



**Serving Up
Physical Therapy
for Pickleball
Players**

Serving Up Physical Therapy for Pickleball Players

Physical therapists help athletes in this fast-growing sport stay or get back on the court.

By Keith Loria

Pickleball blends a trio of paddle sports: badminton, ping-pong, and tennis. The combination must be working, because pickleball was the fastest-growing sport in the United States from 2019 to 2021, according to the Sports & Fitness Industry Association.

Today, more than 5 million people participate in pickleball, and 10% of those players only picked up a paddle since the pandemic began.

Over the last decade, Mark Bouma, PT, DPT, owner of Lake Washington Physical Therapy in Seattle, has started to see a big uptick in the number of recreational and competitive pickleball players who visit his clinic.



Courtesy NSGA





Mark Bouma demonstrates exercises he uses with pickleball players who come in for physical therapist services.

“The thing I have come to appreciate about treating pickleball players is their genuine enthusiasm for the game and the sense of community that is built around the sport,” he says. “Whether I’m working with a 25-year-old or 65-year-old athlete, their goals are the same: to get back out on the court as quickly as possible.”

USA Pickleball, the sport’s governing body in the U.S., estimates that about 17% of pickleball players are 65 and older. While she doesn’t regularly treat them in the clinic, Becca D. Jordre, PT, DPT, PhD, a professor of physical therapy at the University of South Dakota, has been researching older pickleball athletes at the National Senior Games since 2011, when pickleball was first introduced as an exhibition sport. She tests the players’ physical fitness and offers basic recommendations to them as part of her research.

“I study athletes aged 50 and older in all of the 20 National Senior Games Association sports,” she says. “However, this past year my research has focused more on those who play pickleball and

tennis. Athletes only make it to this national level if they qualify in their respective state; thus, they tend to be more serious players.”

Noe Sariban, PT, DPT, happens to be a professional pickleball player, so he understands firsthand the issues that arise with players as a result of playing the game.

He started playing six years ago after meeting with a patient who was injured playing the sport, and he wanted to learn more about it. It wasn’t long before Sariban was competing at the pro level and winning matches.

Sariban is the physical therapist for Engage, a manufacturer of pickleball apparel, paddles, and equipment for the sport. He also works with players during professional tournaments.

“A pickleball tournament is intense in terms of physical demands on the body — it’s a long day, usually with multiple matches — which can lead to acute flare-ups of underlying injuries or new injuries requiring recovery management,” he says.



For example, he recently worked with a female pickleball player who had a left hip problem due to her backhand motion. She was putting a lot of internal and external rotations through her right hip, which caused pain to increase throughout the tournament day.

“I did a lot of mobilization to get some more space in her hip; I performed dry needling to release some of the muscles that were flared up throughout the competition,” Sariban says. “She did medal at the tournament, and, according to her, physical therapy played a role in getting her through the day.”

Tournament competition aside, pickleball is better known as a recreational sport. And as with almost any sport, amateur pickleball athletes often don’t put in the same amount of time off the court to stay in shape, and their mechanics and stability might not be as strong as those of professional players. Professionals also often gain a higher sense of the game and can better anticipate footwork and positioning. All these factors place amateur athletes at a higher risk for injuries.

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Noe Sariban



“Although the overall population of those who play pickleball is getting younger, many players are between 50 and 70 years old,” Sariban says. “Some have never played any other sport in their life. It’s a very low-level sport to pick up for those who don’t have strong athletic backgrounds, and that’s the appeal for many. But it leads to a lot of people playing who are potentially deconditioned.”

Sarah Ansbury, director of Pickleball Palmetto Dunes in Hilton Head Island, South Carolina, is a former pickleball national champion. She teaches clinics around the country and continues to tour professionally.

“There’s a lot of misconception about pickleball. People think they have to shuffle and move all the time — and a lot of people teach that — but it’s seriously bad for your body,” Ansbury says. “You have a lot of people playing who never played a sport before, and they’re moving way more than they need to. Their body can’t rotate, and they’re putting a lot of strain on themselves because they are in a compressed position. They’re going to hurt themselves and need help from a physical therapist.”



Like many PTs who treat them, Noe Sariban is an avid pickleball player himself.

Over her pickleball career, she herself needed to work with a PT multiple times. She was familiar with the experience, though, because she previously played tennis and had back, knee, and shoulder issues with that sport. Many pickleball injuries tend to be similar.

