

VOICE AND DANCE TECHNIQUE INTEGRATION - TRIPLE THREAT OR DOUBLE TROUBLE? - Jennie Morton BSc (Hons) Osteopathy

Being a multi-disciplinary performer is becoming increasingly necessary for survival in the competitive world of the performing arts, nowhere more so than in our musical theatre productions. In addition, today's modern musicals are requiring evermore demanding skills in both voice and dance whilst the performer is also possibly navigating complex sets and scenery, being flown across the stage on a harness, wearing awkward costumes, footwear, extreme headdresses or masks, all whilst being blinded by dry ice, strobe lighting and, of course, having the inevitable pyrotechnics launched from inches away! The effect from the audience's perspective may be stunning, but for the performer, stages have begun to resemble more of a theatre of war than a theatre of comedy.

In order to safely handle all that is thrown at them, it is vital that triple threat performers have a solid all-round technique which can be relied upon to produce a consistent performance for the requisite eight shows per week, enabling them to cope with any potential environmental distractions on stage without it affecting their performance. So, how are we training our performers to do this?

My interest in this subject comes from personal experience of having been a triple threat performer and the particular issues of technique integration that I had to deal with. I was in full-time vocational training at a theatre school from the age of seven where we were well-schooled in all theatrical disciplines. However, each of these was taught as a distinct pedagogy and the means to integrate them was not something that was specifically addressed. My professional career began as a classical ballet dancer and after five years of touring with a ballet company, I decided to make the transition to musical theatre. I had received a good vocal training at school, but had put my voice on the shelf for the time that I was dancing classically.

My first job was in a principle role in *Pickwick: The Musical*, choreographed by the great Gillian Lynn, who was noted for liking dancers with a strong classical dance technique. I soon found that my classical dancer's posture was affecting my ability to sing correctly and I was having trouble reaching my upper register.

My next production was a light operetta which involved minimal choreography. A fellow cast member, who was an opera-trained singer and voice coach, recognised the struggle I was having and offered to help me in exchange for dance lessons—a very good deal for us both! And so began my journey into unravelling the mysteries of integrating dance and voice. I now work as an Osteopath specialising in treating performing artists, which gives me the opportunity to incorporate my knowledge of functional anatomy with my personal experiences in this area. I am regularly treating performers who have developed injuries or physical restrictions as a result of inefficient merging of these techniques so I am more motivated than ever to find some solutions for good training practice.

Let's look first at the typical requirements of posture for dance. This usually favours an anterior centre of mass over the balls of the feet and typically hyper-extension at the knees. Inward bracing and holding of the abdominal muscles is taught, resulting in decreased diaphragmatic excursion and a tendency for upper chest breathing with resulting accessory respiratory muscle overuse. An elevated chin position with extension of the cervical spine is also typical, leading to the larynx being held high.

Now if we look at optimal vocal posture, this requires a more mid-foot stance with knees unlocked. Outward expansion of the abdomen is required to allow free descent of the diaphragm and full use of the lower lobes of the lungs. The upper cervical vertebrae should be neutrally aligned with the chin-sternum relationship undisturbed for protection of the vocal apparatus. The rib cage should be free to expand in all directions for maximal use of lung capacity.

Already we are beginning to see the discrepancies between the postural requirements for these two disciplines. In order to achieve adequate breath intake for vocalisation, the diaphragm must be allowed to descend fully (contract) resulting in outward expansion of the abdominal contents which requires relaxation of the abdominal musculature. If the abdominal muscles are being braced inwards by our dancers, this mechanism will be compromised. The result will be increased use of upper thoracic breathing which, to quote D. Garfield Davies in his book *Care Of The Professional Voice*, "...is less effective, more effortful and generally not used in proper vocal technique" (1998, 2). Dance choreography will often require use of the arms over the head which can also result in a tendency for upper body muscle overuse and high, shallow breathing. If adequate breath flow is not being used the performer may compensate by squeezing the vocal folds to achieve volume, thereby increasing the risk of vocal injury (Melton/Tom 2012, 42). The cervical spine extension often seen in dancers will also draw the larynx high resulting in a squeezed sound. A performer who trained primarily as a dancer may find difficulty in achieving and maintaining healthy vocalisation due to these pedagogical conflicts.

For our performers who trained primarily as singers who are then required to dance, the aforementioned optimal vocal stance with the weight more towards the mid or rear-foot will compromise their ability to achieve economy of dance movements, particularly where jumping is required. This centre of mass placement will also compromise the shock-absorbing mechanisms necessary for landing from jumps, resulting in an increased injury risk to the joints of the leg and spine.

In order for our triple threat performers to navigate through these diversities in technique, we need to find some common denominators in posture and muscle recruitment. In my opinion, the solutions lie in a good understanding of the anatomy and the use of imagery and visualisation to facilitate the performer's understanding of this. The questions that need to be asked are:

1. Are there any muscle groups that can be recruited to the mutual benefit of both techniques?
2. How can we facilitate the performer's understanding of best practice?

Starting with the first question, we need to find a way for our dancers to achieve the necessary core stability for their dance movements without restricting free movement of the diaphragm, allowing for optimal breathing mechanics. There are a multitude of muscles involved in breathing mechanics and core stability, but in my experience of personal experimentation, I feel the solution lies primarily in correct recruitment of the transversus abdominus, psoas and pelvic floor muscles.

