Kickin’ It with Podiatry

This sport is particularly hard on the feet.

BY KEITH LORIA

According to editors at Black Belt Magazine, nearly five out of every 100 Americans engage in some sort of martial arts, meaning approximately 16 million people are taking classes at the more than 40,000 martial arts schools around the country.

There are many disciplines of martial arts and it can refer to anything from karate to Bok Fu to Judo to Jiu Jitsu to Kung Fu to Tae Kwon Do to countless others. While each has its own distinguishing factors, the one thing they all have in common is that people training in them often get injured. Many of these injuries and problems can be relieved by visiting a podiatrist, and there are several foot experts in the field who specialize in dealing with martial arts athletes.

Alan Ng, DPM, surgical skills chairman for the American College of Foot and Ankle Surgeons, doesn’t just treat martial arts athletes, he competes at a high level in several disciplines. Currently, he holds a second degree black belt in Shotokan karate, a second degree black belt in Enshin karate, and was the 1994 KyukToo Ki bare knuckle full contact heavyweight champion. He has also trained in Muay Thai for the past 15 years.

“I started training in college and in the ’90s and fought in many competitions and tournaments,” he says. “I still train to this day. It’s my stress relief and way of staying in shape. I still train but I don’t compete any-

I think it definitely helps me understand what my patients are going through and knowing what to look for when they come in complaining of pain.—Ng

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things (contusions, toenail trauma and uncomplicated fractures) to severe debilitating ones.

For those involved in more aerobic-type martial arts, common podiatric-related injuries include plantar fasciitis, Achilles tendonitis, sesamoiditis, and ankle sprains. Martial arts participants more involved in traditional methods—such as striking pads, a heavy bag, and/or another student—have more extensive injuries that include fractures, hematomas, and dislocation of joints and tendons.

“Most of the time what I am seeing in patients are small contusion-type injuries, little sprains, ankle sprains and twists, mostly from impact,” Ng says. “There are ligament injuries from direct impact, such as kicking or hitting the bag wrong or someone catching impact in the wrong spot. I see a lot of front joint contusions and sprains from that.”

One common thing he sees from martial arts athletes is improper form when kicking the bag, perhaps from a roundhouse kick, causing metatarsal injuries. Impact into the bag with improper force causes partial strains, swelling and discomfort in ligaments. These can take any athlete out of training for a while. “Due to the constant pivoting and elevation of the foot while performing kicks, plantar fasciitis and plantar fascial injuries often occur in martial arts training for more serious athletes,” Ng says. “The pain will be located at the inside of the heel and at the bottom of the heel when this type of injury occurs.”

He explains that the mechanics of performing a front or roundhouse-type kick involves the supporting leg pivoting on the ball of the foot, while the other leg is in the air striking the target. The fascial injury can occur on the supporting leg due to the strain on the fascia, or a fascial injury can occur to the striking leg due to the repetitive pushing off and tightening of the fascia when beginning the kick, or when the kick is concluding, which causes the kicking foot to return to the ground, resulting in tightening of the fascia.

Ng sometimes deals with patients with sesamoiditis, another type of repetitive motion-related injury that happens due to kicking exercises. Someone kicking a heavy bag while one foot is elevated onto the metatarsal heads pivots the ground, resulting in tightening of the ground grappling.”

For ankle sprains, which can occur in martial arts but more likely during sparring than during training, Sung recommends rest, icing, compression and elevation (RICE). Ankle sprains, especially the very common lateral ankle sprain, occur most often during sparring when an athlete is changing positions quickly, as quick changes in direction during sparring can result in being caught off balance.

“Depending on the severity, bracing may be required for three or four weeks, and swelling can last over one to two months,” he says. “Most times, an x-ray is taken to rule out other pathologies, but there are generally very little to no long-term sequelae after the ankle sprain has healed.”

Contact is obviously a large part of some martial arts mediums—hitting a punching bag, an opponent or sometimes a block of wood—and that results in many fractures to the foot and ankle, especially digital and metatarsal fractures. These can result in an inability to put weight on the foot, and swelling and bruising will most likely appear.

Sung says, “The most common foot fractures occur as spiral oblique injuries of either the digits or the metatarsals.”

