The Importance of Sleep in Dancers

by Mercedes Rivera, Texas A&M University

For many dancers, it is common to spend an entire day at the studio including late-night rehearsals and early morning call times. However, the lack of sleep and proper rest in dancers has shown to have major consequences on training and performance. Sleep deprivation over a long period of time is positively correlated with a lack of concentration and agility during performance. Getting less than the recommended 7-9 hours of sleep can also cause an increase in anxiety, especially in younger developing dancers. If the dancer is not at full mental capacity or is physically fatigued while performing intricate movements this can lead to injury. In order to get more sleep, dancers should limit their caffeine intake during the evening and turn off electronic devices before bed in order to reduce distractions during their sleep cycle. Studies also show that taking small naps during the day can be beneficial to the dancer’s recovery process. By making this small lifestyle change, dancers can continue to dance to their fullest while also preventing injury.

Resources:
In junior year of high school, my lower back and neck pain started to aggravate me and affect my performance in dance. I was dancing an average of 5 hours per day in a variety of styles. I treated the pain with ibuprofen and continued to dance as if everything was normal. I learned that I had an early degenerative intervertebral disc in my cervical spine and spondylolysis in my lumbar spine.

Whilst pursuing my Bachelor of Arts in Dance, option in Dance Science at California State University Long Beach, I was introduced to Pilates as a course requirement, and I became interested in resistance training and learning how to stabilize before building strength. I realized how little my trunk stabilizers were being activated while I was dancing or in my everyday life. The stability of my intervertebral joints was lacking sufficiently, which was causing the pain in my spine. I had to learn to stabilize before building strength.

Many dancers have muscular imbalances (overuse of agonist muscles and weakness in the antagonists) due to the repetitive nature of dance. These muscular imbalances must be overcome by learning how to retrain the body and progress to higher strength levels. Resistance training allows dancers to target these imbalances to enhance dance performance. While we often think about dance as being a whole-body experience, there are often muscles that are weaker than others. For instance, research shows that upper body muscular strength and endurance is generally lesser than that of the lower body in dancers.

I have found Pilates to be extremely beneficial and compatible with the practices of dance, for the methods of Pilates training focus on both stabilization and strength, especially in the lumbo-pelvic region of the body. After recently obtaining my certification to teach Pilates, I now have the confidence to establish a movement practice habit in my life that is congruent to my dancing, while providing an additional fitness component and mind-body connection. This movement practice will be important to me even beyond my dance career, to keep my spine healthy and maintain a connection to movement as I age.

Sekendiz et al. (2006) compared the effects of Pilates on trunk strength, endurance, and flexibility in sedentary adult females. In their results, they concluded that “abdominal and lower back muscular strength, abdominal muscular endurance and posterior trunk flexibility in sedentary adult females” were improved with the use of Pilates mat exercises. Another study indicated that after 4 weeks of Pilates-based exercise training, there was an overall enhancement of lumbo-pelvic stability and improvement of flexibility of the lower back and legs. These areas of the body are crucial to living a long and physically healthy everyday life (Phrompaet, Paungmali, Pirunsan, & Sitilertpisan 2011).

I urge fellow dancers to find a different way to move, a different way to connect to their bodies, and a different way to train. The physical and mental benefits do not only enhance performance, but they initiate a new bodily experience that can be utilized in the future long after we stop dancing.

Resources:

The Importance of Upper Body Strength in Dancers

by Danielle Schraer, Texas A&M University

All styles of dance come with different demands on the body and therefore could incur injury in different parts of the body. Most research studies done on injury rates in dancers focus on either ballet technique or lower extremity injuries. This lack of information in other genres of dance and other areas of the body, make upper extremity injuries seem unlikely.

