

Expanding Your Repertoire

Clinicians can keep dancers on pointe with appropriate treatment programs.

BY FRANKLYN FRASER

When Elizabeth Halajian decided to pursue a career as a dancer, she understood pain was part of the profession. Like most dancers, she thought she could work through injuries without causing serious harm to her body.

During her first year with the San Diego Ballet Company, Halajian felt a slight pain in her right shin during rehearsals, but the discomfort always went away. She simply attributed the pain to shin splints, kept dancing and considered it merely an occupational hazard.

But last December, during the annual holiday *Nutcracker* production, the pain was getting worse. After finally making an appointment with an athletic trainer, Halajian found out she had a progressive case of tibial stress syndrome.

"After I saw her, I was rubbing salt in the wound by doing full out performances," she says. Halajian's athletic trainer, Katherine Ewalt, MS, ATC, HHP, NCTM, recommended modified dance activity, stretches, exercises and ice to help manage symptoms.

Halajian's story is a common one at the highest levels of dancing. Professional dancers are prone to overuse injuries, but they don't always seek out trained clinicians. Clinicians must understand the mind-set of dancers and be aware of their special needs in order to be more effective with treatment.

It's not always so simple, says Leigh A. Roberts, PT, DPT, OCS.

Clinicians must understand the mind-set of dancers and be aware of their special needs in order to be more effective with treatment.

"Because dancers have the mentality that they don't want to stop dancing, they tend to dance through injuries. Dancers think dancing is supposed to hurt," says Roberts, owner of LAR Physical Therapy in Columbia, Md., and president of the Performing Arts Special Interest Group of the American Physical Therapy Association. "Oftentimes they don't seek medical help for a minor injury and then the injury becomes chronic and harder to resolve."

ON YOUR TOES

A thorough evaluation, which should include observing dance technique, can help clinicians diagnose a specific injury. Approximately 50 percent of all dance injuries are foot and ankle related, says Roberts. And the majority of dance injuries—60 percent to 76 percent—are related to overuse.¹

Clearly, dancers' lower extremities are hot spots for potential injuries, and flexor hallucis longus (FHL) tendinitis is one of the most common ankle injuries. Clinicians must be careful not to confuse its symptoms with those of Achilles tendinitis. Because dancers often wing (evert) their feet, they have too much weight medially on their foot in relevé (heel raise), which overuses the FHL.

JOHN CUIPPA

Using Pilates for Dance Injuries

For professional dancers, whose livelihood depends on whether they're able to perform on stage or not, recovering from or preventing injuries can be the difference in getting a job.

Like any athlete, dancers have to be in perfect condition mentally and physically. Pilates is a form of complete body conditioning that focuses on strengthening deep support muscles and balancing muscle groups around the joints to help avoid injury and increase performance ability.

Pilates is beneficial for turnout, and it can increase strength and power. "By re-balancing muscular groups, dancers increase range of movement and flexibility, while also increasing strength and control throughout this greater range of movement," says Moira Merrithew, co-founder and executive director of education for STOTT PILATES® in Toronto.

"There is also a strong emphasis on breathing and focusing inward, allowing the mind to focus on what the body is doing," says Merrithew, a former dancer with the City Ballet of Toronto and the Atlantic Ballet Company. "Pilates can have a positive impact on body image and leave you feeling invigorated, as opposed to exhausted."

As a rehabilitation tool, Pilates can also provide an interim step between non-weightbearing and open chain, explosive movements. The focus on mobility, flexibility and strength through a full range of motion can restore injured tissues to a healthy state before sport-specific training begins.

In rehab, Pilates can be used at all stages, from the most acute phase to advanced functional re-education. Current Pilates programs include modern principles of exercise science and spinal rehabilitation.

"We encourage dancers to explore how Pilates can help them physically and mentally for their career," says Merrithew. "Pilates also helps dancers avoid injury or shorten the period of down time when injured. Because of the light resistance and non-weightbearing aspect of this exercise method, dancers can stay in shape while injured."

Melanie Byford-Young, a rehab master instructor trainer for STOTT PILATES, feels that the rehab community has opened their arms to incorporating Pilates principles into their programs.

