



## Dealing With Knee Pain

[00:00:00] Hi there, Coach Edwards here and I want to talk to you this week about something really important. Something that I went through. Something that you may be dealing with or you know an athlete who is dealing with, and that is patella tendonitis.

## Working With High Performance Tennis Athletes

[00:00:13] So I had the experience this last weekend to work with some of the top tennis players in Canada and a junior tennis player. So between the ages of about 12 and 14 and what shocked me, really, well maybe didn't shock me; but what I was disappointed to see was a number of athletes with knee pain. And this is something that I went through when I was young. I was diagnosed with patella tendonitis when I was 12 years old and I had aspirations to be a division one lacrosse goalie. So 12 years old, I'm about grade, was that grade 7, grade 8. But I was playing varsity lacrosse and so my aspirations to play were really high but my knee pain was huge. I went to physical therapists at the time and all that I was told was that I should strengthen my quads, and that typically made me, it just kind of irritated me and and then the other thing was to stretch. So I was constantly doing that you know heel to your butt grab your heel sort of thing pull it to your butt stretch out the quad. But that was just irritating the knee and the patella tendon as well.

## Growth Spurts Are Just The Beginning

[00:01:25] So what the patella tendon is, is basically the tendon below your kneecap. So it takes your kneecap and attaches it to your shin bone and so above that kneecap you have all of your quadriceps muscles the muscles on the front of the leg. Now what happens is the quadriceps muscles go through a phase where, usually this comes on during a growth spurt for young athletes. The majority of times. It can happen elsewhere. It can happen due to just kind of injuries, bad steps things like that. But but what I saw this weekend with all these athletes was that they had all gone through major growth spurts. And so what happens is the long bones of the femur which is your upper leg bone gets...goes through growth phase, and you get this, the bone that the muscle is attached to, lengthens.

## A Rubber Band With a Knot In It

[00:02:19] So now that muscle which is really, imagine it's like a rubber band. So you take a rubber band and if it's over a certain distance it feels fine. It's got a stretch to it but it's OK if you take it and stretch it further you feel the tension in that rubber band. Well that's basically what muscles are going through on a young athlete and that can be really painful because these muscles are on stretch and the signal for basically from the brain to those muscles is like "hold on People!" We're just barely holding on and we don't want to tear anything. And then what that triggers is your brain has this amazing ability to protect the body and it sends a signal to your muscles that we call the stretch reflex. So if you've ever stretched a

muscle like let's say you're you're reaching for your toes and you get to a certain point and you feel Ow! and you just feel everything kind of shorten up. That's a really good example of the stretch reflex.

## Your Muscles Are Just Holding On

[00:03:13] So all this stuff is going on. The bones have lengthened and the brain is sending a signal like "hold on people". But meanwhile we are taking these athletes and we're playing. And that's exactly what I did. Like I didn't want to stop playing lacrosse. I don't want to stop playing hockey or soccer. It got to the point where I was in so much pain that I hated to stop playing the sport. And so I remember you know during my most serious recruiting summers when I would go off to these camps to play lacrosse. And I would have three games a day. So you know breakfast a game, you have a break and then you'd have lunch and a game and then you have dinner and a game. And I hated to stop playing because my knees would tighten up.

[00:03:56] So one of the things that I recommend for athletes to do is one you should see a physical therapist. I think legally I probably have to tell you that. But you know if you get a good physical therapist they're going to help you. But I have to kind of say it with a grain of salt and no offense to the physical therapist out there. Feel free to leave a comment below I'd love to get your input. But my experience with my physical therapist was I was really getting the bad advice. The advice was basically to ice after I played and to stretch and then strengthen the quadricep muscles. The ice helped for sure. After I played the ice would reduce inflammation.

## Anti-Inflammatories Are a Slippery Slope

[00:04:35] I was also told to take ibuprofen at a very young age and I don't necessarily agree with that now. I feel like that maybe may have hindered my body's ability to learn how to repair its own inflammation. Now there's a lot of people who have perspectives on that who disagree with that, but there is a kind of side of the medical world that thinks that by pumping us full of anti-inflammatories when we're young the body then kind of just basically inhibits its own ability to send anti-inflammatory mechanisms to basically keep your body from getting injured and to basically cool things off. So the ice helped after practice.