Common Injuries

With a small court size of 20 feet by 44 feet (22 feet on each side of the net), pickleball largely involves quick movement spurts of one to two steps either forward and backward or side to side. These quick changes in direction can place significant demands on the hamstring and adductors, meniscus of the knee, Achilles tendons, and plantar fascia. As a result, some common acute injuries across all pickleball players include adductor strains, sprained ankles, and Achilles ruptures. Some chronic, repetitive injuries include knee pain, hamstring and adductor strains, Achilles tendinopathy, and plantar fasciitis.

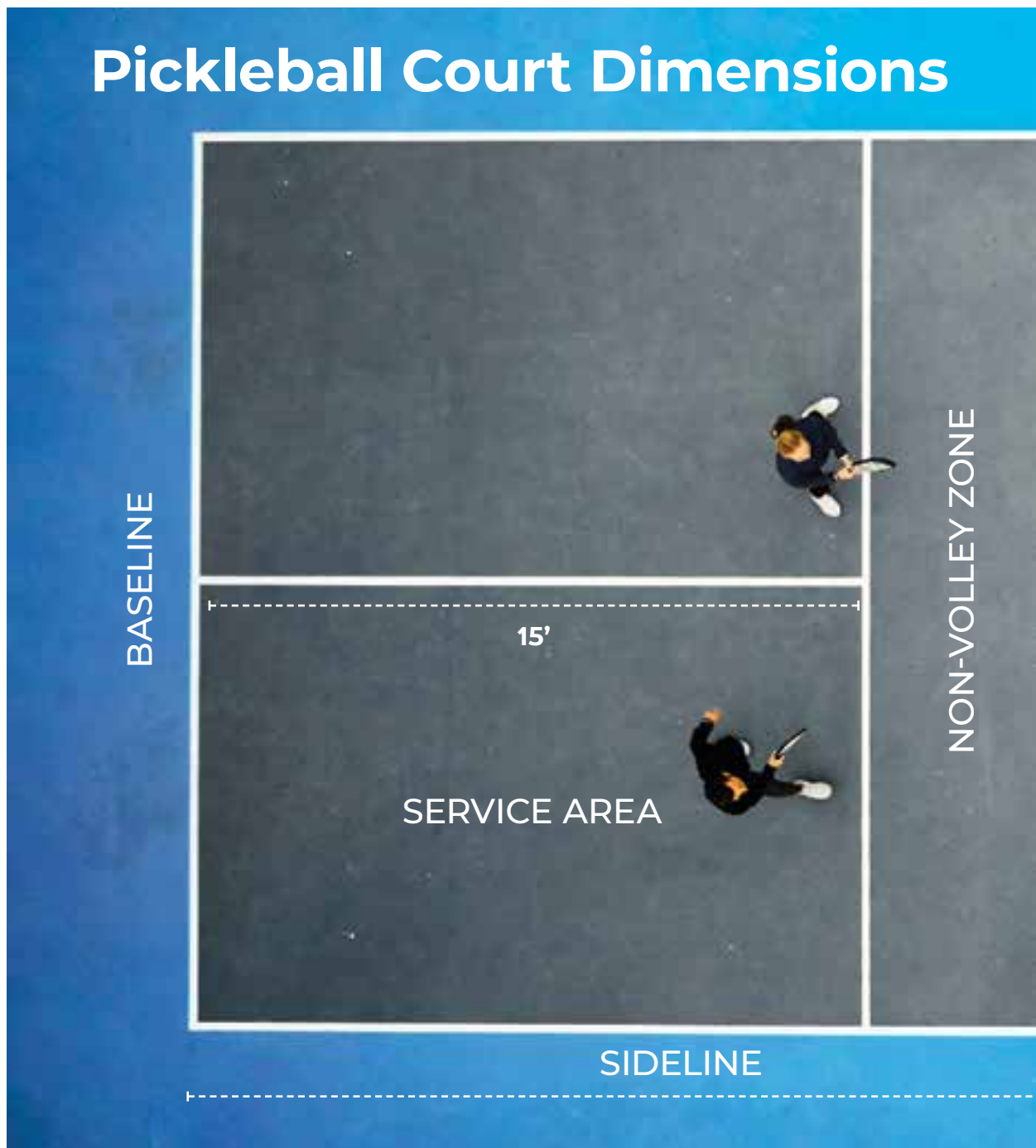
“The quick pivots, lunges, and lateral movements can place repetitive stress in these areas, especially in singles when players have the entire court to cover,” Bouma says. “For many of the lower extremity injuries, the quick lateral movements during a volley combined with pivoting while striking the ball can contribute to stress in these areas.”