"The basic principles of Pilates are consistent with the basic principles of rehabilitation," says Byford-Young. "After isolation of the injured area by the physical therapist, the next stage is to address the body as a whole by incorporating the injured area so that the body can function to its maximum capacity. Pilates does just this."

"Successful integration is the ability to function at the level an individual wishes, enabling mobility of the joints and strength of the muscular system. The integrity of our shoulders, hips, knees and spine are all interconnected and must all be addressed when managing or preventing aches, pains and degeneration and integration of the injured area."

Pilates is gentle on the joints, focuses on suppleness and strength, and can address and rehabilitate specific issues with dancers. Pilates can also be practiced for preventive measures and to stay in shape after physical therapy. "For the clinician or physical therapist, Pilates is a template for assessing clients and for giving appropriate exercises," says Byford-Young.

—Kay Stevenson is a freelance writer in Toronto.

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"Dancers can have complaints in the posterior aspect of the ankle, so a differential diagnosis is important to try to elucidate that it's FHL tendinitis and not Achilles [tendinitis]," Roberts says.

Plantar fasciitis—an inflammation of the plantar fascia—can be another affliction that slows down dancers. Ballet dancers are more prone to developing plantar fasciitis because pointe shoes don't have arch support. But no one factor can be delineated as the cause of plantar fasciitis; the condition is often the result of repetitive use or acute trauma, such as a jump landing and dancing on a hard surface, says Ewalt. Treating plantar fasciitis requires daily stretching, strengthening and icing after long periods of activity.²

Roberts feels that taping the feet is effective to prevent the plantar fascia from overstretching. Taping relieves the pressure from the plantar fascia and provides support to the area.

Depending on the severity of an injury, dancers may need to adjust their technique by avoiding demi- or full-pointe. Demi-pointe, a heel raise position where dancers stand on the balls of their feet, can stretch the plantar fascia more than being "en pointe." Roberts notes that clinicians can strengthen the foot by having a dancer flex through the ball of the

foot, then point through the toes. Articulating through the entire range of motion can strengthen the foot's intrinsic muscles so they contribute to pointing the foot—and not just using the extrinsic muscles such as the peroneals, flexor hallucis longus and flexor digitorum longus.

Dancers are prone to other injuries, including stress fractures, medial tibial stress syndrome, sesamoiditis, FHL tenosynovitis (trigger toe) and patellofemoral syndrome.³

While treatment plans vary and should be based on the nature of an injury, clinicians should incorporate a progressive, dance-specific rehab program.

A program should include high-level activities to assist dancers as they transition back into dance class, rehearsals and performances, says Ewalt.

In addition, encourage rest and avoid offending positions, which help dancers recover more quickly, Roberts says. Icing controls pain during the inflammatory phase, and appropriate stretching or strengthening exercises, along with correcting faulty dance techniques, contribute to an effective recovery.

Dancers don't want to risk losing a role in a performance because of a minor injury, and falling out of practice impedes their hard-earned progress. So Roberts tries to keep them dancing by modifying technique to reduce forces on an injury and providing progressive strengthening exercises that help them return to full dance activities. Whether dancers are recovering from an injury or staying in shape for the season, training consistently is crucial.

In Halajian's case, after 2 months resting, she began dancing again and experienced a rapid return of symptoms. Ewalt referred Halajian to a physician and, after an MRI, she received a diagnosis of tibial stress reaction.

During rehab, Ewalt took exercises in a different direction. Reduced motor control of the lower extremity was a contributing factor to Halajian's injury, Ewalt says, so she implemented a program that addressed flexibility, strength, proprioception and motor control throughout the kinetic chain.

In addition, Ewalt guided Halajian in non-impact cardiovascular exercise to improve general fitness.

Ewalt says research in the field of dance medicine suggests dancers have limited cardiovascular fitness, and one study observed 90 percent of dance-related injuries occur when a dancer is fatigued.

Ewalt, a former dancer herself, was able

to assess Halajian's technique and realized she needed to increase muscle balance and control, two crucial elements.

When clinicians understand the demands of dancing, such as the number of hours rehearsing, length of the season, choreographic style and injury fears, they're better equipped to guide patients through rehab, says Ewalt, who specializes in treating professional dancers at her practice, Performing Arts

and Athletic Restorative Training Specialists in San Diego.

