

Importance and Benefits of Pilates Exercise for Bharatanatyam Dancers

Vrushika Jigar Dave

(PhD Research Scholar)

Email: davevrushika@gmail.com

Research Supervisor: Dr. Ami Pandya

Email: pandya.ami-dance@msubaroda.ac.in

Department of Dance

Faculty of Performing Arts

The Maharaja Sayajirao University of Baroda,
Vadodara, Gujrat

Abstract

Bharatanatyam dance form is a mean of expression, a medium to connect people, it is an art form. In which a full development of several physical capacities is also needed, which turn Bharatanatyam into an artistic and athletic activity. Each movement has to be performed correctly, gracefully, slowly, with control, without apparently effort. Pilates' exercise emphasizes on these factors. When the experienced Bharatanatyam dancer performs, it is easy to admire the grace, accuracy, reliability and harmony of the whole movement. However, to give a tremendous performance, a dancer should be strong and flexible. This means that great performances pre-suppose a fully developed body where technique, aesthetics, and physical conditioning work together. Therefore to achieve excellence, Bharatanatyam dancers must learn how to be an artist and athlete. For this a dancer must take supplementary training. The biggest challenge in front of dance teachers, choreographers and researchers is- what kind of conditioning workout can be included in the training process? Which is the best exercise to improve muscular strength? How can balance and flexibility be optimally developed? And how can the risk of injury are reduced? The answer and convenient option are Pilates' exercises. Pilates is a mild, non-aerobic supplementary exercise. It lengthens and strengthens the muscles, and improves posture, without stressing the joints or the heart. The Pilates method integrates both physical and mental elements. The middle part of the paper presents principles of performing Pilates' exercises and profits using the Pilates method.

The aim of this research is to convey the similarities between Bharatanatyam dance form and Pilates, importance of Pilates exercise and its benefits for Bharatanatyam dancers. Researcher's advice, through her own experience, is to adopt Pilates' exercise in the routine of Bharatanatyam dancers to improve mindfulness, strength, stamina and most importantly reduce the risk of injury which can lead to a successful and long-lasting career.

Key words: Pilates, Bharatanatyam, Dancers, Injury prevention, supplementary training

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals**Method:**

- Articles were obtained from clinical journals identified through online searches using the Google search engine and from primary sources found in the obtained published reports.
- The keyword searched was Pilates and dance.
- References are taken from the workbook by Mr. Chakraborty and Ms. Smita Patil-Pilates' exponent.
- Books by Pilates Exponents and dancers are taken in to the consideration.

Introduction:

“It's now widely accepted by dance researchers, clinicians and educators that supplementary training is an essential part of a dancer's success and longevity. Dance class alone cannot provide the required physical adaptations to ensure optimal performance and reduced risk of injury.” (1)

Bharatanatyam Dance has a complex movement that integrates both artistry and physicality equally. Bharatanatyam Dancers require the creativity and grace of an artist along with the strength and control of an athlete.

The pleasure of art is relished by the audience as well as by the artist only when body and mind both are integrated. The mind is the main ingredient when training in both Pilates and Bharatanatyam dance form. The mind is capable of allowing the body to do almost everything. After learning the basic technique, the body understands the core concepts of movement. With Pilates exercise, different movements can be taught, that allows the body to naturally move with ease, and tone. If the mind will understand the vocabulary of Pilates to its maximum capacity, the body can be trained properly.

“Pilates' classes are included within the timetable at most major dance colleges throughout the UK as a form of exercise that can improve a dancer's flexibility and strength and equally prevent injury.” (2)

Since Pilates requires Body – Mind coordination just like Bharatanatyam, the researcher presumed Pilates as a very effective exercise for Bharatanatyam dancers.

The researcher also feels that the Indian classical dance institutions should go for supplementary training and adopt Pilate's exercise for student's better posture, performance, to reduce risk of injury and for the extension of the career span.

Bharatanatyam:**BharataNatyam: origin and principles**

BharataNatyam is a classical dance form that originated as a temple dance in Tanjore, Tamil Nadu, based on Bharata's Natyasastra. Devadasis performed it as part of the ritual worship known as dasi attam. It passed through the courts of kings in the form of sadir attam over the years. It is said that the name BharataNatyam was derived from the syllable's bhava, raga, and tala. This style includes both nritya (pure dance) and nrutya (abhinaya) (interpretative dance). In this article, the researcher only considers the Nrutya portion.

