# POSTURAL RESTORATION INSTITUTE®

#### What is Posture?

- Posture is the reflection of patterned airflow.
- Airflow is a reflection of the "position" of many systems that are regulated, determined and created through limited functional patterns. These patterns reflect our ability and inability to breathe, rotate and rest symmetrically.
  - Ron Hruska, MPA, PT

#### **Polyarticluar Muscle Chains**

#### Anterior Interior Chain (AIC)

- There are two anterior interior polyarticular muscular chains that have a significant influence on respiration, rotation of the trunk, rib cage, spine and lower extremities.
- Composed of muscles that attach to the costal cartilage and bone of rib 7-12 to the lateral patella, head of the fibula and lateral condyle of the tibia.
- One is on the left side of the interior thoraco-abdominal-pelvic cavity and one is on the right
- Muscles include the diaphragm and the psoas.
- This chain provides the support and anchor for abdominal counter force, trunk rotation and flexion movement.

## Brachial Chain (BC)

- There are two brachial polyarticular muscular chains lying over the anterior pleural and cervical area.
- These chains influence cervical rotation, shoulder dynamics and apical inspirational expansion.
- Composed of muscle that attach to the costal cartilage and bone of ribs 4-7 and xiphoid to the posterior, inferior occipital bone, anterior, inferior mandible and coracoid process of scapula.
- They provide the support and anchor for cervical-cranial orientation and rotation and rib position.





# Visible Signs of Dysfunction as Related to Left AIC/Right BC Pattern

- 1. One or both legs turn out when sitting, standing or lying
- 2. Overdevelopment of compensatory muscles
- 3. Favorable standing position is on the right leg while rotation their upper body to the left
- 4. Walk with little or no arm swing on the right
- 5. Elevated anterior ribs on the left
- 6. Lowered, depressed shoulder and chest on the right
- 7. Asymmetry of the head and face
- 8. Curvature of the spine

## **Objective Findings for Left AIC/Right BC Pattern**

1. Inability to adduct left femur



2. Inability to extend the left hip



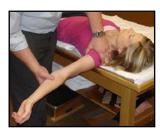
3. Limited trunk rotation to the right



4. Limited humeral-glenoid internal rotation on the right



5. Limited horizontal abduction on the left



6. Asymmetrical femoral-acetabular rotation





7. Excessive or limited straight leg raise





8. *Inability to touch your toes* 



9. Inability to fully squat



#### **Clinical Assessment**

- The left pelvis is anteriorly tipped and forwardly rotated.
- The forwardly rotated left innominate causes the lower spine to orient to the right with the upper spine to the left.
- This directional, rotational influence on the low back and spine to the right, mandates compulsive compensatory movement in one or more areas of the trunk, upper extremities and cervical-cranial-mandibular muscle.
- The greatest impact is on rib alignment and position, therefore influencing breathing patterns and ability.

# Postural Restoration Institute® Treatment Approach

**Restore** pelvic position and muscular balance



**Restore** apical chest wall expansion



**Restore** diaphragmatic breathing



 $\it Restore$  abdominal opposition to diaphragm



**Restore** chest wall flexibility

