**Dance Specific Assessment Tools**

As a performing arts physical therapist that specializes in dancers, it is important to understand the dance genre or style. Just like when treating sports injuries, knowing if you are working with a soccer player versus a basketball player is important for proper return to sport. For example, hip hop artists typically have more upper extremity injuries specifically with weight bearing activities, where as ballet dancers are prone to more lower extremity and back injuries. Therefore, it is key to have the most appropriate assessment tools to return dancers to the stage.

Early assessment and intervention starts much like most physical therapy, measuring and restoring range of motion, strength, etc. However for the purpose of this article, the focus will be on assessments of dancers performing concert dance styles, most specifically ballet. These assessments can then be turned into dance specific interventions.

The following assessments include:

* Functional versus Active Turnout
* Airplane Test
* Heel Raise/Sauté Test
* Topple Test

**Functional versus Active Turnout**

Ideal turnout in ballet can be defined as 180 degrees of external rotation of the lower extremity. Functional (uncompensated) turnout is a measurement of hip external rotation along a longitudinal axis not taking into account the friction between the feet and floor to assist in maintaining turnout.1 Active (compensated) turnout is taking this into account, as well as compensatory movements such as anterior pelvic tilt, tibial torsion, and pronation.1 Functional turnout can be assessed with Functional Foot Prints and active turnout can be assessed using a whiteboard. The whiteboard has a central line dissecting the board. The individual is asked to perform a first position (heels together with bilateral lower extremity external rotation) like they would in class.1 This test will highlight the difference between the two, but also potential compensations that can be addressed through interventions. While studies on this assessment tool have only addressed the inter-intra rater reliability, expert opinion has suggested no more than 15 degrees of discrepancy between the two measurements.

**Airplane Test**

Typically dancers have a ceiling effect with balance testing used on the general population. The Airplane Test is a great assessment of dynamic balance and lower extremity neuromuscular control, requiring “the trunk to be pitched forward and the non-support leg extended to the back keeping the pelvis square”2. The patient then performs at least 4/5 single limb squats drawing the hands horizontally towards the floor and returning to the starting position.2,3 Additionally, assessing for compensations that may be addressed later.

**Relevé/Sauté Test**

Adequate calf complex strength is crucial for dancers. All dancers specifically ones starting pointe or returning en pointe should be able to pass this criteria. All ballet dancers should be able to complete 25/25 relevés (heel raise) if not more! Furthermore, dancers going en pointe for the first time should be able to complete at least 8/16 single limb sautés (jumps).2,3 In my opinion, seasoned dancers returning en pointe should be able to complete 16/16 sautés.

**Topple Test**

The Topple Test is a full 360 degrees revolution of the entire body on a single leg, as known as a single pirouette (turn) for a dancer. Looking for full knee extension on the standing leg, proper retiré position of the gesturing leg, minimal body sway and good control during the deceleration phase. 4

In conclusion, there are a multitude of tests for higher-level athletes and great age related normative values, but they do not always apply to dancers directly. The above tests are just a handful of the ones available for dance specific assessments and functional criteria for return to activity.

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