OSTURAL SCREENING has long been a part of clinical evaluation. It provides both qualitative and quantitative information on the characteristics of the human body. Over the last several years, injury assessment has evolved from single joint evaluation to assessment of the entire kinetic chain. This has sparked renewed interest in the value of the information derived from postural assessment.\(^1\) The postural presentation of the body may be considered a road map of habitual movement patterns. Evidence of asymmetry, medial to lateral or anterior to posterior, provides clues as to how the body has compensated to maintain optimal performance. These adaptations may not be beneficial in terms of pain-free function. For instance, asymmetrical weight bearing through the lower extremities after an ACL reconstruction may cause shifts through the pelvis, resulting in pelvic obliquities. Asymmetrical weight bearing may create a dependence on the hip flexors for stability, leading to disuse of the gluteus maximus and gluteus medius, which produces a further destabilizing effect on the pelvis manifested as femoral internal rotation: the “corkscrew” or “valgus” knee presentation seen in dynamic movement.

Poor postural habits, independent of injury, may result in similar sequelae. The commonly accepted posture of today’s youth encourages slouching, both when sitting and standing. Slouching disengages the trunk muscles, encouraging disuse of the local and global core stabilizers, thereby predisposing the extremities to overuse syndromes. For instance, habitually standing with feet externally rotated and with excessive anterior pelvic tilt deactivates the transversus abdominis, which focuses the posterior stabilizing load on the erector spinae rather than the multifidi. With the excessive anterior pelvic tilt, the gluteus medius and gluteus maximus are no longer in an optimal length-tension position,\(^2,3\) thereby forcing the iliotibial band to function as a stabilizer, one of the primary but often overlooked etiologies of ITB syndrome. Reduced activation of the gluteus medius and gluteus maximus results in a tendency for excessive internal femoral rotation, which is associated with the miserable malalignment syndrome and patellofemoral dysfunction. Habitual posture alone may play a primary role in the lack of core stabilization seen in many athletes. Without activation of the local and global core stabilizers, altered kinetic chain sequelae for both the upper and lower extremities can be expected. Interventions to address postural asymmetries play a substantial role in the remediation of chronic overuse conditions and may facilitate improvement in neuromuscular activation patterns. The initial qualitative visual screening of the entire kinetic chain may identify areas of dysfunction that warrant further assessment.

**Qualitative Assessment of Posture**

When first adopting the kinetic chain approach to posture assessment, deciding where to start, how to proceed, and what to do with the information can be overwhelming. A traditional approach is to suspend a plumb line above the individual’s head and perform the assessment from the top down.\(^4\) A more functional approach involves assessment from the feet upward, still using the plumb line as a guide line. Select an area of the clinic that has low traffic, and a flat, plainly-decorated wall to use as a backdrop. A plumb line can
be as simple as a string tied to a set of keys. Ideally, the client would wear only elasticized close-fitting garments. Removal of shoes and orthotics allows for assessment of alignment without adaptations provided by external supports.

Identifying Asymmetries

The first step in performing the assessment is a visual scan for asymmetries of the client’s posture from front, side, and back views. Digital images can provide a permanent record of the assessment.

**Coronal View—Anterior**

Start by looking at the patient’s feet:

1. Does the patient stand with equal weight distribution on the right and left sides?
2. Are both feet pointed forward, or is one foot rotated differently than the other?
3. Does the medial longitudinal arch appear to be flattened, i.e., foot pronation?
4. Does the 5th ray appear to be laterally displaced (often seen in conjunction with a flattened medial longitudinal arch)?
5. Are the toes actively flexed (gripping the ground)?
6. Are any of the postural asymmetries evident on both sides?

Following assessment of the foot, the clinician should continue the visually scan up the lower leg:

7. Is there asymmetry in the soft tissue contours of the anterior compartment of the lower legs?
8. Is there asymmetry in the soft tissue contours of the posterior compartment of the lower legs?
9. Is there symmetry in alignment of the long axis of the lower legs? Specifically, does there appear to be an “A” frame appearance of the right and left legs?
10. Is there a rotational component evident in the positions of the lower legs? If yes, is the rotation symmetrical?
11. What is the position of the patella, i.e., Is the patella malaligned in relation to either the thigh segment or the lower leg segment?
12. Is the overall alignment of the lower leg posture symmetrical, i.e., Is alignment different or similar for the right and left extremities?

Continue the visual examination by noting the relationship between the thigh and lower leg.

13. Is knee varus or knee valgus evident, either unilaterally or bilaterally?
14. What is the relationship of the midline of the tibia to the femur?

Next, focus on the thigh:

15. Does the thigh appear to be either internally or externally rotated at the hip, either unilaterally or bilaterally?
16. Does the thigh appear to be either adducted or abducted at the hip, either unilaterally or bilaterally?
17. Does the thigh appear to be flexed or extended at the hip?

The final element of lower extremity postural assessment in the coronal plane involves the hips (relationship between the femur and pelvis).

18. Is there a greater weight shift toward one side? Does the client have a tendency to stand on one leg?
19. Does one side of the pelvis appear to be shifted more forward or backward in comparison to the opposite side?
20. Does there appear to be a difference in height of the iliac crests? This can be best assessed by having the patient place the hands on the hips (over the iliac crests) and noting any difference in height between the patient’s hands.

Common postural malalignments that may be identified from an anterior view are illustrated in Figure 1 and 2.

**Sagittal View**

Start with an overall view of the patient from a side view, and then note the following:

1. Does it appear that the right and left sides align with one another in the coronal plane? If so, you should not see the opposite lower extremity.