AVOIDING INJURY

Clinicians can play a role in preventing injuries. Dancers primarily use their quadriceps, calves and back extensors, and may have weaker internal rotators, hip adductors and abdominals, says Doug Scarborough, PT, DPT, MTC, sports medicine coordinator

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Clinicians should encourage cross-training and muscle strengthening techniques so dancers can avoid chronic overuse injuries. To remedy muscle imbalances and prevent injuries, general cross-training—including yoga, Pilates and gyrotomics—can help dancers stay healthy and strong. Gyrotomics, developed by a ballet dancer, are multi-dimensional

exercises that use circular motions and span multiple joints; they're performed on custom-designed equipment.

"In general, they're using their external rotators a lot, as well as their gastrocnemius, by being on their toes," Scarborough says. He encourages dancers to warm up properly and maintain a healthy diet. When dancers stay active in class and cross train in the off season, injuries are less likely to occur. But if an

unfortunate injury does happen, the recovery time tends to be shorter.

A 2003 study in the *American Journal of Sports Medicine* examined the incidence of injuries in a modern dance organization before and after physical therapy intervention. Researchers observed that comprehensive management that included on-site case management and intervention decreased the incidence of new injuries and lost work days for dancers.¹ In addition, the authors determined overuse problems could be handled and prevented by using a comprehensive management program in which performers had daily access to on-site physical therapy services.¹

But not all dance companies have the resources to provide on-site therapy. As a result, clinicians may eventually see a patient who was afraid to seek early intervention out of a fear that she'll have to stop dancing in order to heal.

By then, the damage has already been done and you must deal with a chronic injury. Clinicians should educate dancers about early intervention and explain that handling a problem at an early onset leads to less time away from rehearsals and performances.

REACHING OUT

When working with professional or amateur dancers, clinicians can improve their treatment plans in a number of ways. Ewalt understands the special needs of this patient population and the importance of modifying dance participation to activities that don't perpetuate injuries.

But clinicians don't have to take up dancing as a hobby to treat this group. To communicate with dancers, you should understand basic terminology, positions and movements, says Ewalt. She suggests keeping a dance terminology book in the clinic as a resource.

Roberts and Ewalt agree that continuing education courses and networking with clinicians who work with dancers are always beneficial. Look for clinicians who have more experience managing and treating dancers.

For Halajian, she hopes her injuries are in the past. She continues to work with Ewalt and, after working through ailments, has gained a new perspective of dancing and injury prevention.

"I'm pretty much religious with any exercise Katherine gives me," Halajian says. "She's made me think differently about what I choose to do in class."

By understanding the dance culture, clinicians can help dancers heal without denying



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them their passion. "It's important to know more than just the physical aspects," Ewalt says. "You have to understand the entire context." ■

For a list of references, go to www.advanceweb.com/rehab and click on the references tool bar.

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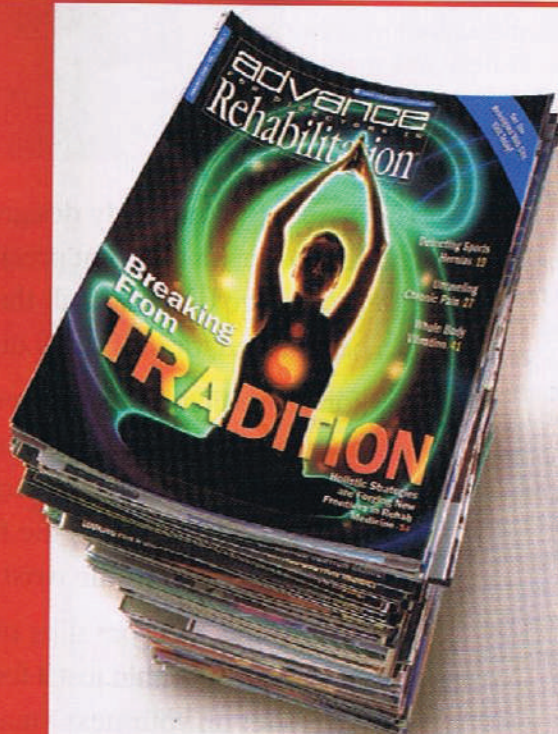
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