Nritya

nrityam talalayashrayam - movement of the body parts in accordance with *tala* and *laya*. Nritya in Sangitaratnakara is

*gatraviksepamatram tu sarvabhinayavarjitam.
angikoktaprakarena nrityam nrityavido viduhu.*

The ideal nritya is that which gives birth to beauty and joy at all levels of human comprehension, including physical, emotional, intellectual, and spiritual. According to Bharata, nritya is the pleasant-sounding, physical movement of major and minor limbs displayed in a graceful manner, creating patterns in space while keeping rhythm with time. Thus, in nritya, the entire body is regarded as an instrument for producing action.

The solar plexus, located at the navel, serves as the **centre** from which all movements originate and are controlled by **breath**. Various bhargas are created by simply shifting the **centre**, i.e. the body's **balance** - sama, abhanga, tribhanga, and atibhanga. Along with earth-based movements (bhumi caris), aerial movements (akasi caris) have been described, implying that the dancer has the ability to create a sense of **weightlessness** through her dance.

The half-seated or aramandi position of Bharatanatyam, with knees bent outwards, increases propinquity with the ground and thus connectivity with the earth. Because the individual's centre of gravity moves closer to the ground, this position improves balance, and the hands can be held in a curvilinear or chaturasra position. The overall effect is an increased sense of center, control, and balance, which keeps the senses alert and the mind relaxed.

Most Bharatanatyam dancers sustain serious injuries as a result of a lack of proper body strengthening training. Body movement training or understanding, muscle usage, and strengthening can save a dancer's body from long-term damage. It is critical for any dancer to strengthen the muscles that are used extensively in a specific form. The core muscles are used

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

the most in Bharatnatyam; Pilates helps to strengthen the core, improve posture, alignment, and stamina.

Certain laws, such as alignment, warm-ups, strengthening, use of breath, flexibility, and injury prevention, apply to the body regardless of cultural or disciplinary differences.

Pilates:

Pilates is a method of exercise that focuses on flexibility, well-developed strength and stamina. Pilates focuses on appropriate postural alignment, core strength and muscle balance.

Pilates -pronounced: puh-lah-teez, Pilates exercises have its place in a group of Body-Mind Exercises, in which the focus is on controlled movement, breathing and mainly posture.

1. It improves mental and physical health,
2. works on flexibility,
3. and strengthens muscles through controlled movements
4. done as mat exercises or with equipment to tone and strengthen the body.

“This method syndicates principles of exercises from the Eastern cultures (control of motion by the mind, precision, body center as the main energy point, proper breathing and relaxation – Hatha-Yoga) and the Western cultures (endurance training, stabilization – classical ballet).” (3)

According to Crews, “the described training concept assumes reinforcing the muscles of the whole body; however, it is especially emphasizing conscious action exerted on deep muscular structures. Appropriate functioning of those structures is essential for normal stabilization during motion.” (4)

The research paper presents a theoretical part of physical exercises developed by Joseph Pilates named ‘Contrology’ and now known as Pilates, its importance and similarities with Indian classical dance form- Bharatanatyam.

The Pilates’ exercise, as a part of the Body Mind Exercises group, initially gained recognition among professional dancers, actors and choreographers and now has become more popular and is regularly applied in sport, fitness and physiotherapy. Pilates is a unique, precise and intelligent approach to exercise, body-conditioning. It gives you a slim, flexible, toned look, you feel more relaxed and mindful.

Key benefits:

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

1. Your muscles are relaxed;
2. your movement is unrestricted; and
3. You achieve good flexibility.
4. Your posture improves as a result of being able to hold your muscles correctly.
5. Increased blood circulation as a result of improved flexibility, which allows the muscles to align more effectively
6. Improved circulation also gives you more energy.
7. Joints and muscles become and remain healthy. They do not tear easily if they are flexible and move freely.
8. Muscles quickly return to normal exercise, and after a few weeks of Pilates, you will notice visible muscle tone and see your body begin to evolve.
9. You don't have to make time for it every day; just 60 to 90 minutes twice a week is sufficient.

Pilates uses your body weight for shaping your muscles, and it trains each part of your body muscles evenly. For example, during an abdominal exercise, think about lengthening your limbs, lifting your buttocks, and connecting your shoulders as well as engaging your centre or belly.

