

Young Dancers Benefit From Yoga

By Cecilia Chan

To withstand the rigors of physical stress in dance, every dancer needs a balanced amount of strength, joint flexibility, and muscular and cardiovascular endurance.

Young dancers and the schools that train them increasingly discovered yoga to be an excellent supportive practice for developing cardiovascular fitness, strengthen the upper body, stretch overworked muscles, balance areas that were hyper-mobile, and learn how to calm the mind before performances. They found yoga helping with practical matters such as injury prevention, improved strength, flexibility, stamina, and overall balance – front and back, right and left, internal and external rotation. Since dancers work so much in the ‘turned out’ position that they never truly felt the internal rotation and how this deep folding of the groins affected their pelvic alignment and the freedom of movement there. Yoga offers an organic way to open the body and support it with balanced strength.

Strength and flexibility are basic components of physical conditioning for young dancers and they are critical for dance performance. Even the simplest dance movements require a precision and control that come only from strength and highly coordinated muscles working in perfect symbiosis. The aesthetically desired line of

many dance movements such as a large jump requires both strength and flexibility to execute or maintain the position. A common error made by dancers is to emphasise flexibility but neglect strength and the other conditioning components. This lack of balanced training can lead to failure to see gains in certain skills and a feeling of discouragement in the dancer. Furthermore, the repeated use of inflexible muscles often produces muscle soreness contributing to further tightness and inflexibility. Therefore, a supplementary body conditioning programme is essential to complement dancers' work in technique classes.

As a ballet teacher, I am often asked which supplementary conditioning is best for young dancers. Two years ago, when I started doing yoga, I immediately realized yoga was going to be beneficial for my profession and also my students. Since the ACL (Anterior Cruciate Ligament) in my right knee was torn after a ski accident, I totally found yoga to be an excellent supportive therapy for injury rehabilitation. The recovery was progressive. I regret that I did not start sooner, and I had to keep doing it. Practicing yoga has made me stronger and more flexible. I encourage many of my students practising yoga with me, and I have already seen the results of yoga on them. The freedom of yoga is in stark contrast to the discipline and high energy of a dance class. Yoga allows my students to express creativity and imagination and physically it

helps to develop and improve their strength and flexibility.

To further substantiate the effects of yogic practice on young dancers, I decided to conduct an experimental study in yoga for my master's thesis. This work was already submitted to The University of Liverpool for my graduation in March 2005. The topic of this research was "*The Effects of a 15-week Yoga-Based Conditioning Programme on Strength and Flexibility of Young Ballet Dancers*". Although there has been anecdotal evidence reporting the dancers' personal experiences in yoga, there are, as yet, no published studies investigating the effects of yoga in young dancers. It is therefore hoped that this research will help to substantiate the effectiveness of yoga-based conditioning, and encourage the dance professionals to carefully examine conditioning routines that can be incorporated into present day dance practice for enhancing the muscular fitness of young dancers.

In this study, 35 subjects aged between 8 and 10 years were randomly assigned to either the experimental (yoga) or control group. The experimental group incorporated a 45-minute yoga session per week into their dance routine, while members of the control group did not expose to yoga training but continued their normal dance practices. Informed consent was obtained from all participants. Each yoga session

consisted of 10 minutes of integration and dynamic warm-up, 30 minutes of asanas (yoga postures), and 5 minutes of supine relaxation. Participants done similar poses to adults, however, the classes were play based and all about having fun. Incorporated into the yoga classes were movement and storytelling. The yoga postures included the stretching, standing, sitting, balancing, twists, supine and prone, forward bends and backbends. The order of postures changed every session to maximise participant enjoyment. Participants were encouraged to perform all the postures properly, and if necessary, appropriate adjustments were made during a practice session if they could not maintain proper technique.

