From the playground to the pros: Examining the risks of early sports specialization

By Stephanie Trendell

It was February of 2021 and Olivia Chinsen, a setter for the volleyball team at Canton High School in Massachusetts, was gearing up for her senior season. It was her first time back on the court since she tore her anterior cruciate ligament (ACL) the season prior. Not only did she endure nine months of recovery from surgery, but also a global pandemic that postponed her senior season by seven months.

In the Westwood High School gym, Chinsen finds herself once again surrounded by the echoes of her teammates' voices, sneakers squeaking on the floor and balls slamming into the ground. But this time, after watching from the bench for nine months, it was her voice yelling out volleyball jargon, her sneakers squeaking on the hardwood and her slamming the ball into the floor. Chinsen was ready for her vengeful return to the volleyball court for her final season.

Not far into warmups, she jumped up to hit the ball and came down *hard*.

“I looked at Coach Cawley and I think my face said it all.” Chinsen said. “I thought, ‘There’s no way I did it again.’”

But she did.

“I tried to convince myself it was minor, but a part of me knew it was my ACL again,” recalled Chinsen.

Another surgery, another clunky knee brace, another nine months of physical therapy. Now, Chinsen is a master of bosu ball squats and a veteran on the leg press machine.

Chinsen is one of many high school athletes who has experienced one or more season-ending injuries. Many experts blame these injuries on the trend toward specializing in a single sport starting at a young age. In a 2019 study in the Journal of Athletic Training, researchers found that student athletes who play club sports are more than twice as likely to experience time-loss injuries.

“Club sports,” also known as “travel sports,” refers to teams that do not affiliate with a school or county. Club teams are privately-run organizations designed for elementary to high school aged kids to get more practice in a certain sport, and to get them playing in front of college athletics recruiters. Often, there is an expectation for athletes to specialize in a sport if they have aspirations to play at the collegiate level.

“I love that [kids] are active at all. There's a lot of benefit to sports participation during the developmental ages, but single sports participation does make me a little nervous sometimes,” said Dr. DeAnna Corey, a sports medicine physician at Emerson Hospital.

When working with single-sport athletes, Corey analyzes a variety of factors. She makes a distinction between athletes who play one sport and athletes who specialize. “If I have a patient playing soccer in the spring and the fall and that’s it and they’re taking time off, I’m not too worried about them. As opposed to another child who’s focused on soccer but is playing [all year round] and on multiple teams, I’m going to be a little more nervous about that,” she said.

For kids in their developmental years, there are actually great benefits to going down to the park and playing basketball with friends or street hockey with the kids next door. Corey refers to this time as “unstructured play.”

“It’s kids being active with other kids without any adult structure being involved,” she said. One of the pitfalls of starting organized sports at a young age is that there is less time for kids to engage in this casual, unstructured time.

“This is something I encourage for my younger patients or my parents of younger patients. It’s good for the kids socially and emotionally, but they’re also doing different movements, so their neuromuscular learning is a bit different,” said Corey. “It can help prevent burnout to have this time to blow off steam that isn’t related to a single sport.”

Another vital component Corey looks at when it comes to single-sports participation is the motivation behind a child’s choice to focus on one sport. “Is it because they’ve shown some promise in this sport and we’re trying to push them on the trajectory of a future athletic career? Is this the only sport that they like? Is it the child’s choice or is this more of a parental drive?”

These are important questions to ask when looking at youth sports specialization because, especially when an athlete wants to play a sport in college, the level of commitment they must dedicate to that sport should not be cast aside.

Campbell Kline, a University of Maryland softball alumni, is very familiar with this. Kline verbally committed to UMD following her freshman year of high school, which means she went through the recruiting process in middle school.

Kline played on a club team that practiced three to four times a week and participated in tournaments on the weekends that were all over the country. “Anywhere from South Carolina to California,” she said.

Aside from intense practices and tournaments, here's a glimpse into the college recruiting process for those who are unfamiliar: Players attend tournaments every weekend to get noticed by coaches who can’t even really talk to them because of NCAA restrictions. Rules in place about recruiting in the NCAA are aimed at avoiding premature college commitments, but there

are many loopholes, including “unofficial” visits to college campuses and verbal commitments that these rules have become pretty much null. With these loopholes, athletes can commit to a school at any age. So forget deciding what you want to do for the rest of your life at 18, for kids like Kline, it’s 15.