“Pilates as supplementary training feels familiar to dancers because it embodies artistry quality of movement and an emphasis on breathing, alignment and adaptation, deep core support and mobility. Because of this, dancers may enjoy and commit to Pilates with confidence and ease. This can mean a higher rate of adherence to supplementary training.” (5)

“Since the 1920’s dancers have subjectively reported the benefits of engaging in the Pilates method alongside their dance training. In recent years scientific research has also started to evidence these benefits. Studies have shown that [Pilates](#)’ can help to improve alignment, flexibility and muscular strength in dancers, and due to its focus on fluid and controlled movements it is often a natural choice for dancers. More hypermobile or flexible dancers might wish to choose Pilates-based exercise in order to encourage greater strength and control.” (6)

Similarities in the Principles of Pilates'[1] and Bharatanatyam:

Principles	Pilates	Bharatanatyam

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

<p>· Breathing:</p>	<p>Breathing is essential in the Pilates method. In Return to Life, Pilates allocates a section of his introduction explicitly to breathing. He saw significant value in increasing the intake of oxygen and the circulation of this oxygenated blood to every part of the body. This he saw as cleansing and invigorating. Proper full inhalation and complete exhalation were important to this. He recommended people to squeeze out the lungs as they would twist a wet towel dry. Pilates' energies to properly harmonize the breathing practice with movement.</p>	<p>You can help prevent muscle fatigue by providing your body with additional oxygen. Dancers with strong respiratory muscles can dance for longer periods of time while remaining alert and focused.</p>
<p>· Concentration</p>	<p>Pilates weights concentrated focus, the way that exercises are done is more important than the exercises themselves.</p>	<p>Bharatanatyam dancers must be aware of the importance of maintaining concentration. They will be able to remember what the next step is, what should be done next, and where to focus because they will be concentrating on dance movements and being fully aware of where they are.</p>

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

<p>· Control</p>	<p>"Contrology" was Joseph Pilates' preferred name for his method, and it was based on the awareness of muscle control. All exercises are done with control. The muscles work to lift against gravity and the resistance of the springs and thereby control the movement of the body.</p>	<p>" In dancing, "control" means that your body is doing what your mind wants it to do.</p> <p>The movement in Bharatanatyam dance should be controlled; for example, while performing a basic Natta adavu, maintain Aramandi and place your leg in Anchita Pada-bheda by your side. The movement should be controlled.</p>
<p>· Centering</p>	<p>For students to control their bodies, they must have a starting place: the center. The "powerhouse" muscles are a group of muscles in the centre of the body that include the abdomen, lower and upper back, hips, buttocks, and inner thighs. In Pilates, all movement should start in the centre and work its way out to the limbs. All movement in Pilates should begin from the center and move outward to the limbs.</p>	<p>The Bharatanatyam dancer should focus on the centre of her body while maintaining Araimandi, then only one will be able to maintain the balance in the pose.</p>

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

· Flow	Pilates aims for a sophisticated economy of movement, creating flow through the use of right transitions.	Only if the movements are executed in a fluid manner will the dance piece be considered graceful.
· Postural alignment	Using correct posture while doing Pilates exercises progresses safety by correcting muscle imbalances and improving coordination.	Bharatanatyam dancers must maintain proper body alignment and posture in order to appear elegant and confident. It also helps with overall balance and control. Dancing with proper alignment is more comfortable and promotes longevity.
· Precision	Precision is essential to do the Pilates correctly. The focus is on doing one precise and perfect movement, rather than many unenthusiastic ones. The aim is for this precision to ultimately become second nature and carry over into everyday life as grace and economy of movement.	It should be done precisely because it is our responsibility to take this ancient art form to the next level while maintaining its quality. The physical qualities and skills of the dancers determine the quality of this dance form. A dancer's body is more capable of a wide range of movement if it is stronger and more flexible.

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

· Relaxation	Correct muscle firing patterns and upgraded mental concentration are boosted with relaxation.	Relaxation allows for creativity. Relaxation makes room for creative thinking, which is often referred to as being in the flow or zone.
· Stamina	With increased accuracy, motion becomes more effective so there is less stress to perform the exercises.	Stamina is defined as increased endurance. It is critical for professional dancers to maintain their energy level throughout a performance or class.

The principles mentioned above are clearly related to the Bharatanatyam dance form, and if Bharatanatyam dancers begin practicing Pilates, it can help them improve their physical health and career span.

Similarities in Bharatanatyam Dance form and Pilates:

The researcher, who has been an active Bharatanatyam dancer for over 20 years and a Pilates instructor for over 7 years, can see the connection and similarity between Bharatanatyam dance movements and Pilates. And thought it was critical to introduce and incorporate into the Bharatanatyam dancer's routine.

