

# WHEN TO START POINTE WORK?

Teachers are constantly under pressure from students who can't wait to put on a pair of pointe shoes. Here, Moira McCormack, physiotherapist and former member of the Royal Ballet Company, explains the dangers of beginning pointe work too early.

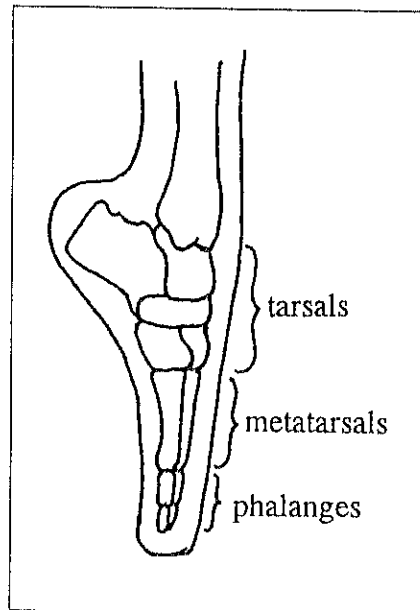
This is a question that lingers in the minds of many teachers and parents. It is, however, not possible to generalise about the ideal age to start pointe work for several reasons; these factors should be considered:

- stage of musculoskeletal development,
- type of physique,
- strength of technique,
- type of foot.

This presents a great problem for the dance teacher. A class is made up of a variety of physiques and sometimes ages, maturing at different rates. It is hard to delay one child when others are progressing, but at least if the teacher is fully aware of the problems involved, she can temper her teaching accordingly. In *The Healthy Dancer* Robert E. Stephens PhD says that "dance teachers should be aware of the anatomic, technical and legal implications of starting a female dancer on pointe too early."

When considering the stage of growth of a young body we must consider both muscles and bones. The bones of the foetus begin as cartilage models. Cartilage is softer than bone. Gradually hard bone tissue is laid down in the cartilage, first within the shaft and then the epiphyses at the ends of the bones. A collar of cartilage (epiphyseal plate or growth plate) is left at the ends of the bone until growth stops. The metatarsals and phalanges are not fully ossified until the early teens, differing from child to child. Until then, the growing bones are soft and vulnerable.

Bones develop according to the stress imposed on them. They strengthen with exercise, but eventually weaken if unduly



stressed. Therefore, needless to say, the foot is extremely sensitive to stress, especially when bones are not yet fully mature.

Howse and Hancock in their book *Technique and Injury Prevention* state that "pointe work should not begin until growth has settled in the feet." Stephens, in the article mentioned earlier goes so far as to state that "because of the possibility of compression injuries to the epiphyseal plates, X-rays of the feet should be taken if there is any question as to the skeletal maturity." This is rarely possible, but it is a sobering thought.

We can, however, make sure that these bones and their joints are well supported by strong muscles and that the mechanics of the foot are undisturbed by weakness, bad technique or carelessness. While the growth of bone cannot be hurried, muscles at least can be cultivated early and can be specifically strengthened with exercises. If the intrinsic muscles of the foot can be strengthened as early as possible (7-8 years), young bones and joints can be protected from undue strain. The strength of the foot is naturally

developed by correct placing and control above the hips and spine. Foot problems arise mostly from insufficient control of turnout in the hip joint or overturning the feet when restricted in the hip. "Rolling" the foot on the flat weakens the inner arch of the foot and weakens the muscles which support it. Too much weight is thrown over the big toe and its joint.

The ankle and knee also suffer. On demi pointe even more body weight is thrown over the big toe. If this has been the scenario, then progressing to pointe work will be even more disastrous. The overturned foot relies on friction with the floor, but on pointe this is very much reduced and even more turnout at the foot is lost. The foot should always be worked in alignment with the leg. If it is not, the foot will suffer, especially when weight bearing, and the alignment of the foot depends on the control from above, with well developed strength in the main muscle groups. Only when the student can hold good posture during movement is it worthwhile progressing to pointe work.

In *The Pointe Book*, Janice Barringer reports that Doctor James Garrick believes that a student should be able to do a strong relevé from two feet to one, or perform a balanced grand plié in the centre, proving that she is strong enough to start pointe. Mr Justin Howse suggests that ability to hold turnout on two legs and one leg alone with good trunk control must be a prerequisite to commencing pointe training.

When considering the type of foot suitable for pointe work, one is looking for an ankle and foot flexible enough to hold the well-placed body directly over the pointes. If too stiff, the body cannot be held in balance over the pointes but rather is held too far back with overworked calf muscles. In this case, one should

