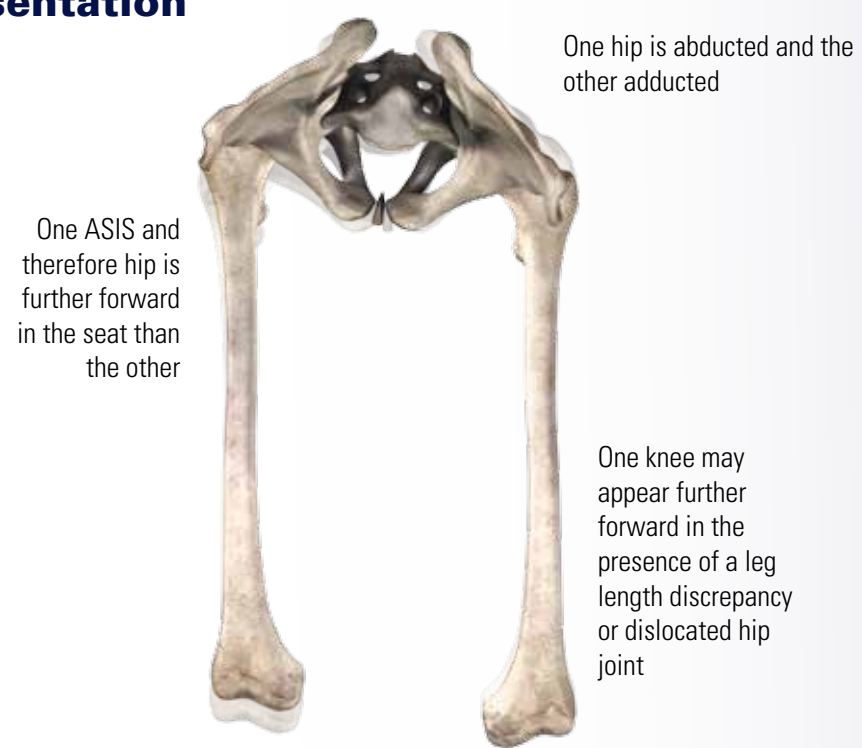


POTENTIAL Solution Fixed Posture



PELVIC ROTATION

CLINICAL Presentation

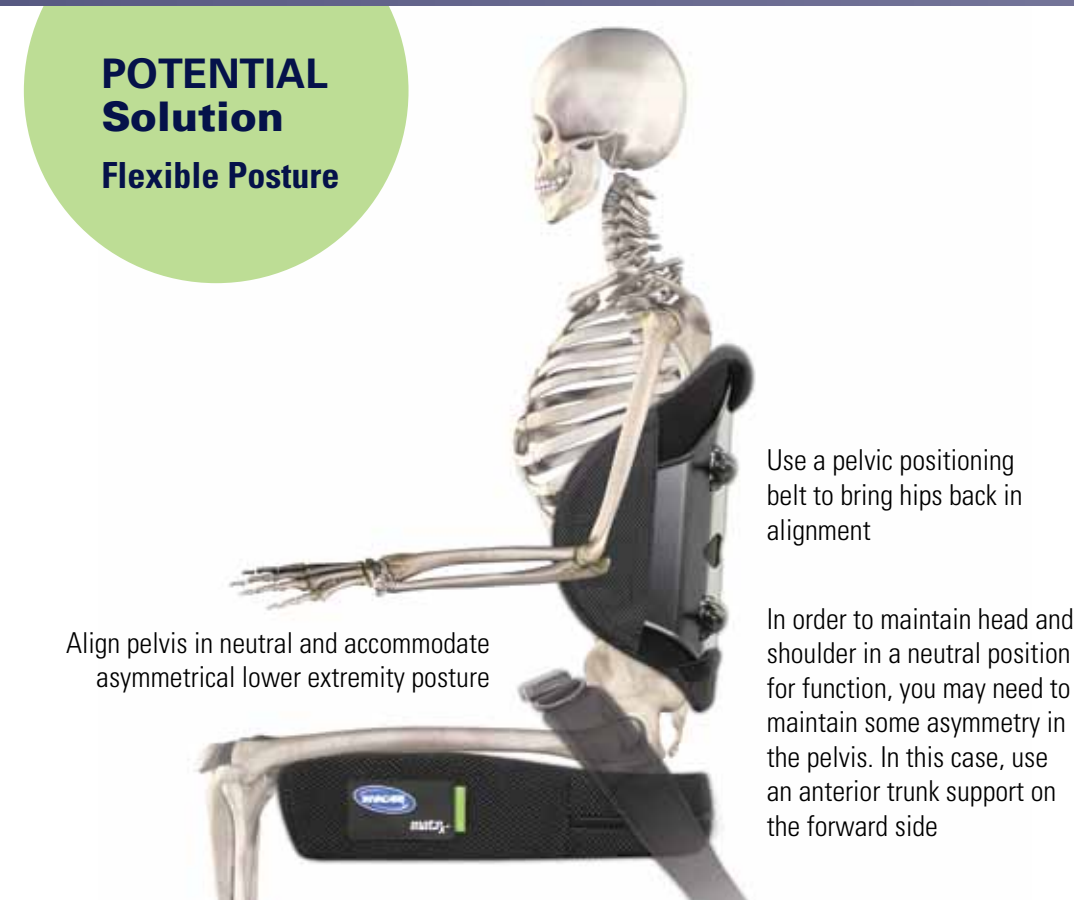