Some of the similarities are,

1. Body alignment,
2. Core engagement,
3. Pelvic placement,
4. Full body engagement,
5. Concentration,
6. Spinal balance
7. Precision.

It's critical to understand the value of conditioning outside of dance class for both improved performance and injury prevention. Because of the repetition, Bharatanatyam dance movements stress the same body part over and over. Pilates can help Bharatanatyam dancers by strengthening their muscles and improving their balance.

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

Pilates is a natural choice for most dancers when it comes to supplementary training. During World War I, founder Joseph Pilates began developing his concept for this exercise.

“As early as the 1920’s, when founder Joseph Pilates opened his inaugural studio in the United States, Pilates’ conditioning has been extremely popular among dancers (Gallagher, 1999, p.9). Leading dance figures such as George Balanchine and Martha Graham studied with Joseph Pilates and sent their students to train with him, causing Pilates to gain a significant following in the dance community (Gallagher, 1999, p.9). Continuing to grow in popularity among dancers, many dance companies, studios, and undergraduate and graduate programs now incorporate Pilates’ conditioning into their training (Ahearn, 2006, p.92). The anatomical and conceptual similarities between Pilates and dance, as well as many benefits of Pilates for dancers, explain the lasting and growing popularity of Pilates conditioning among dance communities throughout the world.” (7)

“The Pilates principles complement instructions and corrections given by all dance teachers within their classes, whatever genre is being taught. Every dancer should be determined to improve their technique and performance and studying the Pilates method can certainly help achieve the goal.” (8)

Over the course of 20 years of working with Bharatanatyam dancers, I’ve discovered that connecting mind and body produces meaningful results. It is critical to raise awareness about how movement works, where it comes from, and how to connect to it. Dancers can add a new level of grace, accuracy, muscle awareness, and sophistication to their dance practise and performances through kinesthetic input. They begin to understand their body's structure and become stronger and more flexible, as well as more mindful of how to move with full awareness of the body. Pilates is an important part of this process.

The Pilates principles are the same and cover all of the instructions and corrections that dance teachers give in their dance classes. Every Bharatanatyam dancer should be determined to improve their posture, physical health, dance technique, and performance; Pilates can help with this.

Breathing techniques may play an important role in improving breathing function in young Bharatanatyam dancers. Pilates breathing techniques can be incorporated into teachers' classes. Different breathing strategies used in Bharatanatyam classes, before or during performance, may highlight other practical aspects of the use of the breath in dance and assist young dancers in evolving in their art form.

Benefits of Pilates Exercise for Bharatanatyam Dancers:

1. Pilates allows you to move with or against resistance!

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

2. Work on your balance
3. Increase your core strength.
4. Increases stability
5. Enhances Posture
6. Assists you in getting to know your body
7. Increases self-esteem and confidence
8. Its breathing technique helps to reduce stress.
9. Your movements become more fluid.

“Pilates has long been part of the professional dancers' supplementary training. In fact, Joseph Pilates Studio in NYC was in the same building as NYC Ballet.

We can say that Pilates has loads of benefits for dancers!

Whether it be in a rehabilitation capacity after injury, working towards your strength goals or for injury prevention, Pilates improves your stability, flexibility, strength, body awareness and coordination!” (9)

Conclusion:

The gist of the article is that Pilates training, which works on balance, breathing, flexibility, and postural alignment, can be a useful tool for Bharatanatyam dancers, professionals and dance teachers to improve muscular strength and flexibility of their students. Teachers should be aware of the importance of conditioning outside of dance classes, not only to improve performance but also to protect dancers from injuries, and Pilates is recommended because it develops capacities, which are critical for performance while not ignoring the artistic component. Pilates, in fact, has principles that are very similar to dance technique and employs movements that are analogous to certain dance technical skills. Pilates, by emphasizing breathing, alignment, position, and abdominal work, can help the dance class develop optimal dance technique, explore and expand one's physical capacity, and prevent and rehabilitate injuries.

So, based on the information provided above, we can conclude that Pilates principles are complementary to the Bharatanatyam dance form. Bharatanatyam dancers can use it for strength, posture, injury prevention, and rehabilitation, and regular Pilates practice (twice a week for 60 to 90 minutes) can help them advance in their careers. Pilates' workout addresses the needs of Bharatanatyam dance technique, allowing dancers' physical capacities to be developed in a specific way.

Other Indian Classical Dance styles have similar fundamental principles and could be interpreted similarly; however, the present study is restricted to Bharatanatyam dance form.