As far as the ability to play multiple sports goes, Kline said, “there’s no time.”

“You’re practicing three to four times a week and you go away on the weekends. And it’s not like I can drive from California to Maryland to be back for my soccer game,” she said.

“I feel like it would’ve been so fun doing so many different sports because when you’re an athlete, you like different sports, you’re competitive. But once I knew that I could go somewhere with softball, college-wise, I focused on that.” However, during Kline’s junior and senior years of high school, she decided to play basketball, along with softball, before she was bound to a single sport for the next four years.

Kline felt like playing club sports was necessary in order for her to play softball in college because club teams are where athletes get the most exposure to college coaches. And she is not alone in that opinion. The question then becomes: How do we get athletes on the path to college sports, while also keeping them healthy enough to endure a four-year collegiate career?

“She loved volleyball. She wanted to play volleyball in college at that time, so I’m sure in that moment, all those dreams were going through her mind, just slipping away,” said Chinsen’s coach, Pat Cawley, recalling the moment she saw her go down for the second time, reinjuring her ACL. “My heart broke for her.”

Cawley, who played volleyball at Boston College and graduated in 1979, said the recruiting process was virtually nonexistent when she was in high school. “There was no recruiting in those days. You talked to the coach and told them you were interested,” she said. “There was no video. I just went around and watched college teams to determine where I could fit in. Then we had tryouts, just like in high school.”

In the world of athletics today, that is not the case. The dedication an athlete is expected to have to a sport if they desire to play at the college level far exceeds what many experts deem to be healthy.

According to Corey, there are certain yellow and red flags she looks for, “Are they doing this sport for more than eight months out of the year? Are they specifically choosing this sport over other things? Are they quitting other activities they enjoy for this sport?”

Chinsen first picked up a volleyball when she was 8 years old and never looked back. At age 12, she started playing year round for several different club teams, which required more commitment as she aged. When she was in high school, on her most serious club team, she practiced three times a week with tournaments every other weekend. At tournaments, each

game consisted of two sets, and her team played, on average, four to five games on each day depending on how far they went in the elimination round on Sunday. This totaled in approximately 20 sets of volleyball per weekend.

Sports today are just more demanding. Tori Constantin, assistant softball coach at the University of Rhode Island, has observed the dramatic changes over the years in the landscape of athletics. “People are now running softball tournaments in December and January, and that never happened when I was playing,” she said. Constantin feels the problem is less about specialization and more about overuse. And it starts with the coaches.

“We had a pitcher on campus who we’re recruiting. She said she throws 750 pitches a week. That’s 3,000 pitches a month,” Constantin said. “She was talking about how she had some upper back tightness and lost some velocity because of it, but that's what some coaches are telling these kids is good.”

For comparison, Constantin said the pitchers on her Division I team throw about 100 pitches “on a heavy day.”

Constantin discussed a common myth about sports specialization. “You want to get a scholarship? You have to work harder. And ‘harder’ in a 14, 15, 16-year-old kid's mind, is more. But that’s not always the case,” she said.

The benefit of playing multiple sports is simple: it gives other muscles a natural break.

“If you are going to play soccer and softball at the same time, your arm gets to take a massive break in the fall season. I think that’s why you see better balance and maybe less injuries in kids who don’t specialize because they have time to rest parts of their body,” Constantin said.

“If you manage your body the right way, [specialization] can be done properly,” said Constantin. “But it’s hard because travel ball teams don’t have the same resources that we have in college.”

Age matters when it comes to athletes who specialize. The younger you are, the longer you are putting wear and tear on the same muscles, and as you grow and continue to play your sport, these muscles can reach a breaking point. The result wreaks havoc on your body.

But for an athlete, the physical injury isn’t even the worst part. It’s the recovery.

Some of the most common sports injuries that require surgical repairs entail a months-long recovery process. For a tear of a ligament in the knee (ACL, MCL, PCL, meniscus), the average recovery time is about nine months. For rotator cuff or labral tears in the shoulder, it’s usually around six months. An injury to the ulnar collateral ligament in the elbow, a common injury for baseball players, requires a minimum recovery time of nine months, but it is often much longer. Not only does this time away from their sport feel eternal for an athlete, it also complicates simple, everyday tasks, like showering, getting dressed or even just walking.