He continues: “Older individuals can be more susceptible to these lower extremity injuries because of age-related changes of the collagen and decreased elasticity of these structures.” It’s important, then, for rehabilitation to focus on helping the players’ soft tissues and joints meet the demands that pickleball places on them.

Of the older pickleball players Becca Jordre has studied, she says that more report recent knee injuries than injuries to any other body area. Shoulder and hip injuries come next.

Low back pain also is reported often by pickleball players. It may not be an acute injury as often

Pickleball Court Dimensions

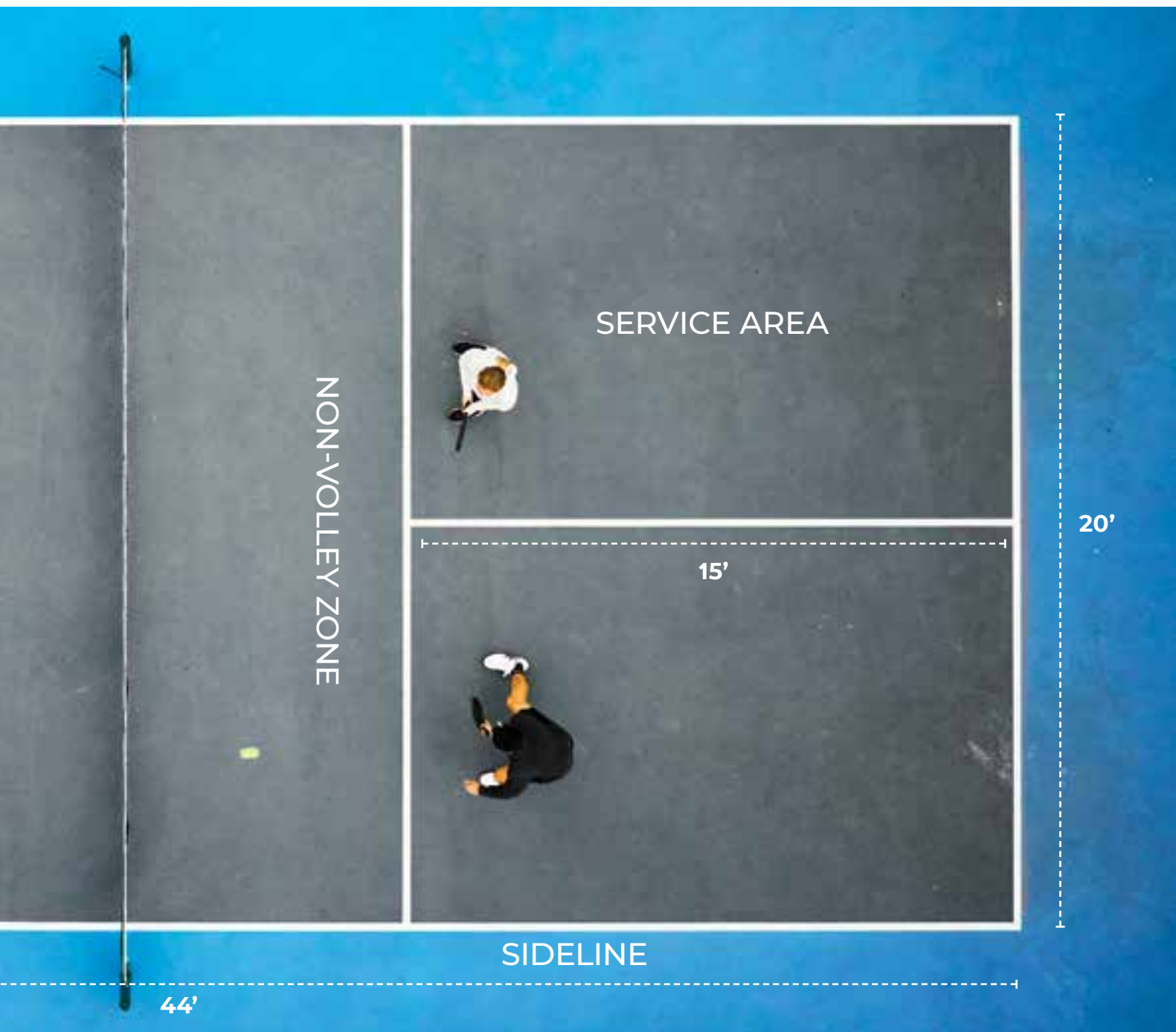


as, say, an ankle sprain, but several factors can contribute to pain over time, such as altered mobility up or down the chain, poor footwork and movement on the court, altered motor control, and instability in the core and gluteal musculature.

