Table 5: Balance Error Scoring System-Modified (BESS) 6[60]

This balance testing is based on a modified version of the Balance Error Scoring System (BESS) 6. A stopwatch or watch with a second hand is required for this testing.

Balance testing

"I am now going to test your balance. Please take your shoes off, roll up your pant legs above ankle (if applicable), and remove any ankle taping (if applicable). This test will consist of three 20-second tests with different stances."

(a) Double-leg Stance:

"The first stance is standing with your feet together with your hands on your hips and with your eyes closed. You should try to maintain stability in that position for 20 seconds. I will be counting the number of times you move out of this position. I will start timing when you are set and have closed your eyes."

(b) Single-leg Stance:

"If you were to kick a ball, which foot would you use? [This will be the dominant foot] Now stand on your non-dominant foot. The dominant leg should be held in approximately 30 degrees of hip flexion and 45 degrees of knee flexion. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."

(c) Tandem stance:

"Now stand heel-to-toe with your non-dominant foot in back. Your weight should be evenly distributed across both feet. Again, you should try to maintain stability for 20 seconds with your hands on your hips and your eyes closed. I will be counting the number of times you move out of this position. If you stumble out of this position, open your eyes and return to the start position and continue balancing. I will start timing when you are set and have closed your eyes."

Balance testing — types of errors

1. Hands lifted off iliac crest
2. Opening eyes
3. Step, stumble, or fall
4. Moving hip into > 30 degrees abduction
5. Lifting forefoot or heel
6. Remaining out of test position > 5 sec

Each of the 20-second trials is scored by counting the errors, or deviations from the proper stance, accumulated by the athlete. The examiner will begin counting errors only after the individual has assumed the proper start position. The modified BESS is calculated by adding one error point for each error during the three 20-second tests. The maximum total number of errors for any single condition is 10. If a athlete commits multiple errors simultaneously, only one error is recorded but the athlete should quickly return to the testing position, and counting should resume once subject is set. Subjects who are unable to maintain the testing procedure for a minimum of 5 seconds at the start are assigned the highest possible score, 10, for that testing condition.

Which foot was tested: left or right (i.e., which is the non-dominant foot)?
Condition Total errors
Double-leg stance (feet together) of 10
Single-leg stance (non-dominant foot) of 10
Tandem stance (non-dominant foot at back) of 10
Balance examination score (30 minus total errors) of 30

clinical domains and investigational results.[50,55] Various commercial computer-based screening tools (e.g., ImPACT) are often utilized in sports clinics to assist in return to play decision making. In a majority of cases, neuropsychological testing is not done until the patient is symptom-free. In certain situations