Vashti Etienne, operations support specialist at ATI Physical Therapy and physical therapy student, tore her labrum in her shoulder while on the soccer team at Salem State University. Although she physically felt the effects of the injury, she never had surgery to repair it. Why? The same answer any athlete would give: The recovery sucks.

Having been through an injury herself and working with physical therapy patients, Etienne understands how truly grueling the recovery process can be. With many of the younger athletes she works with, they grow impatient and there is pressure to speed up their recovery. “They’re pushing themselves too much and it creates that burnout very quickly. Especially with the younger folks, it can cause them to lose that love for the sport.”

Etienne noted that her injury combined with her time working alongside athletes reminded her of a simple fact: “You only got one body and you’ve got to treat it the right way,” she said. “Mentally getting there is a challenge, but once you’re over that hump, you’ll feel so much better.”

Alison Bloom, physical therapist at Brigham and Women’s Faulkner Hospital, has seen a lot of overuse injuries in her time working in orthopedics and sports physical therapy. ACL tears like Chinsen’s are an injury encountered frequently. “[The ligament] is so susceptible to change of direction and twisting. If you don’t have the muscle strength to overcome that, it makes you a lot more susceptible to tearing it,” said Bloom.

With pre-college, one-sport athletes, there are often not adequate resources and knowledge to support their desire to specialize. There may be intense and frequent practicing, but not enough time to weightlift, stretch or simply just rest.

“In an ideal world, people wouldn’t specialize at a super young age,” Bloom said. “If they are going to, then maybe you don’t have kids on the field more than three days a week and on the off days, they’re doing something like stretching or strengthening to avoid burning them out.”

The resources needed to protect the health and well-being of an athlete are often not available until college. Some high school coaches, though, are taking the leap to try and address this issue to get high school athletes on the best path to success.

Adam Hughes, wellness coordinator at Chinsen’s alma mater, Canton High School, has worked to build up the strength and conditioning program for athletes, a vital aspect of injury prevention. Striving for perfection in a single sport, he said, only causes young athletes to limit themselves. “When you have to focus on attaining peak performance in that one thing all the time, that is going to drastically limit you because it's like your peak is never really enough,” he said. “It doesn’t allow you space for the enjoyment of getting better.”

With single-sport athletes especially, Hughes emphasized the importance of conditioning to prevent overuse injuries. “For example, the arm is not intended to move in this direction to begin with,” he said, simulating a throw. “You have to be very meticulous with the work that happens

before you get on the field. Work in the weight room and ‘prehab’ work to help reduce instances of injuries, because we can't always prevent them.”

The one caveat to this is that it is difficult enough to get high school athletes in the weight room, let alone get them to do tedious injury prevention exercises. And when they do workout, they often aim for physical vanity, without understanding what they are doing. This can be another contributing factor to injuries. Having worked with high school kids for many years, Hughes has discovered that when it comes to getting athletes to buy in, it’s all about the approach. “There was a time when I believed in separating it all: You have your strength portion, plyometrics (explosive movement training), and injury prevention because that’s the model I went through when I was in school,” he said. “Now I put it all in the same workout because if I say we’re gonna stretch, most high school athletes take that as a break. I think it’s about how it gets integrated into what you do. Is it an extra or is it just part of your practice?”

While Hughes’s program was just in its early stages during Chinsen’s time at Canton High School, it has largely expanded since, with the goal of preventing injuries like hers from being as frequent as they currently are.

Looking back, Chinsen said she doesn’t feel like her coaches focused enough on injury prevention. There is no definitive evidence to say that her injury was caused by overuse, but even she agrees, such things are avoidable. “I felt pushed to be as fit as possible,” she said. “I’ve heard a lot of stories from friends who have gotten injured and said that bouncing back was very challenging and a lot of it is preventable, so it’s disappointing.”

Currently, Chinsen continues to play volleyball on the intramural team at Boston College. She can’t say for sure if she would have played competitively in college, had she not been injured, but one thing that her injuries solidified: it was no longer her choice.

“For me, I feel like this totally could have been prevented, and then, who knows what could’ve happened?”