[00:05:18] But the thing that I know now, what's helped me the most and what's helped a lot of young athletes who I work with is: instead of stretching with quad, like basically putting your butt to your heel and grabbing it and pulling it to and stretching things out. One, I do a hip flexor stretch, where I'll get on a couch, you know get on my favourite couch at home and I'll put one legged standing on the floor. The other one I'm basically kneeling on the couch and my quad, my leg is basically open. So if this is my hip and this is my quad and here's the knee joint, this is my shin bone basically it's open. That takes stress off the patella tendon but allows me to stretch the hip flexors up here and into the upper quad which gives me some length. OK.

## Get On The Bike

[00:06:08] The other thing I tell athletes to do even before that is, if you can, get on some sort of a bike with a high seat and pedal lightly. Basically get more blood flow into the quadriceps and to loosen up basically just get you help that tissue get warm. People have gotten away from that, a lot of strength coaches have because they think like, oh well if you bike you know you're not using the you're basically using a different mechanism than if you were to sprint and you're gonna be sprinting so it's going to hurt you. I disagree. I think there's a lot of benefits to just getting heat into the muscles and getting it soft.

## Get Some Heat In There

[00:06:43] So whether you do that with a hot pack or a sauna or if you go for some light jogging in a pool or; but I like the bike the bike is easy it's usually around and it's simple. Get on a bike, you pedal lightly at a high seat and then you slowly lower the seat. You go for couple of minutes the lower seat and you lower the seat again you lower the seat again. We're basically doing is as you lower the seat is you're you're basically increasing the flexion of the knee right which then puts a little extra pressure on that patella tendon. But the Quad, the muscles are getting soft. Then I like to roll. OK. So the thing about rolling is there's people now who are like oh my god, rolling's the worst thing ever. There's no science behind it, whatever. You know what if you went to a massage therapist and had a massage you probably oh that's fine. That's OK. Well think of a roller as a poor man's massage. That's a kind of a great way to look at it. So you get the heat in the muscle and then you get on some sort of rolling device like a travel roller a foam roller or a softball. Nothing too crazy intense because that can also can be too much. But basically getting some soft you know motion working in tissue is going to help lengthen out the quad before we actually ask the knee to bend.

[00:08:04] OK. Now what I saw happen with these tennis athletes was that they did none of this. Right. The girls have Kenesio tape on their knees on the patella tended to try to kind of to support it. There's you know, neither here nor there on the can Kenesio tape for me.

## Dynamic Warm Ups Can Be Bad

[00:08:21] But then they're going out and doing a dynamic warm up and they're just like inside, like some of the girls came up to me later and they were just really there were a lot of pain but they're toughing it out because there's some of the top tennis athletes and they don't want to look soft and I get that. But what we're doing is we're putting an athlete in a really bad situation. So. So my rules for patella tendonitis are this: get some heat in the muscles before you ask them to bend. Then roll them with a travel roller or a foam roller, a softball, you know take it easy. The more intensive the ball you go, the easier you want to go. We're just trying to get some length in there. OK. So we got some heat. We've got some length. Now stretch the knee. Now flex that knee whether it's on the couch with a little bit more of a knee band or you

could grab the heel if you can do that comfortably if you grab the heel pull it to your butt, stretch it that way. That's that's great. Progress gently into a dynamic warm up. I like to go basically static warm ups first. OK. People freak out about this because they all all statisticians you can't do is going to slow you down. Listen if you're 12 13 14 years old and you're going through a massive you're going through a massive growth spurt you need static stretching OK or else you're going to hurt yourself. Right. Then get into your dynamic warm ups get in your sprints things like that.

## Static Stretching Has Benefits

[00:09:43] Now when you're done after your session you want to try to get length in the muscles. Now's the perfect time to work on stretching static stretching slowly maybe even some passive stretching gently. OK. And then ice and cool down the muscles, not just the patella tendon but also the quadriceps. Great. That is what has helped me the most in my experience, my career. That's the advice I give to athletes. By all means go to a physical therapist and see what they have to say. But weigh that against the advice that I'm giving you here from experience. Again I'm not a physical therapist. I'm not a doctor. I just have to say that. But that's the experience that has helped me and has helped a lot of the athletes I've been around. So I was really sad...You know it hurt me to see athletes in pain and but sometimes technical coaches don't you know have this mindset. They just want the athletes to do what they need to do. But we really need to take care of athletes are growing. So I hope that's not you if it is leave me a comment below and I hope you enjoy this. And by all means I'll see you next week.

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Sincerely,

Jonathan Edwards - Olympian