It has been shown that modern dance requires more from the upper body than other genres and has an 11-14% upper body injury rate (Ambegaonkar, 2012). Overall muscular endurance, strength and power have an influence on whether a dancer will sustain an injury (Ambegaonkar, 2012). A study done on collegiate-level modern dancers used a modified push up test, to compare the upper-body muscular endurance of collegiate-level dancers with non-dancers who are physically active (Ambegaonkar, 2012). The study wanted to see if anthropometrics (measurements or proportions of the body) or physical activity could be used to predict the outcome of their study. Although dancers were more active throughout the week, there was no significant difference in the number of pushups achieved by either of the groups. Even though dancers perform more physical activity than most other populations, “dance alone does not provide sufficient stimulus to cause physical fitness and muscular gains.” (Ambegaonkar, 2012). This study showed that cross-training is a necessity to increase upper body strength. Some dancers are skeptical of strength training because they are afraid that muscular gains may affect their body’s natural aesthetics or artistry; however, strength improvements have been shown in dancers that participated in cross training without any negative effects on their body’s natural aesthetics (Ambegaonkar, 2012). With modern dance placing such a high level of demand on the upper body, it is important for modern dancers to maintain their strength and musculature in order to prevent upper body injuries.

Resources:


Exercises to Improve Strength in the Upper Extremities

Target Area: Triceps, abs, upper back

Sit tall with your knees slightly bent, hold the band with palms facing down. Lean your upper body forward, and extend both arms behind your body. Return to the starting position.

Target Area: Biceps, back extensors, abs

Sit tall with your legs straight out, turn palms upright lift elbows to shoulder height, lean back and engage your abs as you extend the arms and burl back in.

Target Area: full body integration

Loop the band around so it sits just under your scapulae. Hold the band under your hands and extend your body out into a push up position. Execute a push up breathing in as you lower and exhaling as you push up way from the floor.
An Investigation into Memory and Flow in Dance
by Lauren Copping, Trinity Laban

After two years of studying in London, England I have recently completed my thesis for the MFA Dance Science at Trinity Laban Conservatoire of Music and Dance. My research, entitled “An Investigation into Memory and Flow in Dance,” looked at topics in cognitive and positive psychology to better understand the role of memory in contemporary (modern) technique classes. The capacity to memorize is highly important in dance. Dancers are not only required to quickly learn and memorize new combinations, but they must also be able to retain and recall long, complex movement sequences (Carvalheiro & Rodrigues, 2009). Memory in the context of contemporary dance is especially interesting because there is no set repertoire or movement vocabulary (Stevens, Ginsborg & Lester, 2010). However, despite the acknowledgement that dancers demonstrate extraordinary memory capabilities, research into memory for dance has been notably absent in dance science literature. A second topic that has also been evidenced in contemporary dance, but necessitates further dance-specific research, is flow. As a central concept in positive psychology, flow is the subjective mental state that describes an intrinsically rewarding experience where there is a sense of everything coming together, even in challenging situations (Csikzentmihalyi, 1990; Swann, Keegan, Piggott, & Crust, 2012). Moreover, literature has independently discussed the role of attention as it pertains to both these psychological constructs, but no studies have explored attention as a possible relation between memory and flow. In order to address gaps in the research, this study aimed to add to the existing literature and to expand the scope of psychology as it pertains to memory and flow in contemporary dance. Specifically, the purpose of this research was to investigate female dancers’ perceptions of memory in relation to achieving flow during contemporary technique classes. Using a qualitative design, this project included two-phases of semi-structured interviews that were analyzed using an inductive approach of thematic analysis (Braun & Clarke, 2006). Twelve female contemporary dancers participated in the study, all of whom were enrolled in the undergraduate, postgraduate, or professional development programmes at the same dance institution. Following thematic analysis, five themes were identified: perceptions of memory, factors influencing memory, strategies to improve memory, memory in the body, and perceptions of achieving flow. Dancers discussed various factors and strategies they perceived to improve their recall for contemporary dance sequences. The participants mentioned that flow was only experienced once movement was stored in the body, meaning it was no longer consciously attended to. These findings suggest that implementing factors and/or strategies to enhance memory for dance during learning may lead to overall improvements in memory. This could result in increasing dancers’ likelihood of achieving flow in contemporary technique classes.

**Resources:**