POTENTIAL Causes

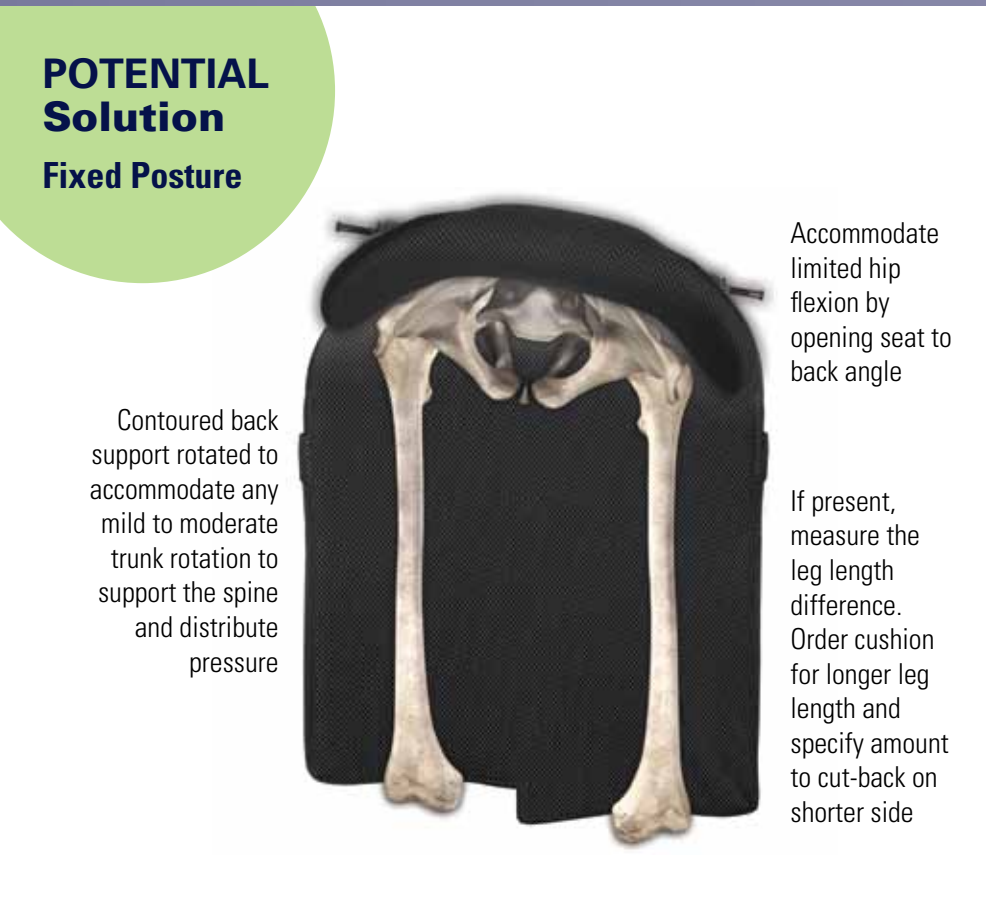
Wheelchair Fit
Poor wheel placement on manual chair
Seat to floor height too high for foot propulsion