References:

1. Authors: Margot McKinnon and Hannah Etlin-Stein, Article- Pilates: A natural choice for dancers, 09 Nov 2015, Para 1, Line 2nd.
<https://iadms.org/resources/blog/posts/2015/november/pilates-a-natural-choice-for-dancers/>
2. Article written by [Sue Hall](#)- “Pilates benefits for dancers”, 13-05-2014, Para-8(last), Line 1st.
<https://www.futurefit.co.uk/content-hub/pilates-benefits-for-dancers/>
3. Shah, S. (2013). Pilates exercises. *International Journal of Physiotherapy and Research*, 1(4), 196-203.
4. Shah, S. (2013). Pilates exercises. *International Journal of Physiotherapy and Research*, 1(4), 196-203.
5. Article by-Hannah Etlin-stein, Para-13th.
<https://bodyharmonics.com/why-pilates-for-dancers-is-a-natural-fit/>
6. Article The benefits of supplementary training for dancers-by Trinity Laban
<https://trinitylaban.wordpress.com/2015/11/28/the-benefits-of-supplementary-training-for-dancers/>
7. Article- “Pilates and Dance: A Reformer for the Art”, By Gabriella Berkow, Goucher College, Page- 1, Para-1st.
8. Article written by [Sue Hall](#)- Pilates benefits for dancers, 13-05-2014, para-8(last), Line 1st
<https://www.futurefit.co.uk/content-hub/pilates-benefits-for-dancers/>
9. Article written by [Sue Hall](#)- “Pilates benefits for dancers”, 13-05-2014, Para-8(last), Line 1st.
<https://www.futurefit.co.uk/content-hub/pilates-benefits-for-dancers/>

Bibliography:

1. “Pilates’-Return to life through Contrology” by Joseph. H Pilates and William John Miller.
2. IADMS Bulletin for Dancers and Teachers.
3. Margot McKinnon is founder of BODY HARMONICS: Pilate’s studios, integrated health clinics and international teacher education program.
4. BITTAR, A.; MELO, R.; NOLETO, R.; LEMOS, T. The effects of Fletche Pilates in the respiratory systems of young female ballet dancers, from a public dance school. In: IADMS 27thAnnual Conference, 2017, Houston.
5. Pilates Mat on a Group of PE from Athletics Fitness Center. Post-graduation in Pilates, monograph.
6. www.futurefit.co
7. www.academia.com

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

8. www.iadms.org
9. <https://www.betterhealth.vic.gov.au/health/HealthyLiving/dancing-preventing-injury>
10. <https://www.futurefit.co.uk/content-hub/pilates-benefits-for-dancers/>
11. McMillan A, Proteau L, Lebe R: The effect of Pilates-based training on dancers' dynamic posture. J Dance Med Sci.
12. The Bharathanatomy Series: Anatomical Movements and Directions
- Sneha Rajagopalan <https://narthaki.com/info/healthtip/ht47.html>
13. <https://narthaki.com/info/healthtip/ht5.html>
14. Application of ballet technique for Bharatanatyam dancers
- Veena Basavarajaiah, Bangalore
15. <https://narthaki.com/info/articles/article81.html>

[1] Guidance for Principles of Pilates is taken from a book written by Joseph Pilates'- "Contrology".

Types of Supplementary Trainings for Dancers

Vrushika Jigar Dave

Research Scholar

Dr. Ami Pandya

Associate Professor, Dept of Dance, Faculty of performing arts

The Maharaja Sayajirao University of Baroda, Vadodara

Abstract: *You may or may not be a professional dancer yet, but if you are serious about becoming one and compete frequently, you are technically an athlete in training. Dancers and dance teachers should not ignore fitness. Dancer's lean, muscular bodies, agility and as they are continuously being on the floor, they are considered physically fit. It is observed that guides, dancers and dance teachers don't give importance to fitness or supplementary training as much as they should give. Even if you are not a professional dancer yet, if you are practicing it and dedicated to be one, you are actually an athlete in training. You consider any dance form, dance training has some loops and holes, rehearsals and dancing sessions are not enough.*

Even the best sense of rhythm, meticulous technical training, and perceptive dance intuition aren't enough to make a dancer truly succeed; focused strength, balance, and flexibility are also required to perform the movements with power and grace. Conditioning for Dance improves dance technique and performance by strengthening the body's core (abdominal and back muscles), improving coordination, balance, and alignment, and increasing flexibility. Today's dancers are unhealthy and not aware about their food and fitness needs as much as they could be. They are not physically fit enough for the demanding routine made by the choreographers, and running between school or work and their dance sessions, so it is seen that fitness often gets ignored or side lined.

