The Science of Dance

Pedagogy

As the ability to "see" dance increases with more refined tools, teachers of dance in general and ballet in particular need to make anatomically sound corrections and unassailable decisions in the training of young dancers, as the technique class should be the first stop in injury prevention.

dance-pedagogy.pdf

Shoulder Complex

Understanding the shoulder complex can help dance educators and dancers better make the important connections to merge maximal range of motion with well aligned and supported movements that create full body artistic expressiveness.

shoulder-complex.pdf

Bone Health

A balance between healthy nutrition and training is essential for building strong bones. This should be emphasized by dance teachers to both the developing and mature artist and should be supported by experienced health professionals.

bone_health_female_dancers.pdf

Nutrition

Concise and practical strategies regarding the types and amounts of food that are needed to sustain health across the variety of activities dancers participate in, specifically addressing a balance of nutrients: carbohydrates, fats, proteins, micronutrients and fluids.

dance-nutrition-2016.pdf

Injury

Teachers can help injured students cope with the emotional and physical challenges of their injuries while assisting in their return to full dancing by offering flexible options for class attendance and participation.

technique_class_options.pdf

First Aid

Immediately after an injury occurs, dancers can use the PRICED method to decrease the local inflammatory process and protect the injury prior to seeking medical care.

first_aid.pdf

Turnout

"Ideal" turnout traditionally has been identified as 180 degrees of outward rotation of both legs combined. An awareness of basic anatomy will help in the understanding of the limitations of this expectation.

turnout_for_dancers_anatomy.pdf

Research

Quantitative research is the systematic investigation of phenomena using statistical, mathematical, or computational techniques verifiable by means of observation or experiment.

quantitative_research.pdf

Motor Learning

Teachers can use current research about motor learning to evaluate their practice, assess their assumptions, and refine the class structure and intention.

motor_learning.pdf

Adolescence

Parents, teachers, and the young dancers themselves all need to be aware of physiological changes, psychological issues, nutritional considerations, and the need for training modifications.

adolescent-dancer.pdf

Fitness

Training methods, which are generally based on tradition, are not sufficient to help prepare dancers for the higher, more physically demanding aspects of performance.

dance_fitness.pdf

Proprioception

Dancers need to continue to train all senses (visual, vestibular, and somato-sensory) to adapt to changing conditions of technique and environment and to rehabilitate from injury.

proprioception.pdf

Stretching

When to stretch, which tissues to stretch, how much and how often to stretch.

stretching.pdf

Warm-up

A thorough warm-up will engage the joints, muscles, energy systems, and mind in a systematic and dance-specific fashion, allowing the dancer to take full advantage of his or her own capabilities.

warm-up-importance.pdf

Pointe

Balanchine: " there is no reason to get a young dancer up on full pointe if she can not do anything when she gets there!'

start_pointe.pdf

Tendinopathy

The current understanding of tendinopathy, ways to manage it according to evidence-based practice, and some typical dance-specific tendinopathies.

tendinopathy.pdf

https://www.iadms.org/resource/resmgr/resource_papers/

IADMS
International Association for Dance Medicine & Science