

On the Technique

Proprioception and Dance

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There are many factors that are involved with being able to glide smoothly and efficiently along the dance floor.

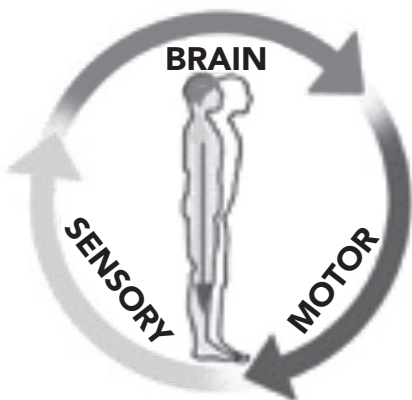
Humans have an innate communications system between body and brain that helps to coordinate smooth, balanced physical movements. This inherent attribute is known as proprioception and is sometimes referred to as the body's sixth sense. Proprioception allows one to know exactly where their body is positioned at all times.

More specifically, proprioception provides a constant flow of sensory information that contributes to a natural sense of the body's spatial position. Without this, everyday physical activities would be difficult to accomplish. Creative activities such as dancing, tai chi, ice skating and others rely heavily on proprioception. There are several key factors that make smooth body movements possible. This relies on various sources of sensory information much the same as a car's on-board computer relies on its electronic engine sensors. In this analogy, information is continuously sent to the computer by the car's electronic sensors. The sensor information is collected by the on-board computer and is then instantaneously processed. This results in ongoing real time adjustments to the engine

to ensure smooth and efficient performance. In the same manner, vision, the vestibular balance system and proprioceptors all send sensory information to the brain. The information from each of these areas is instantly processed and acted upon in real time to help ensure smooth, efficient and balanced movements.

Here is how proprioception works. Nerve endings called proprioceptors that are associated with the body's muscles, tendons; ligaments and fibrous tissue in the joints provide sensory information to the brain. The brain integrates this to form a sense of body position, direction and rate of movement. There are specialized proprioceptors located in the belly of the muscles known as muscle spindles that detect and track muscle elongation as well as the level of exertion during physical activity. Other proprioceptors provide information about joint angle and location of the limbs as well as objects in the immediate environment. All of this information is conveyed to the brain through the nervous system's sensory pathways. The brain processes this instantaneously to determine the position of the body and limbs relative to each other. The brain then signals the muscles to help create the actual physical movement through another set of specialized nerves known as motor neurons. This finely tuned feedback system between sensory and motor pathways takes place automatically in real time to support coordinated movements in three dimensional spaces.

There are various ways to work with proprioception for the purpose of enhancing dance skills. While vision is an important aspect of movement, it can also be a distraction when learning new figures and routines. One of the most effective techniques for improving spot dance skills is to close your eyes while dancing a routine, providing there is no risk of collision with other dancers or nearby objects. This eliminates the dominant visual sense, thereby making you rely more heavily on proprioception. Many dancers improve significantly over a shorter period of time when using this technique. It helps one to become increasingly more aware of their body sensations in relation to



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the dance movements. This technique is not recommended for dances that travel.

Another way to build proprioceptive awareness is to dance your routine slowly in front of a mirror. In this scenario, proprioception is used in conjunction with vision to help develop a more refined quality of movement over time. The mirror provides excellent real time feedback. While practicing this technique it is important to always maintain an upright posture. A misaligned posture will throw one's center point of balance off. It is also important not to gaze downward while dancing as this will also throw the center point of balance off. Bad postural habits are easy to pick up and become difficult to correct once reinforced.

Proprioception provides a means by which dancers can achieve graceful movements with greater expression. Refining proprioceptive skills leads to higher quality dance movement through enhanced spatial awareness with a decreased probability of injuries. This is how experienced dancers glide elegantly across the dance floor without fear of bumping into others. They know exactly where they are in reference to their own body as well as their immediate environment. Everyone possesses a degree of proprioceptive awareness. This can be further developed by practicing the fine movements of dance repetitively. It will serve to greatly enhance your dance experience.