Sariban identifies one move in particular that can lead to lower back injuries, as it involves various body movements occurring together. Dinking, also known as “the net game,” involves hitting the ball softly (ideally away from the opponent) to leave

the opponent with an unattackable ball around the non-volley zone.

“When players are at the non-volley zone, there’s a lot of forward flexion at the lumbar spine, often combined with flexion rotation when dinking. If a player — often one at a lower playing level player — doesn’t have proper mobility and footwork to get in the right position, it will lead to lower back problem over time.”



Once Sariban determines the factors that are contributing to the patient’s pain, he works with them to regain proper strength and function, and then will reassess their mechanics of playing to prevent recurrence.

Another common injury is “pickleball elbow,” which is similar to the better-known “tennis elbow.” Poor form in making contact with the ball, improper footwork positioning, and being in the wrong spot within the court all contribute to poor mechanics at the wrist, forearm, and elbow.

Injury Focus: the Ankle

When Bouma works with a pickleball player with an ankle injury, whether from a sprain or Achilles tendinopathy, there is a similar pathway to get them back on the court.

“First, we must progress the injury out of the acute phase using manual techniques and modalities that help reduce swelling, promote tissue healing, and restore range of motion, particularly dorsiflexion,” he says. “Dorsiflexion is a key ankle motion in

achieving the ‘athletic stance’ that allows the player to quickly step laterally and to perform the stop-and-go footwork necessary for pickleball.”

If dorsiflexion is not fully restored, Bouma explains, the player is at greater risk for recurring Achilles injuries or knee pain, because the biomechanical forces at play will be transferred to other areas of the kinetic chain.

“To progress ankle stability and enhance ligament and tendon strength, progressive amounts of loading are applied throughout the system,” Bouma says. “There are countless ways this can be done, but I always try to integrate pickleball court movements and paddle skills into the exercise.”

Interventions begin with retraining the proprioception of the ankle on unstable surfaces and progressing to reactive balance activities, dual-task concepts, agility, and, finally, game speed movements.

“As a physical therapist, I am looking to optimize movement patterns,” Bouma says. “It is critical that we train out compensation patterns that may lead to an overuse injury somewhere else or place the player at risk for reinjury. We want to achieve high-quality movement, and I want to ensure that the structures that were injured can tolerate the loading that pickleball demands and are properly protected by sound body mechanics throughout the kinetic chain.”

“If I could do one thing for all pickleball players, I would integrate more strength and power training into their week.”



Becca Jordre

Shouldering Tennis Pain

For many former tennis players, pickleball has provided an opportunity to get back on a court if they’re unable to continue playing tennis, as pickleball places less demand on the body.

For example, while some pickleball players have shoulder injuries — primarily rotator cuff tendinitis or shoulder impingement — Bouma notes that these are more frequent in tennis players. In fact, he explains that many former tennis players had chronic shoulder conditions that prompted them to transition to pickleball.

“Overhead paddle swings are infrequent in pickleball, and many swings involve quicker shots close to the body. They have a slower follow-through velocity than a tennis racquet backhand or forehand,” he says. “Plus, dinking is a common return strategy in pickleball. The player is close to the net, and the paddle follow-through is limited, which most shoulders can tolerate.” He adds that the length and weight of the paddle places less force during ball impact than the force created by a typical tennis racquet.

Safety for Seniors

Safer than tennis or not, pickleball is a sport, and — like all sports — there’s always risk of injury.

At 75 years old, Edgar Campos, PT, has long treated athletes involved in recreational activities, and as a pickleball player himself he understands the issues that arise from playing the sport — especially among the older population.

“I live in a community with a lot of senior citizens, and I’ve seen pickleball become very popular. That results in injuries among those 55 and older,” he says. “There’s a lot of moving and backing up. I’ve seen people slide and misstep. In fact, a partner that I played with suffered two fractured wrists when she was going back to hit a lob and stepped wrong.”

Older adults are more active than their counterparts from generations ago, he notes. “The boomer population is not a sitting-down population — we all walk around, ride bikes, and play sports like pickleball,” he says. But care for this aging population needs to be different from that for younger recreational athletes.

Campos says the most important thing is educating older pickleball players on the importance of stretching and strength training.

What's in a Name?

According to USA Pickleball, the association for the sport in the United States, the game was invented on Bainbridge Island, Washington, in 1965. From the organization's website:

After playing golf one Saturday during the summer, Joel Pritchard, congressman from Washington state, and Bill Bell, successful businessman, returned to Pritchard's home on Bainbridge Island to find their families sitting around with nothing to do.

