

“Dance for Health” Class Core Concepts



- **Alignment** is the straight placement of skeletal structures over each other along the body’s vertical plumb line
 - head, rib cage, and pelvis are vertically stacked over the legs and feet
 - weight is transferred through the center of each joint
 - line of gravity, or vertical line that bisects the body, passes through the center of the torso, and the body parts on either side of the line of gravity are symmetrical (square)
 - proper alignment maximizes muscle efficiency and prevents injury
 - **alignment markers**
 - when viewed from the side, the body’s vertical plumb line should pass through the center of the ear lobe, shoulder (acromion), rib cage, hip (greater trochanter), knee, and outer ankle bone (lateral malleolus)
- **correct alignment through neuromuscular re-patterning from somatic therapies**
 - body alignment re-patterning begins in the nervous system: need to re-train the nervous system’s cerebral images of movement and messages to muscles to change movement patterns
 - find mental image of correct alignment
 - pause and allow for breath
 - lengthen spine and release tension in back of neck (“head floats up”)- make the change in the body with mental control and awareness, not tension
- **Proper Technique and Overload Progression** are critical for injury prevention in dance and movement classes
 - Proper technique: correct placement and skill execution
 - Overload progression: sequence of class exercises that progresses in intensity and challenge
- **Proper Technique**
 - Important for neuromuscular efficiency, joint protection, avoiding stress on muscles, preventing fatigue and injury
 - **Common errors in alignment—watch out for:**
 - Excessive arching of lower back
 - Lifting hip
 - Locking back into knee joints (hyperextending knees)
 - Pronating (rolling-in) feet
 - Forcing turn out from knee down
 - Wobbly ankles, rolling out (sickling) on balls of feet- indication of weak peroneals and calves
 - **Injuries associated with common misalignments**
 - Locking back into knee, pronating, and forcing turn out strain knee ligaments and cause knee problems
 - Lifting hip can cause strains or tendonitis in hip flexors
 - Excessive arching of lower back reduces abdominal support that provides stability and protects spine
 - **Key points in proper technique**
 - core support- abdominals in and up, ribs closed, back engaged
 - proper posture- spine lengthened, tailbone down, chest open, head in line with spine
 - keep sitz bones straight over heels
 - weight on big toe, little toe, and heel- do not roll out or in on feet
 - knees aligned over 2nd toes whenever bent- do not roll in (look down and be able to see big toes)
 - articulate feet on floor
 - keep pelvis under and square and stabilize lower body when upper spine or working leg moves
 - lead with pelvis in travelling movements
 - work in and maintain an individualized level of external rotation
 - maintain turn out in both working and supporting legs
 - engage inner thighs and hamstrings when standing **on one or both legs**
 - **Correcting alignment and improving technique**
 - Increase core strength and abdominal support
 - Do not force turn out- work in personal degree of external rotation
 - Do not lock back into knees- keep weight forward towards balls of feet
 - Keep pelvis under, tailbone straight down
 - Lengthen front of hip, stretch hip flexors
 - Engage and strengthen peroneals (muscles on outside of lower leg) and calves to lift arches, stabilize ankles, and prevent rolling out on feet
 - Perform supplemental strength and flexibility exercises as well as mind-body conditioning for core support, such as Pilates or yoga
 - **Teachers should assess weight-bearing joints first-** hips, legs, knees, ankles- because they are more prone to injury

- **Overload Progression:** follow conditioning principles to safely increase intensity when designing classes

Warm up

- A warm up is necessary before any exercise or movement session to elevate body temperature and prevent muscle strains
- The gradual muscle contractions of a warm-up prepare the muscles, tendons, and ligaments to work and stretch, distribute heat and oxygenated blood around the body, increase muscle elasticity, and connect and focus the mind and body
- **Warm up format**
 - Begin with low-intensity movements of major muscle groups
 - Incorporate core abdominal work
 - Include static stretching (no bouncing) after active portion of warm up
 - Progress to integrated full body movements
 - End with exercises that promote cardiovascular endurance
- A good, thorough warm up should last at least 15 minutes
- Warm up should be specific to later movements in the class to promote correct mind-body patterns

Dance technique or movement exercises

- Floor and/or standing exercises, specific to the dance technique, are performed after the warm up
- **Dance technique or movement exercises sequence**
 - Begin with simple, stationary movements on two legs: *pliés* (bending and straightening knees) to find proper standing alignment, knee placement, turn out
 - Move to standing on one leg and performing movements with other leg that test balance and increase in leg height
 - *Tendus*: brushing leg and articulating foot on floor, first balance on one leg
 - *Degagés*: brushing leg and articulating foot off floor with a sharp, dynamic energy
 - *Rond de jamps*: circular movement of one leg; first rotary action of hip joint, stabilize pelvis and torso
 - Progress to higher leg extensions and full-body movements
 - Incorporate travelling exercises that change levels at end of sequence
- Elements of the class exercises should relate to both the warm up and final combination

Across the floor (time permitting)

- Travelling combinations that gradually increase in intensity and complexity can be performed in small groups after the class exercises
- Movements should relate to the final combination

Final combination

- Longer combination that integrates all of the previous elements of class is learned and performed near the end of class
- If students are sufficiently advanced, the combination promotes cardiovascular endurance to condition the dancers' aerobic energy systems (the short-duration and high-intensity movements in dance classes condition anaerobic rather than aerobic energy pathways)

Cool down

- Perform slow, low intensity movements to gradually decrease circulation and heart rate to normal and re-center the body
- Keep dancers' heads above the floor for the first few movements of a cool down to prevent blood from rushing to the head
- Perform static, active stretches (no bouncing) during the cool down, when muscles are quite warm, to maximize flexibility gains

- **Personalized Approach to Healthy Movement**

- Help students to find the optimal way to reach the desired aesthetic goal within their individualized body structures, rather than conforming to an external ideal
- Explain to students the anatomical purpose of exercises, proper way to perform each movement, and importance of correct alignment and technique for injury prevention
- Provide students with 4 important tools
 - Conceptual understanding of anatomically correct technique
 - Heightened perceptual awareness of the body
 - Knowledge and understanding of how to work efficiently within one's own body
 - Pride in and strong sense of self
- Recommend healthy amounts of supplemental conditioning (avoid too much cross training that could lead to overuse injuries)
 - Strength training: 2-3 times per week on non-consecutive days, light weights
 - Flexibility: active, static stretches held for 30-60 seconds (no bouncing)
 - Cardiovascular endurance: at least 30 minutes 3 times per week using low resistance
- Teach students to become thoughtful movers who have deep somatic awareness, assume responsibility for their growth and progress, and utilize safe and efficient kinesthetic practices

References:

- Clarkson Priscilla M., and Margaret Skrinar, eds. *Science of Dance Training*. Champaign, IL: Human Kinetics, 1988.
- Daniels, Kathryn. "Teaching the Whole Dancer: Synthesizing Pedagogy, Anatomy, and Psychology." *The IADMS Bulletin for Teachers* 1.1 (2009): 8-10. International Association for Dance Medicine and Science.
- Erkert, Jan. *Harnessing the Wind: The Art of Teaching Modern Dance*. Champaign, IL: Human Kinetics, 2003.
- Plastino, Janice Gudde. "Incorporating Dance Science Into Technique Class And Performance Training." *Journal of Physical Education, Recreation and Dance*. 61.9 (Nov. 1990): 26-27.