Jay Sung, faculty and attending physician for White Memorial Medical Center, Los Angeles, California, is a board certified, fellowship-trained foot and ankle surgeon. He says the variety of injuries in martial arts is great but the most common injuries for these sports have to be cuts and bruises.

He says, “For my practice, I have encountered patients training in martial arts to have a high number of bruises to the legs and ankles. Al-though most do not complain and seek out treatment (they are usually seeing me for different reasons), cuts and bruises are readily treatable, and simple wound care or cold compresses are usually prescribed. Other injuries can be specific per the sport. An example would be Brazilian jiu jitsu, where broken toes are a hazard due
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A common sprain to the foot is a hyperextension injury to the first MPJ, often the result of sparring and changing directions rapidly. The hallux becomes forcibly dorsiflexed while the athlete lunges forward to attack an opponent, resulting in a sprain of the first MPJ.

With kids, Ng says, he sees a lot of the same things, but usually not a break or sprain. Bruises and overuse injuries are more likely with the young ones, and fractures or ruptured tendons are rare.

Training Time
One thing that all of the podiatrists agree on is that proper stretching and preparation is vital for keeping martial arts injuries at bay. With stretching, the number of minor soft tissue injuries, including muscle strains and tendon strains, will decrease.

Ng says, “I recommend that stretching be done for at least 20 minutes before performing any kicking or punching techniques. Sung adds that he has treated many martial arts athletes who didn’t properly prepare for a training session or match.

Sung says, “Conditioning is important even for daily life routines, but vital for martial arts. By conditioning through aerobic exercises or strength training programs, it allows the practitioner of martial arts to better prepare and see results in their art. Conditioning also helps prevent sloppy technique which can lead to injury due to fatigue.”

Dr. Cesar Irby, a podiatrist with the Northeast Medical Group in Stratford, Connecticut adds that most nagging strains and sprains can be avoided with a proper post-workout routine as well, stretching one’s feet and ankles after training. Other tips Irby gives for proper foot care are to clean feet with warm soapy water and dry thoroughly to prevent foot fungus, moisturize feet to prevent skin fissuring that can lead to athlete’s foot, and apply lotions/creams after showering, avoiding the areas between the toes.

The age of participants should also be considered when warming up. Ng says that knowing one’s body limits is important, claiming he can’t do the same thing now that he could in his twenties and thirties. He says, “Most of the population are not professional fighters and they hurt. There’s a reason they are hurt- ing. They don’t do this for their livelihood and without preparing correctly and at pace you can handle, tendons can pop.”

A slow progression of training is essential to promote increased balance, flexibility and strength while reducing the risks of foot and ankle sprains.

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Equipment Matters

With concussions becoming more of a conversation topic due to the NFL and sports media, it’s important to realize the importance of headgear in martial arts. Sung says, “Although it may be uncomfortable and unrealistic to daily life routines, headgear can help prevent trauma and swelling around the brain by providing an extra cushion against falls, punches, kicks, etc. Specifically with the foot, protective footwear can help (if participants are not training with bare feet.) Savate (a form of karate in which savateurs kick with their toes) has a special shoe where the toes and heels are enforced, while kickboxing has special boots required.”

Investing in a great pair of training shoes is never a bad idea. A shoe should provide comfort, protection, and support during activities.

Seeking Help

Sung thinks it’s important that martial arts athletes seek out a podiatrist for help, even if they think their problem is minor. If any injury is severe enough to limit an athlete’s ability to walk, it should be seen by a podiatrist so x-rays of the area can be taken. “As any practitioner knows, preventing injury starts with knowledge and who better to consult with about foot and ankle injuries than a podiatrist?”

According to Ng, besides help with foot and ankle problems, you can offer preventative tips, plus advice on proper training and warming up, “Most of the time, injuries can be prevented with supervision and an understanding of how you’re supposed to do techniques, not overtraining, and not going too wild. People start out and they do too much or go too hard too fast and don’t limit themselves. Technique is important. If you do something the wrong way, it can hurt, but do it the right way and you can avoid problems.” PM

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Keith Loria is a freelance writer who has written about everything from baseball to corporate mergers to healthcare, with a little entertainment thrown in the mix. Recent notable interviews include legendary actor William Shatner, heart surgeon pioneer Dr. Marc Dedomenico and Pez Candy CEO Joe Vittoria.