Key words: *Supplementary training, Dancer's body, types of physical exercise*

The methods used for various dance fitness levels- like flexibility, movements are insufficient to assist quickness, muscular endurance, but not dancers in preparing for the physically all dancer's bodies are at the same demanding portion of the performance. fitness levels when they begin. "For any dancer, the physical, as well as Individual fitness needs of each dancer psychological well-being is the base of vary and must be trained outside of the their artistic expression." ⁽¹⁾ classroom.

To dance well, a dancer should focus on **Reasons-** why dancers should focus on all aspects of fitness. "Good fitness their fitness levels:

ensures that dancers are less prone to 1. to be able to last longer on the dance injuries, can enhance their performance, floor.
and push their physical abilities. All this 2. to pack a punch in your performance
helps in prolonging their career and 3. muscular endurance
ensures dancers live a happier, fuller 4. better flexibility
life." ⁽²⁾ 5. Improving in neuromuscular

Your dance class can be helpful in coordination while dancing
improving certain aspects of your

6. Your level of fitness can influence your body fat and muscle composition.

Rest should also be a part of your training.

“Years ago, it was said that the best dancers have two talents that set them ahead of their contemporaries- deep understanding of expressions, and physical and psychological prowess to accomplish it to perfection. A dancer who can jump higher, balance longer is not necessarily a better dancer, unless she is fit to be consistent in the long run.”⁽³⁾

A fit dancer is always a better dancer.

What is supplementary training?

Supplemental exercises are exercises that are added to a regular exercise routine to complete a training programme; they might be in the form of adding new exercise programmes to the routine, or they can be a person's standard, unchanging, and frequently automatic training programme.

Supplementary activities for novices, such as stretching and callisthenics, are required to prepare and acclimate the body for any activity. Dancers that participate in cross training programmes do so in order to improve their performance in their chosen dance forms.

Supplementary training is a broad term that encompasses a range of fitness and conditioning needs. The word ‘supplementary’ infers additional training in order to enhance the existing training.

Core exercises improve your balance and stability and train the muscles in your pelvis, lower back, hips and

abdomen to work in harmony. This leads to better balance and stability, whether on the stage or in daily activities, and that is why it is very important for Bharatanatyam dancers to work on core muscles.

Your core stabilizes your body, allowing you to move in any direction, even on the bumpiest terrain, or stand in one spot without losing your balance. Viewed this way, core exercises can lessen your risk of falling.

As Claire Calvert, dancer with The Royal Ballet says “Doing squats doesn’t help me do 32 fouettés[1] because I still have to practice the steps. But with that new base of strength and confidence, I feel more present in the performance, which means I can focus better on the story or the character.” (*The Red Bulletin*, 2019). It is therefore not a substitute for dance class, but a very important addition.”⁽⁴⁾

There are seven main fitness and conditioning needs for the dancers:

- **Aerobic fitness** – associated with moderate intensity, longer-duration activity.
- **Anaerobic fitness** – associated with high intensity, maximal, short bursts of activity.
- **Muscular Strength** – the ability of a muscle to produce a maximal force on one occasion.
- **Muscular Power** – the explosive (speed-related) aspect of strength (e.g. jump or leg swing).
- **Muscular endurance** – the ability of a muscle to produce continuous strength (e.g. hold a plank position or develop) or repetitive power

actions (e.g. repeated jumps or leg kicks).

- **Flexibility** – the range of motion available at a joint, including the ‘stretchiness’ of the muscle(s) around that joint.
- **Neuromuscular coordination** – required for all of the above, but also associated with balance, agility, coordination and skill. (See Irvine, Redding & Rafferty, 2011).

It is not possible to practice each and every form of exercise listed above, but being aware of your own body and its fitness needs, you can plan your sessions to work out and use supplementary training to improve your performance and reduce the risk of an injury.

Pilates:

Pilates is a low-impact exercise that improves your balance, core strength, mobility, flexibility, and even your mood through regulated movements. It concentrates on the smaller and deeper muscles that support and improve your overall health.

“Pilates involves low impact flexibility, stability, and endurance movements. It focuses on core and muscle strength, along with postural alignment.”⁽⁵⁾

“Since the 1920’s dancers have subjectively reported the benefits of engaging in the Pilates method alongside their dance training. In recent years scientific research has also started to evidence these benefits. Studies have shown that Pilates can help to improve alignment, flexibility and muscular strength in dancers, and due to its focus on fluid and controlled movement it is often a natural choice for dancers. More

hypermobile or flexible dancers might wish to choose Pilates-based exercise in order to encourage greater strength and control.”⁽⁶⁾

Yoga:

Yoga is a technique that aids in the control of one's mind, body, and soul. It combines physical and mental disciplines to achieve a serene body and mind; it aids in stress management and relaxation. It also aids in the development of flexibility, muscle strength, and overall body tone.