The property had an old badminton court, so Pritchard and Bell looked for some badminton equipment and could not find a full set of rackets. They improvised and started playing with ping-pong paddles and a perforated plastic ball.

At first they placed the net at badminton height of 60 inches and volleyed the ball over the net. As the weekend progressed, the players found that the ball bounced well on the asphalt surface and soon the net was lowered to 36 inches.

The following weekend, Barney McCallum was introduced to the game at Pritchard's home. Soon, the three men created rules, relying heavily on badminton. They kept in mind the original purpose, which was to provide a game that the whole family could play together.

Oh, and the name? Again, USA Pickleball investigated and states:

Within days [of the game's invention], Joel Pritchard's wife Joan had come up with the name "pickle ball" — a reference to the thrown-together leftover non-starters in the "pickle boat" of crew races. Many years later, as the sport grew, a controversy ensued when a few neighbors said they were there when Joan named the game after the family dog, Pickles. Joan and the Pritchard family have held fast for decades that the dog came along a few years later and was named after the game.

Proof of when Pickles was born could help resolve the two-story name debate. ... [USA Pickleball] looked for dog records, uncovered photos, and interviewed several people who were there from 1965-1970. Based on evidence, ... the dog was born in 1968 — three years after pickleball was first played and named. In other words, the Pritchard family story stands true that pickleball was not named after the dog, but rather in reference to the local pickle boat races.

"People do not think about flexibility. They just get out of bed and play," Campos says. "It's definitely important to think about stretching, especially as you get older, and keep your body ready for playing the game. It's a great sport as long as people learn to do it correctly."

Staying on the Court

As often as they treat people with pickleball injuries, the PTs interviewed for this article have a lot to say about preventing injuries in the first place.

Jordre regularly looks at training trends and tests the physical performance and health of National Senior Games athletes. She notes that athletes who play pickleball report significantly more time spent engaged in cardiovascular exercise each week than do athletes in other sports.

"They also have a nonsignificant trend toward less strength training," Jordre says. "Strength and power training are critical for sports like this.

Everything has to be specific to the athlete, but if I could do one thing for all pickleball players, I would integrate more strength and power training into their week as a way to prevent injury and promote their health even further."

"Dynamic warm-ups and guidance on how and when to work on flexibility will also help them to thrive in their sport," she adds.

Bouma identifies several areas a player could focus on to prevent injury. The first is a consistent dynamic warmup before playing that not only targets lower extremity mobility, but also integrates the trunk and shoulder motions.

"It doesn't have to be elaborate, but a five-to-10-minute program of multiplane movements and dynamic stretching prior to getting on the court can make sure that the player is ready to go," he says. "I really like players to be proficient at single-leg balance concepts, particularly with arm and leg movement. Single-leg balance activates so many

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Edgar Campos



Courtesy NSGA

muscles and systems including the core, lateral hip, adductors, calf, and ankles.”

He suggests that as a warmup players perform short volleys to each other while balancing on one leg. If they can’t stand on one leg safely, then he suggests a tandem split-stance, which maintains a narrow base of support but allows for standing on both legs.

Given how common it is for players to take up pickleball after months or years of limited physical activity, Sariban believes everyone should see a PT prior to starting out.

“Older people, especially, who more likely have impairments and limitations, should be assessed,” he says. “The thing about pickleball is that it’s different from any other sport I’ve ever played. It’s



Courtesy NSGA

addictive, and people don't just play once a week. They'll play four or five days a week for multiple hours at a time. That can be a recipe for causing problems with the body over time."

To avoid injuries, Sariban believes players should approach physical therapy as a wellness and preventive measure. "There are definitely things we can address prior to people stepping on the court," he says.

For instance, something as simple as the player's type of shoes can impact what happens with the body and the way it moves. Improper footwear can lead to getting a foot caught, rolling an ankle, or something else that will cause an acute injury.

"We also look at how they hit the ball, how they move on the court, and if they have a sense of what their body is doing," Sariban says.

Bouma points to education and training that physical therapists can provide, including ways to optimize movement on the court that will enhance

performance and reduce the risk of injury. "A physical therapist can perform an evaluation and movement assessment on a player to determine areas that could be incorporated into their training program to improve their performance. These could include improving squat and lunge techniques, gaining shoulder mobility, increasing lateral hip strength, and achieving greater ankle mobility." ■

Keith Loria is a freelance writer and frequent contributor to APTA Magazine.