Clinical
Limited hip flexion, abduction, adduction
Leg length discrepancy may be caused by dislocated or subluxed hip
Unequal buttock/thigh depth, leg length discrepancy

POTENTIAL Solution Flexible Posture

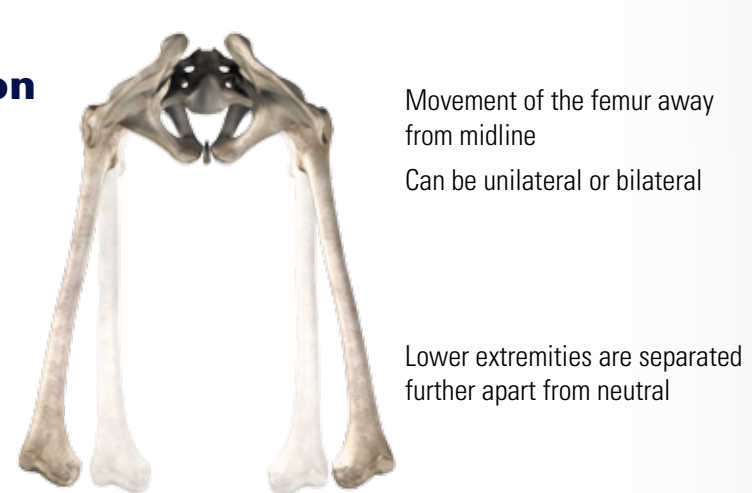


POTENTIAL Solution Fixed Posture



HIP ABDUCTION

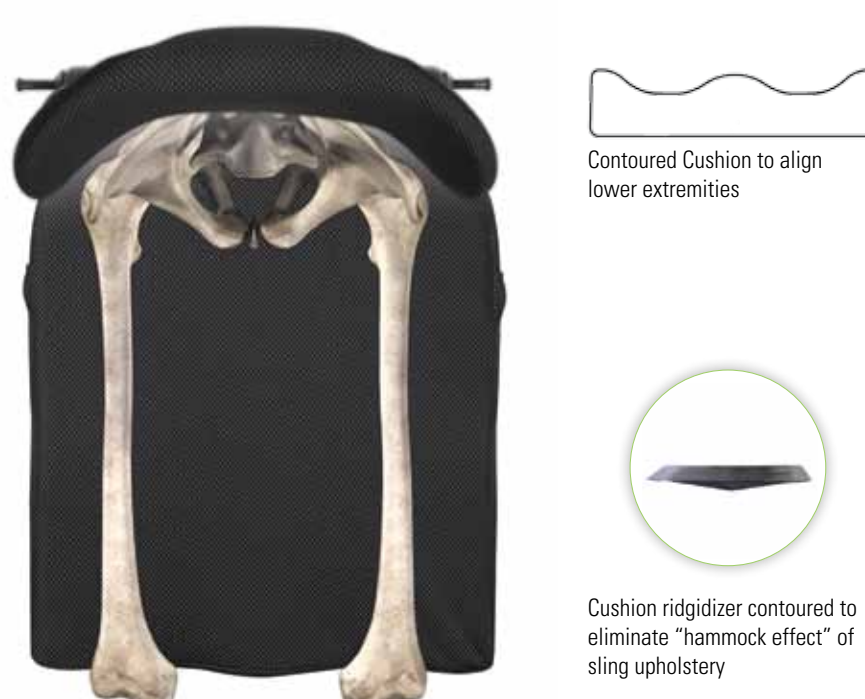
CLINICAL Presentation



POTENTIAL Causes

Low or high tone
Surgeries, LE Abduction due to excessive abdominal tissue
Inadequate seat depth