“There is little scientific research to support the benefits of yoga in dance specifically, however dancers do tend to naturally choose yoga as a form of supplementary training. An unpublished study reported improvements in hip flexion range of motion after a four-week intervention and suggested that yoga can offer additional educational benefits. Dancers who are naturally less flexible may benefit from practicing yoga due to its focus on dynamic stretching. Previous or existing injuries should be considered before attending class.”⁽⁷⁾

Power Yoga: Power Yoga, which originated in India, has been incorporated into many fitness routines around the world. It has numerous health and fitness benefits and is an excellent way to stay fit and healthy.

What exactly is Power Yoga?

Power yoga, which is based on Ashtanga Yoga, is a brisk workout

that resembles an aerobic workout. There are numerous advantages to practicing power yoga every day, including improved posture, physical strength, and balance. It is fast-paced and emphasizes the flow from one posture to the next rather than each posture individually. It helps to,

- Boosts Immunity
- Improves Quality of Sleep
- Aids In Hormone Regulation
- Builds Muscle
- Improves Capacity Of Lungs
- Improves Posture

• **Aerobic and endurance training:**

Endurance exercise, often known as aerobic exercise, comprises activities like walking, jogging, swimming, biking, and jumping rope that increase your breathing and heart rate. Endurance exercise increases your overall fitness and keeps your heart, lungs, and circulatory system healthy. As a result, those who engage in the appropriate amount of physical activity on a regular basis can lower their chance of developing diseases including diabetes, heart disease, and stroke.

Dancers must have good aerobic power in order to dance for longer periods of time and at lower heart rates before becoming fatigued. Additional cardiovascular training such as running or swimming can be useful. Running is a cheap and effective way of training aerobically but if you are recovering from an injury and want

to avoid running, swimming is a great alternative.

• **Zumba:**

Zumba is a workout programme that incorporates dancing exercises with Latin and international music. Interval training — alternating rapid and slow beats — is used into Zumba routines to help improve cardiovascular fitness.

Zumba is an aerobic activity that can contribute to the amount of aerobic activity suggested by the Department of Health and Human Services for most healthy persons.

Aerobic exercise can help you stay healthy, lose weight, strengthen your heart, and improve your mood. If you enjoy Zumba, you're more likely to do it on a regular basis and get the benefits of its cardio benefits.

For a high energy workout, try Zumba. "It features aerobics and dance moves performed to Latin American music. Since Zumba involves the entire body, you'll get a great full body workout. This helps tone muscles and improve endurance." ⁽⁸⁾

• **Step aerobics:**

Step aerobics is a workout that combines upbeat music, choreographed moves, and a raised platform. As you explore dance-inspired exercise, here's what you can do to become more active:

- Appreciate how your body can perform a routine.
- Recognize how dancing makes you feel.
- Notice positive changes in your mood, energy, and endurance.

- Honour the experience of learning something new.

- **Plyometric training:**

It is critical for dancers to have leg power for both jumping and travelling sequences. Plyometric training, also known as jump training, aims to increase power (speed and strength) by incorporating exercises that require the muscles to exert maximum force in short bursts of time. According to one study, such training improved subjective measures of dancers' jumping, such as height, ability to point feet, and overall jump ability as assessed by experienced dance faculty members. Again, before beginning plyometric training, consider your injury history and workload. Some dancers are concerned that working on strength in this manner will result in the development of "bulky muscles" and a loss of aesthetic quality. There is little evidence to back up this claim, and the benefits of plyometric training appear to outweigh the potential drawbacks.

The additional stress placed on the body as a result of supplementary training can result in temporary fatigue. Allow at least two weeks between the end of training and any scheduled performance periods.

Andrea Kozai (2012) provides the following recommendations for strength and power-based exercises:

- Andrea Kozai (2012) provides the following recommendations for strength and power-based exercises: If the dancer has

difficulty with slower movements, they may lack strength. If they need work on moving more quickly, they should train for power.

- Strength-building exercises can be included by pairing dancers up and asking them to provide manual resistance for each other.
- Plyometric-type (jump training) exercises can be incorporated into class by asking dancers to complete several functional jumps in sequence, focusing on explosiveness instead of technique. However, be cautious when using these techniques with inexperienced dancers. Explosive movements must be integrated gradually to allow the muscles to adapt to the high forces they produce.