The transversus abdominus and diaphragm have a direct connection via inter-woven fibres. The transversus is active during exhalation by squeezing in on the abdominal cavity and thus creating the pressure to expel the air from the lungs. As it engages, the horizontally-aligned fibres also form a firm corset of support for the lower back providing the necessary stability. So much of dance training is focused on "sucking in" the abdomen during inhalation to provide the impetus for movement, when more efficiency lies in correct engagement of the abdominal muscles during

exhalation. If active exhalation is used by engaging the transversus during the downward phase of movements, such as landing from a jump or lowering a leg from a high kick, not only will these movements be supported and protected from collapse, but a natural reciprocal recoil for inhalation will also occur, thus removing the need for forced effort during in-breath. This will allow the abdominals to soften in order for the necessary expansion to accommodate diaphragmatic excursion without compromising stability.

The psoas and diaphragm also have direct fascial connections via the medial arcuate ligament. They meet in the centre of the body at the level of the solar plexus, referred to as the place where “function meets breath” by Jo-Ann Staugaard-Jones in her book *The Vital Psoas Muscle* (2012, 116). The psoas is unique in that it is the only muscle to connect the upper body to the lower body and is vital for the strength and fluidity of dance movement. Paired with the iliacus, it forms the iliopsoas to become a strong hip flexor, vital to dance technique. If a dancer is pulling inward on the abdominals and thus restricting diaphragmatic excursion, she or he is then also necessarily restricting iliopsoas movement, which results in tension and restriction at the hip joint. This can lead to decreased flexibility and increased injury risk.

The pelvic floor muscles connect the ischium (or sitting bones), the coccyx at the base of the spine and the pubic bone. They form a diamond-shaped sling of muscles also known as the pelvic diaphragm and are again active during forced exhalation. This provides stability for the pelvis which allows for freedom of movement in the legs and arms. A stable pelvis is at the root of all movement as it reduces the need for tension higher up the chain and into the extremities creating more economy of movement. Without excessive upper body tension, there is scope for greater lower rib expansion for deeper inhalations and the reduction in excessive muscular activity leaves more oxygen available in the system. This can help to reduce fatigue, which is another risk factor for injury. The pelvic floor muscles can also be recruited independently of exhalation creating an alternative base of support option when a dancer might otherwise have braced in the abdominal muscles.

The combined result of this pattern of muscle recruitment will enable the breath to be deeper and lower in the body, serving also to lower the centre of gravity. This will make the dancer more stable and decrease the tension in the muscles of the neck and vocal apparatus. Once this mechanism is understood, performers may further explore into the use of other muscles such as the obliques, quadratus lumborum etc., to broaden their options further.

These ideas may require quite a shift in thinking for many dancers used to working with a rigid abdominal technique and may not be appropriate and/or possible for all movements and gestures. However, I believe that embracing these ideas creates a series of options for the performer to choose from which will hopefully broaden the potential for dance and voice integration. There is no one form of muscle recruitment that will work for every situation, but if you always refer back to the anatomy then you can find individual ways to optimise the technique to suit a particular performer's body or choreographic/vocal repertoire requirement.

In order for this to be achieved, I believe that the teachers working in these pedagogical fields need to have a firm understanding of anatomy and the ability to contextualise this appropriately. Whilst I understand the need to teach the disciplines of dance and voice as separate entities, where a performer is specifically training for a career in musical theatre, there must also be specialist

training available on the integration of these techniques. Dance and voice educators must come together to explore common pathways to reach optimal performance in all disciplines.

To answer the second question of how we can best facilitate the student or performer's understanding of these ideas, I think most performers respond well to the use of visualisation and imagery. Using the idea of the lungs being spongy and elastic can be helpful in reducing a dancer's rigidity in the approach to breath. Encouraging performers to imagine that they are performing in a theatre-in-the-round where their audience is behind as well as in front of them can promote awareness in the posterior and lateral aspects of the body, allowing for all-round expansion of the rib cage. Imagining the voice resonating out through the whole skull rather than exiting at the mouth can reduce the tendency to "push" the voice and also helps to align the cervical spine, and therefore vocal apparatus, in a more neutral position. These ideas coupled with a good grounding in anatomy will give performers some useful tools to help them negotiate their technique integration.

As our performers are now having to deal with increasingly complex interaction with sets, props and costumes, I believe that part of their training should be devoted towards balance and proprioceptive work. Practising reciting text or singing whilst performing balance exercises on wobble-boards or fit-balls at the same time as throwing and catching a ball can help increase reflexes, reaction time, and proprioception, enabling our performers to have better skills to cope with complex working environments.

I also believe there is an onus of responsibility on the part of the choreographers and musical directors who create our musical theatre productions to integrate and liaise on how to ensure the best possible vocal and physical performances whilst minimising injury risk to their performers. In my ten years of experience as a musical theatre performer I found that, during rehearsals, choreography was always taught in one studio and vocals in another, but the responsibility for blending the two together was left up to the performer to figure out! In one particular production, I had to begin a number by timing a run from the wings in order to hit the height of a split leap centre stage whilst simultaneously hitting a high note beginning on a consonant (which required preparing the breath slightly earlier in order for the following vowel to be on the beat). The breath placement for the jump and the vocals were mutually incompatible and I spent a year in this West End production trying out different ways of getting the two things to work simultaneously, but never quite managing it!

Choreographers and musical directors are both trying to get the most of their performers but perhaps better communication and integration of ideas may prevent the scenario of a dancer having to hit a top B flat whilst being held upside down in a partnered lift!

I have spoken to many performers and educators involved in the world of musical theatre in the UK, the US, and Australia and the story seems to be the same everywhere, that the integration of voice and dance technique is an area that remains under-researched and is not always well addressed in the training of the triple threat performer. However, there are several people that are beginning to look at this more closely, including Joan Melton, PhD in the US, whom I thank for sharing her wonderful work with me and for the opportunity to write this article. I think the time is right to begin to address these issues now as our musical theatre industry continues to grow and become ever-more adventurous in its productions. Thus we can ensure the safety and health of our dedicated and very talented triple threat performers.

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