

Biomechanical Considerations for Turnout

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Interviewer: Laura Di Orio of Dance Informa <http://danceinforma.us/>

Why is turnout important for dancers, particularly ballet dancers? What does it help them achieve?

Nancy and Allegra: Turnout or lateral rotation of the hip is a discipline at the heart of the ballet aesthetic as well as many world dance forms—just as the contraction is a central principle in the Graham aesthetic for movement. Turnout is not necessarily important in all dance. Many forms use it in expression. Slightly turning out the hip can provide a more stable base of support through the feet.

What percentage of turnout is genetic or are you born with, and what percentage of turnout is learned or acquired? Is there a certain limit of turnout for each dancer?

Nancy and Allegra: There are many considerations when it comes to improving turnout—some are structural and some are functional or related to habitual use of the body. Skeletal factors include the structure and facing of the acetabulum, or hip socket, the length, shape, and angle of the femoral neck, and the elasticity of the iliofemoral ligament. Although these factors cannot be improved, tendon and muscle structures can support one's lateral rotation to maximum advantage with training. Imbalanced pelvic alignment can restrict lateral rotation and can limit the muscular support and mobility around the joint. Anterior tip of the pelvis will decrease turnout. The opposite movement, gripping/tucking under also inhibits turnout. Tension in any of the muscles of the hip will lessen turnout. Overuse of muscles you do not need prevents the deep lateral rotators that support turnout from working effectively.

At Towson University we have been investigating and developing a sequence of somatic work using Functional Awareness®: Anatomy in Action to release unnecessary tension and teach appropriate motor recruitment. In addition, ballet faculty, Catherine Horta Hayden is using Balanced Bodies rotator discs within the ballet barre work to improve turnout. Quantitative measurements of student turnout, using a tool called Functional Footprints, along with qualitative responses, demonstrated improved turnout and stability of the standing leg to maintain turnout in action.

What are some ways (stretches, exercises, etc.) that can help dancers safely improve their turnout?

Nancy and Allegra: One way in which dancers can safely improve turnout is to equally train the muscles of medial rotation as well as lateral rotation. Training should be a combination of strengthening and stretching the entire hip structure. Too many dancers just practice a couple of exercises to improve turnout and by doing so create an imbalance that defeats all their efforts.

What are some "don't"s, or common mistakes that dancers should avoid, in terms of improving turnout?

Nancy and Allegra: Most dancers overuse turnout muscles. DO NOT walk, stand, and sleep turned out all day, everyday. This restricts hip motion and impedes progress to utilize turnout effectively. Allow your body to move towards balance by coming back to neutral. This will give your body an opportunity to release unnecessary tension, recruit for appropriate muscle action, and recuperate.

Is there a thing as 180-degree turnout? Please explain.

Nancy and Allegra: 180-degree turnout is the ability to rotate each individual hip 90 degrees to each side. The result is the toes pointing directly side, right and left.

This is an extremely rare condition for the hip joint. Usually dancers are trying to achieve this position and recruit too much rotational action in the knee joints, ankles, and feet. This destabilizes the knee and ankle and can lead to injury. One can work professionally as a dancer and contribute to the field of dance performance best by working within their considerations of their own structure and maximizing a balanced neuromuscular approach in order to stabilize the leg for action

What should a dancer be thinking about, focusing on, when turning out?

Nancy and Allegra: If the aesthetic of the dance form requires lateral rotation, dancers should be encouraged to focus on healthy and biomechanically smart ways to achieve their maximum amount of turnout. Continuing to consider a neutral pelvis and utilizing the deep lateral rotators of the hip will help improve and maintain healthy turnout in the long term.

How can a dancer tell if his/her turnout has improved? How can a dancer not feel discouraged if /she doesn't obtain "perfect" turnout?

Nancy and Allegra: Perfect or 180 degree turnout is an unrealistic ideal for most dancers and can lead to pain and injury in the hip, knees, and ankles. Work within your physical structure. A quantitative measurement tool for turnout is called *The Functional Footprint*.

There are ways to increase your turnout through releasing unnecessary tension.

- Release the muscles of the hip not needed to engage in rotation. A tight IT band and tensor fasciae latae muscle often impedes recruitment of the deep lateral rotator muscles.
- Stretching the medial and lateral rotators of the hip, the hamstrings, and hip flexors to ensure resiliency of action for turnout. PNF or Proprioceptive neuromuscular facilitation* or foam rolling can release this tension as well.
- Somatic practices such as the Functional Awareness®, Bartenieff Fundamentals, Alexander Technique, or Feldenkrais Method® are useful to discover ease in action and release unnecessary tension

Resources and further readings:

https://c.ymcdn.com/sites/www.iadms.org/resource/resmgr/imported/info/turnout_for_dancers_anatomy.pdf

https://c.ymcdn.com/sites/www.iadms.org/resource/resmgr/imported/info/turnout_for_dancers_exercises.pdf

Calais-Germain, Blandine. *Anatomy of Breathing*. Seattle: Eastland Press, Inc., 2006.