

SAVING GRACE: ELEGANCE AND FOOT CONTROL

by Jack R. Giangliulio, D.C., B.S.

In my career as a dance injury doctor I have treated a myriad of dancers plagued by injuries to differing parts of their bodies. The majority of these injuries had a single etiology in common; they were all inherently rooted in the dancer's lack of foot control. Loss of foot control is one of the top causes of injuries in dancers. In fact, I have written multiple articles on this subject. But one day while watching a performance, I was astonished to discover that proper foot control was even more important to dancers than I have ever imagined.

I was treating a dance company during a long Nutcracker run when I decided to watch a performance from the front of the house. I must admit, as the doctor on call, I scrutinize dancers differently than most spectators; I'm always on the alert for signs of possible injuries. In this case, two female dancers, whom I knew, were dancing near each other. They were of the same size and built, and both were equally talented dancers with strong technique; however, one of them continually caught my eye. She danced with an effortless grace, floating across the stage cocooned in a veil of elegance. To my amazement, in comparison, the other dancer seemed to be in labor, every lift of the leg and jump was a monolithic effort. It made no sense! As individuals these girls were beautiful dancers and yet side-by-side the difference in their grace was polarizing.

This sparked my curiosity; I knew they were equally talented, I knew they were physically the same, and I knew they were both dancers audiences loved to watch. So what was the problem? That question consumed me; there had to be an answer. The only logical conclusion was that there must be a biomechanical difference between the two dancers. The challenge was on; I was compelled to find the difference.

I remembered, a couple of weeks early the less graceful dancer had shin pain that quickly resolved with one treatment. At that time, I also cautioned her to pay more strict attention to her foot control. It wasn't a major problem; however, when her feet were significantly stressed they would slightly roll-in (Hyperpronation) - hyperpronation is a good reason for shin pains. She didn't enjoy me pointing out this flaw in her technique, so she decided to ignore the whole concept. Ah ha, foot control; now I had a biomechanical difference to focus on.

I honed in on the two dancers each time they performed. I watched them from the front and I watched them from the wings. Each time I concentrated on the effects their foot control had on their bodies. When the graceful dancer jumped or lifted her legs she would push through her feet. Her ability to maintain the arch of her foot without hyperpronation allowed the natural arch of the foot to give her spring. Because of this she needed less muscular effort to elevate her legs. The combination of foot spring and less muscular effort allowed this dancer to have superior control of her limbs; thus a more graceful appearance. When she landed from jumps or placed her foot onto the stage, she had the ability to dissipate the force of the landing by using her mastery of foot control to steadily roll down through the arch of her foot. This created soft landings, allowing her to swiftly spring up through her feet again for the next technique. As I said, she floated across the stage.

In sharp contrast, the other dancer had problems maintaining her foot control during jumps. When she pushed off to jump, the arch in her foot would roll-in. This stopped the springing momentum of her foot, forcing her to muscle her legs into the air by exerting extra hard with her hip and thigh muscles. The visual result was choppy laborious movements. When she landed her arches would quickly hit the floor, causing her to lose the ability to dissipate the forces of landing. Visually you could see her heels jar down as her slippers slapped onto the stage, generating a vibratory jolt throughout her body and leaving her unprepared for the next step. It was the same when she lifted her legs or placed them back onto the stage. I was exhausted just watching her dance.

By Jove, I found the answer! There is a link between a dancer's gracefulness and a dancer's foot control. Before this point in time I would have never thought of correlating the two. Now I had a new hypothesis to test. Armed with this information, I watched every dancer during the Nutcracker performances. The same patterns continually repeated themselves proving the hypothesis to be true. "Dancers with decreased foot control have loss of stability in their feet, which causes them to physically work harder to move their legs and to jump. This increased physical demand may be visualized and interpreted by the audience as less grace and elegance."

As alluded to earlier in this article, proper foot control has always been an indicator in determining the future health of a dancer; however, now it may also be utilized as a hallmark of a dancer's grace and elegance.

- *Dance Long & Healthy*

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