

DANCERS' HEALTH CORNER

Pointing you in the right direction

BY KATHERINE EWALT

Note: The Dancers' Health Corner is a regular column for DSD written by Katherine Ewalt from Performing Arts and Athletic Restorative Training Specialists (PAARTS) in San Diego. The column presents information and/or advice about dance-related injury and injury prevention. The information is provided as a resource and should not be used to self diagnose or treat. Dancers who experience ongoing pain should seek the advice of a physician or clinician to avoid aggravating current symptoms or potentially causing other more-serious injury. Due to legal limitations, no individual diagnosis or treatment plans will be provided through this forum. If you have questions, e-mail them to info@PAARTSsandiego.com.

I am a professional modern dancer and have had trouble with my hip for several years. It feels like it is shifted to the outside and like it pops out of place. I have been treated for this injury numerous times but it has never completely gone away, and I feel like I am no longer able to address this problem in my technique classes. This issue is affecting my dancing, and I think possibly causing other problems. What can this be? — Jillian Chu

A. The hip joints are of significant importance in the aesthetics of dance as they connect the lower extremities to the torso, allowing the dancer to communicate intent, motion and purpose without actually moving. Due to the nature of dance activity and the use of the turn-out position, as seen in all forms of dance, it is common for dancers to develop muscular imbalances, including tightness and/or weakness in the anterior (front), lateral (outer), and posterior (back) thigh and hip muscles.

External, or lateral, snapping hip syndrome is a common dance injury related to these muscular imbalances. The dancer with this condition commonly reports the sensation of the hip "slipping out of place." Similarly, a "snap" may be reported to occur at the outside of the hip during such movements as *rond de jambe*, shifting the weight to a single leg stance and jump landing. A brief look at the anatomy of the hip may assist in providing a clearer picture of how this condition develops and why the hip feels "shifted to the outside" and "popping out of place."

As seen in [figures 1 and 2](#), the muscles of the gluteus maximus and tensor fasciae latae insert into the iliotibial band (ITB) just above the bony prominence of the greater trochanter of the femur. The ITB is the strong fascial band that courses down the lateral (outside) aspect of the thigh to the lateral knee ([figures 1 and 2](#)). By their insertions (attachments) into the ITB,

the gluteus maximus and tensor fasciae latae muscles provide support to the hip and knee by tightening the fascia during movement. Additionally, these muscles cause the joint actions as follows:

Gluteus maximus

- Hip extension (direction of arabesque)
- Hip external rotation (turn-out)

Tensor fasciae latae

- Hip abduction (lifting the leg to the outside as in *dégagé second* in parallel)
- Hip flexion (as in *grand battement front*)
- Hip internal rotation (turn-in)

When tightness and weakness of the gluteus maximus and tensor fasciae latae or tightness of the ITB develops, these muscles no longer work in concert with the other musculature in and about the hip to produce the many motions required for dance activity. The dancers will often find ways to move/dance around these limitations, further perpetuating the tight and weak cycle, which may ultimately develop into external/lateral snapping hip. The actual "snap" is a result of the tight ITB moving over the greater trochanter of the femur as seen in [figures 3-4](#).

Similarly, during jump landing, as the tensor fasciae latae contracts to stabilize the pelvis, fibers from its fascial connection to the ITB may also snap forward over the bony prominence causing the hip to feel like it is "sliding out of place." Sometimes, with repeated external snapping, the underlying tissues can become inflamed and swollen leading to pain at the outside of the hip, known as trochanteric bursitis. For this reason, it is important that the dancer attend to any muscular imbalances that may exist to avoid further and/or secondary injury. A thorough assessment of the dancer's strength and range of motion as well as analysis of dance technique will confirm each contributing factor that should be addressed. Should these contributing factors go unaddressed, there is the potential for the development of chronic hip problems as well as secondary compensatory injuries to other areas such as the knee and low back.

Factors that may increase a dancer's risk of developing external snapping hip include a wide pelvis, prominent greater trochanter, ligamentous laxity, weak hip abductors and tightness in the iliotibial band. Of these, the dancer can work on strengthening of the abductors and deep rotators of the hip as well as stretching the iliotibial band to regain and maintain muscular balance about the hip. To help prevent the development of external snap-

ping hip, it is suggested dancers include a structured stretching regimen as part of their daily dance routine.¹ Such a routine should include stretching of the calf, hamstrings, quadriceps, hip flexors, hip rotators, tensor fascia latae and ITB (see Dancers' Health Corner article in *DSD* Sept/Oct 2007 for stretching routine photographs and instruction).²

FOLLOWING ARE SUGGESTED STRETCHES AND EXERCISES FOR EXTERNAL SNAPPING HIP:

- Iliotibial Band Stretch (right) (figure 5)
- Side-lying hip abduction (figure 6)
- Side-lying hip abduction with external rotation (turn-out) (figure 7)

It is important that the dancer's technique be evaluated by a clinician well versed in dance, as often faulty dance mechanics may be the root of the problem. If the signs and symptoms do not change or worsen, the dancer should seek the advice of a physician or clinician.

Anatomical figures:

1 and 2: Karen Clippinger "Dance Anatomy and Kinesiology." *Human Kinetics*, 2007, p.166-167.

3 and 4: Sammarco GJ. *The hip in dancers. In: Medical Problems of Performing Artists*, vol 2, 1987.

Model for figures: Jillian Chu, director for Bound Contemporary Dance

¹Reid D, et al. Lower extremity flexibility patterns in classical ballet dancers and their correlation to lateral hip and knee injuries. *American Journal of Sports Medicine* 1987; 15(4): 347-352.

²Ewalt, KE. Dancers' Health Corner: Pointing you in the right direction. *Dance San Diego* 2007; 1(3): 8-9. **DSD**

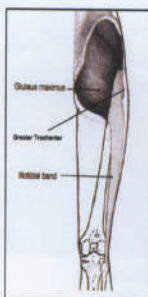


Figure 1
Posterior/back view of hip

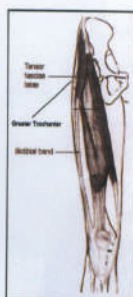


Figure 2
Anterior/front view of hip

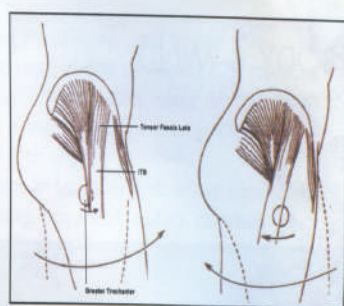


Figure 3 and 4
Diagram of the right hip showing the relationship of the tensor fascia latae and iliotibial band to the greater trochanter. Figure 3: The tendon snaps forward as the dancer flexes the hip when landing from a leap; figure 4: The tendon snaps backward as the dancer recovers and extends the hip.



Figure 5



Figure 6



Figure 7



Katherine Ewalt, MS ATC, NCTM, HHP, is the owner and director of Performing Arts and Athletic Restorative Training Specialists (PAARTS)

Wellness Studio in San Diego. PAARTS is a multifaceted wellness studio specializing in the needs of performing artists, athletes and active people. Ms. Ewalt has worked in the fields of sport and performing arts medicine for 10 years and is actively involved with the International Association for Dance Medicine and Science (IADMS), and the National Athletic Trainers' Association (NATA) Performing Arts Medicine Work Group. Ms. Ewalt is the dance medicine consultant to the San Diego Ballet. For more information, please contact info@PAARTSsandiego.com or (619) 7225-5762.

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