

# The Challenge of the Adolescent Dancer

by the International Association for Dance Medicine and Science  
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The adolescent growth spurt often occurs just as dance students are committing to career paths and increasing the intensity of their dance training. During the growth spurt enormous physical, psychological, and social changes correspond to a time when the young dancer is very vulnerable. Sudden increases in height and decreases in muscle strength and coordination are compounded by dramatically fluctuating hormone changes. Taken together, these changes can overwhelm both male and female teenagers.

Choices made during the adolescent growth spurt can have a profound impact on a dancer's professional development and long-term health. Parents, teachers, and the young dancers themselves all need to be aware of the following: physiological changes, psychological issues, nutritional considerations, and the need for training modifications.

## Physiological Changes During the Adolescent Growth Spurt

During the adolescent growth spurt, physiological changes include increased height, increased body mass, increased arm and leg length, and changing proportion of limb to torso length. As the nervous system struggles to keep up with these muscular and skeletal changes, the dancer experiences fluctuations in coordination and balance.

The long bones of the arms and legs grow prior to the trunk, challenging the stable torso required in dance classes. This growth can also be asymmetrical, with one arm growing more rapidly than the other. Since the muscles often do not lengthen as fast as the bones, strength and flexibility can decrease. Growth plates at the ends of bones can be vulnerable to injury, particularly in areas such as the knees where strong tendons attach.

The age of onset, length and pace of the growth spurt are all highly individual. The growth spurt usually takes place at ages 11 to 14 (sometimes earlier for

girls and later for boys) and can last 18 to 24 months. While some youngsters grow slowly and may notice no dramatic changes, others can grow as much as one centimeter or more in a month.

As one might imagine, these complex physical changes can have a significant effect on dance abilities. Many students will experience an overall decrease in technical skill and control. Specifically, a young dancer may notice a decrease in strength and flexibility, resulting in lower leg extensions. Decreased coordination and balance often make pirouettes and long balances difficult. The increased length of the legs in relation to the spine challenges the student's ability to maintain proper (neutral) alignment of the pelvis and torso. As technical control decreases, the risk of injury increases.

## Psychological Issues

The adolescent dancer in a fast paced growth spurt is coping with rapid changes in his/her world. The combined pressures of dramatic hormone fluctuations and a perceived decrease in ability can make this an emotionally challenging time. Unless he or she is well informed, the student dancer is likely to feel a loss of confidence in dance ability and a corresponding decrease in self esteem, compounded by being unable to perform at a level that was previously taken for granted. This in turn can be perceived as a loss of talent, especially when fellow students appear to be improving. Changes in body shape and size may also challenge a dancer's positive self-image, particularly in a dance environment that values a slender physique.

The young dancer should be informed that this is a temporary rather than a permanent state, and that the previous ability will return once the body has begun to catch up with the growth rate. The dancer also needs to understand the lengthy time frame of the growth spurt and accept that this process may last a year or more. Teachers and parents can boost the dancer's confidence and morale by acknowledging the student's

efforts and maturity, providing a positive perspective while reinforcing the need for patience.

### **Nutrition: Avoiding the Female Athlete Triad**

Recent research suggests a relationship between exercise levels, nutrition, hormone levels, and bone density. Adolescent dancers, like all physically-active young women, are at risk for developing the Female Athlete Triad, a syndrome comprised of disordered eating, amenorrhea (absence of menstruation), and osteoporosis (loss of bone density). Emphasis on low body weight as a prerequisite for success as a professional dancer can encourage the eating disorders linked to the Female Athlete Triad. This syndrome may have long-term health ramifications, with a chronic energy deficit or disordered eating contributing to amenorrhea, which in turn may lead to reduced bone density and early onset of osteoporosis. Young dancers should be educated about healthy eating habits and encouraged to pursue a healthy lifestyle to improve and prolong their dance careers.

### **Suggested Class Modifications**

Teachers can accommodate the adolescent growth spurt in their classes by modifying the class content and structure on an individual basis, making the class less physically stressful. This period can be used to consolidate technical understanding, enhance artistry, learn about the body and work on individual needs.

Sections of the class that should be limited include impact work such as jumps, pointe work in the center on one leg, challenging lifts in partnering classes, kneeling sequences in modern and jazz classes, and other movements that stress the knees, such as grand pliés.

Other aspects of class can be expanded. Teachers can focus the student's attention on trunk and pelvis stabilization through postural corrections, facilitating a deeper kinesthetic awareness. Attention to trunk control in classes may produce the dual benefits of minimizing injury while establishing good movement patterns. Similarly, spending time on developing proprioceptive skills (awareness of the position and motion of the body in space) through simple exercises will have long-term benefits. Body conditioning techniques are especially useful at this time as they can be non-weight bearing and executed during class.

The challenge for the dance teacher is to continue

the dance class as normal for the majority of students while accommodating those in a growth spurt. Teachers should encourage students to modify their participation on an individual basis and provide alternative forms of class participation, such as floor barres and supplemental conditioning techniques aimed at muscular control rather than excessive flexibility. Teachers also might postpone high profile competitions or examinations during this time to lessen the pressure on the young dancer.

### **Medical Support**

It is important that dance students have access to informed medical advice during the adolescent growth spurt. A screening program may help to identify problem areas and prevent injuries; physical therapists or other exercise specialists can design preventive and rehabilitative personal exercise programs. Medical practitioners should work collaboratively with teachers and students to establish a team approach. The research work of dance medicine and science professionals should be shared with dance teachers and students in a way that is applicable to daily training.

### **Summary**

Physiological changes associated with the adolescent growth spurt can temporarily diminish a dancer's technical proficiency and increase vulnerability to injuries. The loss of technique in combination with normal adolescent emotional challenges can lead to lack of confidence and low self-esteem. Adolescent dancers should be encouraged to learn about their changing bodies while trusting that they will regain their technical control and resume their progress once the growth spurt has ended. Teachers can support their students during these challenging times by providing flexible individual class modifications and encouraging healthy nutritional habits. Parents should be provided with information about the changes that occur during the growth spurt and encouraged to supply a supportive environment at home. Health care practitioners should work in collaboration with dance teachers, students, and their parents to build a bridge between the science and art of dance.

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