All the subjects in either the yoga or control group were assessed on selected strength and flexibility field tests prior to and following the 15-week programme. The back-saver sit-and-reach test (BSSR) was used to measure the flexibility of lower back and hamstring. Strength and flexibility of trunk extensor were assessed by the trunk lift test (TL), and abdominal muscular strength and endurance were assessed through the 1-minute modified curl up test (CU). Paired t-test was used to analyse the differences after intervention while independent t-test was used to compare the mean changes between the two groups. Although both yoga (n=17) and controls (n=18) displayed increases in strength and flexibility after 15-weeks, the improvements

between the pre- and post-test scores of the BSSR (Figures 1 & 2), CU (Figure 3) and TL (Figure 4) whilst controls showed no significant difference. The increases in flexibility and strength of the yoga group ranged from 14 to 21.5% over the 15-week period. Results from independent t-tests revealed significant differences between the means of two groups in BSSR (Figures 1 & 2), CU (Figure 3) and TL (Figure 4) with the significant level at 0.01. Drawing from the results of this study, it was concluded that a once-weekly yoga-based conditioning programme showed positive effects on strength and flexibility in female young ballet dancers.

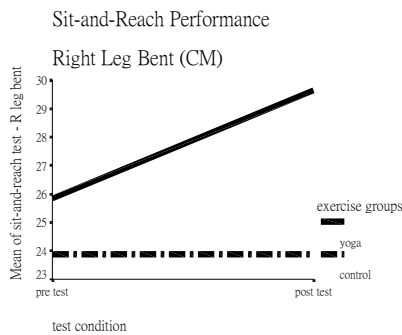


Figure 1. The Effects of Yoga-Based Conditioning Programme on back saver sit-and-reach test (R Leg Bent) $p < 0.01$ compared from baseline and with controls

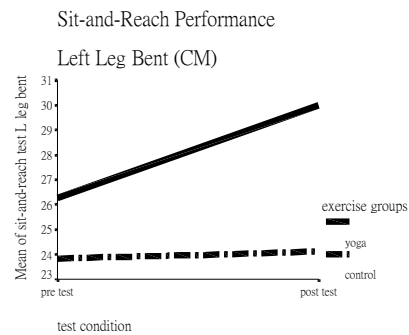


Figure 2. The Effects of Yoga-Based Conditioning Programme on back saver sit-and-reach test (L Leg Bent) $p < 0.01$ compared from baseline and with controls

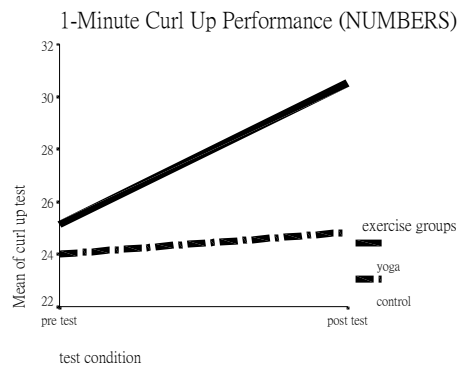


Figure 3. The Effects of Yoga-Based Conditioning Programme on 1-Min Curl Up Performance $p < 0.01$ compared from baseline and with controls

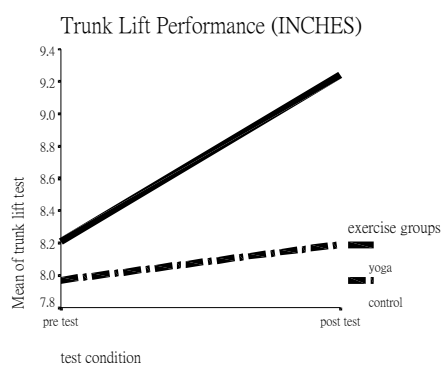


Figure 4. The Effects of Yoga-Based Conditioning Programme on Trunk Lift Performance $p < 0.01$ compared from baseline and with controls

Of interest was the findings that even at this young age 8-10 years in girl, yoga practice can result in strength and flexibility gains. These results provide convincing evidence for young dancers and their schools to include supplementary conditioning exercises earlier in a dancer's training. By making young dancers aware of the importance of muscular fitness, they would be safe to enjoy a healthier dance life in later years. Given that the girls in this study did not undertake many hours of yoga a week, this may indicate that increasing the exercise frequency and the duration of each yoga session produce more benefits for children. This warrants further study.