In summary:

Know your body, its needs, focus on your food habits, dance more, explore different areas (for guidance refer to the bibliography and references). You can choose any one exercise along with your dance training for a particular time or you can go for 2 or 3 types of exercise in a month, it can be aerobics for twice a week, swimming for once a week and Pilates for once a week, but remember the capacity of your body, as rest is equally important when it comes to physical training.

Dancers with enough strength and flexibility can avoid injury. When working on the upper body, proper mechanics are critical to avoid injury. Conditioning entails understanding how the body responds to energy and force.

Adolescent dancers are particularly vulnerable since they do not always focus on conditioning. They frequently lack the core strength needed to stay in appropriate alignment. Young dancers go through considerable physical changes as they become older, which is ironic. Muscles and bones do not grow at the same pace throughout growth spurts, which can result in joint instability, functional strength loss, and diminished proprioceptive awareness

(knowledge of limb location), putting young dancers at risk for back injuries. Conditioning is the most effective technique to manage the physical and mental demands of your chosen dance style while also improving your performance abilities. You can reach your maximum physical and artistic potential by releasing your buried strength.

References:

1. IADMS and Sarah Irvine, MSc, Emma Redding, Ph.D., and Sonia Rafferty, MSc, Association for Dance Medicine & Science (IADMS), <https://www.iadms.org/page/303->
2. www.beyondthebarreusa.com
3. <https://beyondthebarreusa.com/blogs/fitness-nutrition/7-compelling-reasons-why-you-need-dancer-fitness>
4. Kozai, A. (2012). Supplementary Muscular Fitness Training for Dancers. *The IADMS Bulletin for Teachers* 4(1). Available at: https://cdn.ymaws.com/www.iadms.org/resource/resmgr/Public/Bull_4-1_pp15-17_Kozai.pdf
5. Jordan C. [Caroline Jordan]. (2019). Ballet Pilates: Dancer's workout for total body fitness (At home routine).
6. <https://www.danceuk.org/healthier-dancer-programme/health-faqs/fitness-and-strength/>
7. <https://www.danceuk.org/healthier-dancer-programme/health-faqs/fitness-and-strength/>
8. Avoid comparing yourself to other dancers3 Zumba moves you can do anywhere. piedmont.org/living-better/3-zumba-moves-you-can-do-anywhere
9. Amelia Wilkinson, Dance Science Graduate Intern & Administrative Intern for Health and McKinnon, M., & Etlin-Stein, H. (2015, November 09) Pilates: A natural choice for dancers [Web log post]. Retrieved from <http://www.iadms.org/blogpost/1177934/231658/Pilates-A-natural-choice-for-dancers>

Bibliography

1. 5 basic barre exercise techniques. www.piedmont.org/living-better/5-basic-barre-exercise-techniques
2. Dance — health benefits. (2013). www.betterhealth.vic.gov.au/health/healthyliving/dance-health-benefits
3. Ford J. [Jenny Ford]. (2019). Step Hero 1 of 6 — how to do step aerobics — learn to step program beginner [Video file]. <http://www.youtube.com/watch?v=McLIYilnEzg>
4. Laskowski ER. (2019). Zumba: What are the benefits? mayoclinic.org/healthy-lifestyle/fitness/expert-answers/zumba/faq-20057883
5. Metcalf A. (2017). Four Pilates moves for lean legs. acefitness.org/education-and-resources/professional/expert-articles/6506/four-pilates-moves-for-lean-legs
6. Kefallonitou, M, M., (2014). The effects of Yin Yoga practice on dancers' range of joint motion : a biomechanical and perceptual investigation (Unpublished thesis). Trinity Laban Conservatoire of Music and Dance, London.
7. Chapter 4: Training Principles and Supplementary Fitness. In Quin E, Rafferty S & Tomlinson C. (2015) *Safe Dance Practice. An Applied Dance Science Perspective*. Champaign, Ill, USA: Human Kinetics.
8. *The IADMS Bulletin for Dancers and Teachers*. (2014) 5(1). Special edition on supplementary training, available at: https://cdn.ymaws.com/www.iadms.org/resource/resmgr/Public/IADMS_Bulletin_DT_5-1.pdf
9. Rafferty, S. (2010). Considerations for Integrating Fitness into Dance Training. *Journal Of Dance Medicine and Science*, (2), 45.