Moirra McCormack teaching at an Academy Workshop

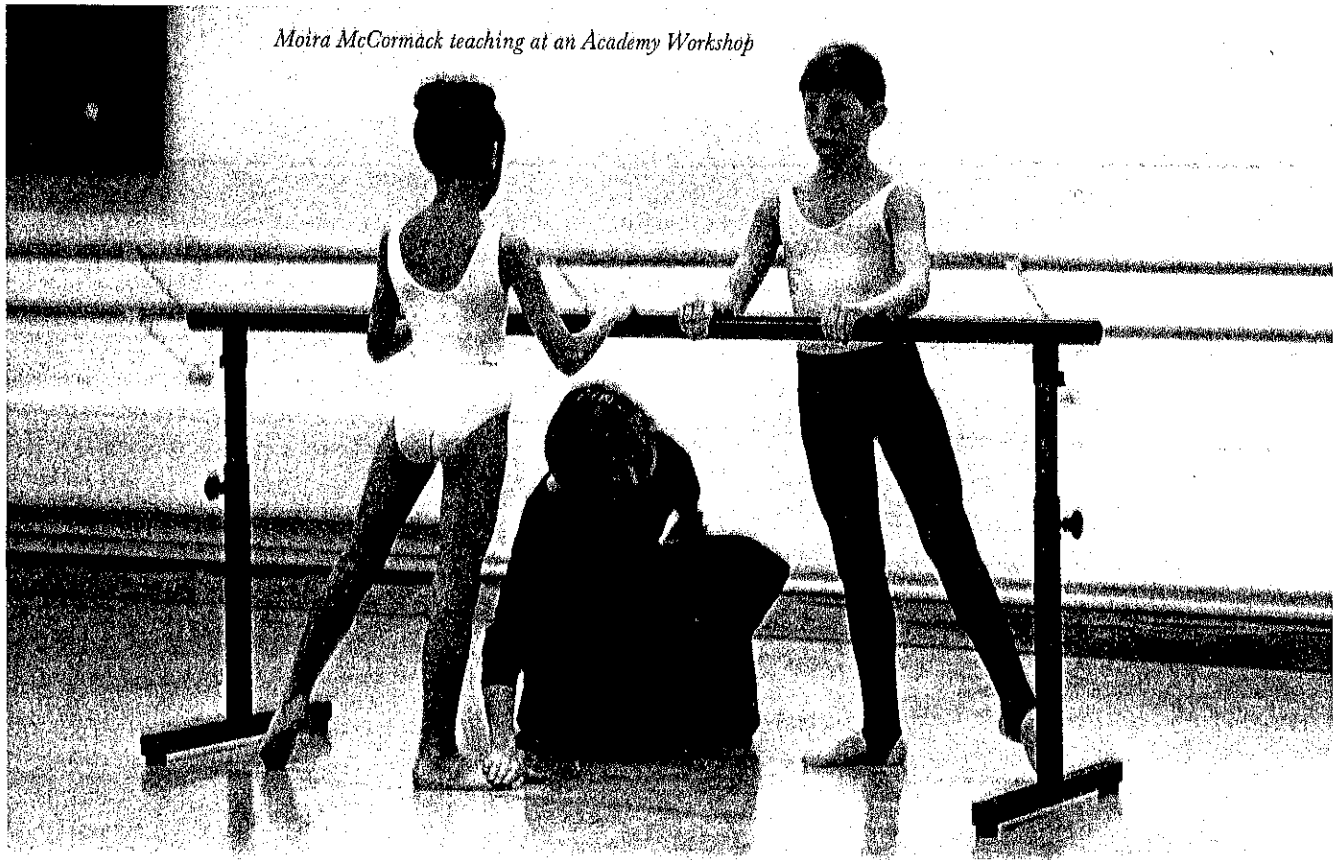


Photo: Chris Davies

decide if the student should progress to pointe work at all.

The over-flexible foot, although beautiful, is a most precarious pointe base unless it is fully strengthened along with the other major muscle groups. The student must gain control of back, hips and knees if also hyperextended, and pull the foot back preventing the toes from curling over and over-straining the forefoot. This physique would certainly benefit from a delayed start. Pointe work challenges the already strong foot and ankle but it will only further weaken and injure the weak foot and ankle.

The more favourable foot for pointe work has first, second and third toes the same length, and broader rather than thin and narrow. This provides a good stable base. However, if the big toe is longer, this can be agony for beginners, with the resulting bruised toe nails. If weak, the long big toe may curl and be pushed out of alignment, often bringing on early bunion deformity. The long second toe can also present problems, but in both these cases, strengthening well-fitted pointe shoes and adequate padding can be the solution.

Any stiffness in the extension of the big toe can cause incorrect weight placement on demi pointe and any hindrance to coming "through the foot" will prevent good

technique, with the toe joint in time suffering from forcing its range. In *The Healthy Dancer* Mr A. J. G. Howse considers this problem a definite contra-indication to a dance career. Sometimes the question is not *when* to start pointe work, but *if* it is advisable.

Consideration must also be given to students who are experiencing a growth spurt. In *The Pointe Book* Janice Barringer reports that during a growth spurt weight distribution changes, as does the centre of gravity. When a child is growing rapidly strength often decreases with the tightening up of muscles as they fail to keep up with bone growth. At these times it is wise to delay beginning pointe work as a rapidly growing body runs greater risk of injury.

It is the teacher's responsibility to explain to students the significance of pre-pointe strengthening, and that readiness is an individual matter. Howse and Hancock in *Technique and Injury Prevention* state that there is no shame and certainly no disadvantage in starting pointe work later rather than earlier. Barringer says "a teacher must know how to evaluate a child for pointe readiness and be able to clearly interpret the process for parents." Education of parents is important. It may look impressive to have great numbers of young students tackling

demanding choreography on pointe, but that teacher will probably not be around in the future to survey the lasting problems she has caused. Rather, parents will respond with respect to a careful explanation of why pointe work should be approached with caution.

The answer to our initial question, therefore, comes a no surprise. All bodies are different and so one cannot generalise about age. The most important consideration is strength. A suitable general physique and type of foot will allow this positive development. Muscular strength and good basic technique protect immature bones and joints. Many influential factors must be taken into account and the decision approached with awareness. ■

For further reading:

*Dance Technique and Injury Prevention* by Justin Howse and Shirley Hancock. A and C Black.

*The Pointe Book* by Janice Barringer and Sarah Schlesinger. Dance Horizons.

*The Healthy Dancer* edited by Allan J. Ryan MD and Robert E. Stephens PhD. Dance Books.

*The Dancer's Foot* by Dr Terry L. Spilken. Dance Books.

*Preventing Dance Injuries* edited by Ruth Solomon, Sandra C. Minton and John Solomon. NDA/AAHPERD.