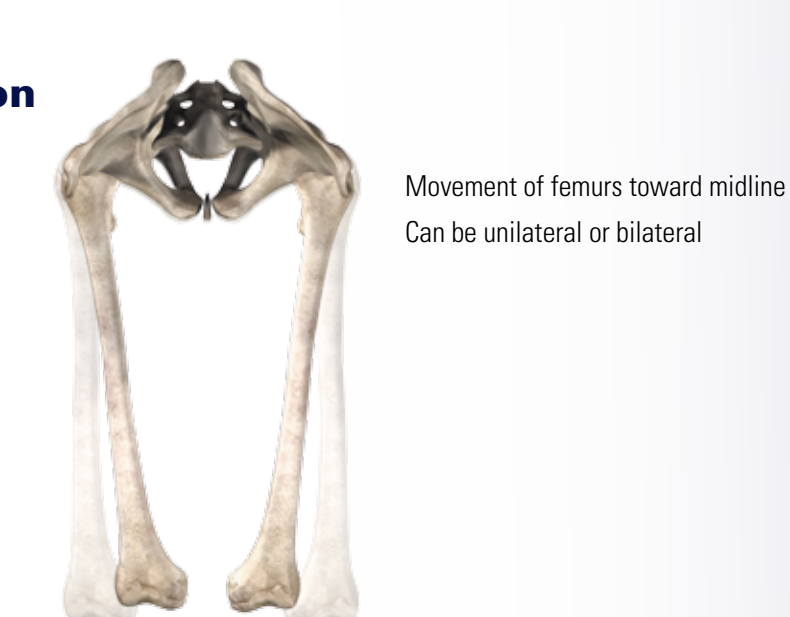
Flexible: Try to align femurs in neutral using contoured cushion
Try distal lateral thigh supports
Fixed: Accommodate with custom contoured seating



Flexible: Use seat rigidizer or solid seat pan
Try distal medial thigh support or contoured seating
Fixed: Accommodate with custom contoured seating

HIP ADDUCTION

CLINICAL Presentation



POTENTIAL Causes

Sling upholstery without solid seat insert
Low or high tone, decreased range of motion and/or strength of hip abductors

Invacare® Matrix® Seating Objectives

- Facilitate postural stability while allowing purposeful movement to promote effective function and support healthy resting postures.
- Respect 3 dimensional anatomical shapes, working to match contours for optimal support and pressure redistribution.
- Wherever possible, support postures from within the contours of the seating system in order to maintain skin integrity and to promote stability, balance and function, complemented with additional external components as needed.

Invacare® Matrix® Guiding Principles

- The effect that seated posture has on breathing and swallowing should be a primary concern.
- Long term sitting can cause secondary complications such as tissue trauma, back and neck pain, postural deformities and joint contractures.
- A comprehensive evaluation, including a physical assessment in both supine and sitting, is the foundation of all effective seating solutions.
- The position of the pelvis directly impacts the spine, which in turn influences the position of the head and extremities.
- The pelvis is the foundation for seated function and the PSIS must be supported in order to achieve postural control.
- Determining if a posture is fixed or flexible is vital for selecting appropriate seating solutions.
- The opportunity to trial seating solutions in static and dynamic situations is important for identifying the most effective overall seating solution.

For more information, visit www.invacare.com.

These are the opinions of clinical staff at Invacare Corporation and proper assessments should be made at the individual patient level. This information is not intended to be, nor should it be considered, medical, billing or legal advice. The physician and other medical care providers are responsible for determining proper product selection and the appropriate billing codes when submitting claims to the Medicare program, and should consult an attorney or other advisor to discuss specific situations in further detail.

©2012 Invacare Corporation. All rights reserved. Trademarks are identified by the symbols ™ and ®. All trademarks are owned by or licensed to Invacare Corporation unless otherwise noted. Form no. 12-088 rev.0912

matrix
SEATING SERIES

INVACARE
Yes, you can.®