

Youth and Plyometrics: Do they go together?

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Conversation with a Coach

Recently I had the chance to communicate with one of elitesoccerconditioning.com's subscribers who is from Portugal. He read the article in the science of soccer section on the website about plyometric training for 12-13 year old youth soccer players.

[\(click here to read that\)](#)

He emailed me some concerns regarding the validity and safety of youth doing plyometrics. I added some additional content than what was in the original emails. My immediate reply to Sergio was this:

Taylor:

I appreciate your comments and I hope you are enjoying the website.

One of the main evidences for the fact that it is ok for kids to do certain types of plyometrics is how they live their life. Kids run, jump, jump off fences and land on the ground, fall from playground equipment, play hopscotch and the list goes on. In all of these activities kids seem to grow up normal. When you look at running, that is plyometric, and we will not tell kids to stop running.

Here is what Sergio had to say about my comments:

Sergio:

My name is Sergio and I am from Portugal. We know that children aged 12 years in Portugal are different of American children aged 12 years too.

It's true, they jump all their childhood, but ask or check the statistics about injuries in young people. It's increasing! I can give you an example SYNDROM SINDING-LARSEN-JOHANSSON DISEASE

I will copy and paste something that I read in a web site:

"When a child or adolescent complains of pain and tenderness near the bottom of the kneecap, the problem might be from jumper's knee. Kids in sports that require a lot of kicking, jumping, or running are affected most. Doing these actions over and over can lead to pain in the tendon that stretches over the front of the kneecap.

Sometimes the bone growth center at the bottom tip of the kneecap is affected. This condition is known as Sinding-Larsen-Johansson disorder. It is mostly likely to

occur during growth spurts.

Disruption within the developing bone in the bottom tip of the kneecap may produce pain and tenderness in the front of the knee. Fortunately, this condition is not serious. It is usually only temporary and will improve with age."

It was just an example...as well I could speak about OSGOOD-SCHLATTER DISEASE.

But it's funny because today I was speaking with a doctor about it and he told me that he doesn't understand the large number of orthopedic injuries with children nowadays.

I think that we have a problem. Intensity and volume of our trainings!
I can have my players run and jump by just saying..."Boys, play with the ball!" But, I can do an exercise, and plan 10 minutes of jumps also. This is, and you know, jump training=plyometric training (or introduction to plyometric training). We know that plyometric training is good to improve explosive force...it looks nice when we have explosive players...

Technical and tactics it's good and enough. Jose Mourinho never used to do physical training. why?!? He can work and improve physical conditioning with the ball in the same time that is improving tactic and techniques contents.

I emailed Sergio back with this:

Taylor:

Good hearing from you again. Here is my response to your comments.

My comments come from the American college of sports medicine (ACSM).
"Plyometrics have been previously thought of as a method of conditioning reserved for adult athletes, the American College of Sports Medicine contends that plyometric training is a safe, beneficial and fun activity for children and adolescents provided that the program is properly designed and supervised.

Regular participation in a plyometric training program may also help to strengthen the bones, facilitate weight control, and prevent injuries.

With qualified coaching and age appropriate instruction, plyometric training can be a safe, effective and fun method of training for children and teenagers who have developed an adequate baseline of strength. Plyometric training should begin with simple, lower intensity drills and progress to higher intensity drills over time.

Beginning with one to three sets of six to ten repetitions on one upper body exercise and one lower body exercise twice per week on non consecutive days seems reasonable.

Children and adolescents should be provided with specific information on proper

exercise technique, rate of progression, and safe training procedures (e.g., warm up and cool down).

Plyometrics are not intended to be a stand alone exercise program and should be incorporated into a well-designed overall conditioning program that also includes strength, aerobic, flexibility, and agility training.

The contention that plyometrics are inappropriate for boys and girls is not consistent with the needs of children and teenagers or their physical abilities." ("Plyometric Training for Children and Adolescents", Dec 2001, www.acsm.org)

I continue here:

Now for my own thoughts as a follow up. I believe that your beliefs are founded on the right thing. You feel that it is best to protect the kids first. You don't want the kids to get injured. I agree that this is correct. All too often coaches and parents want their athletes and teams to win and be great. The unfortunate thing is that this can come at a great cost. Players get burned out and they get injured. Proper rest, recovery, intensity and volume are big keys to increasing performance and decreasing injuries.

There is a proper place and time for plyometrics. And using plyometrics properly can even reduce injury while improving performance. It is important we don't treat little kids like adults.

Additional information

Becoming great soccer athletes should be done one phase at a time. Fortunately, plyometrics can come early in the training life of youth soccer players. I found this article from the NSCA about training youth using plyometrics. [Click here](#) to get that article.

Here is some more evidence for youth being able to do plyometrics:

The International Youth Conditioning Association quoted a study in their *Developmental Essentials* book. It says, Another group of prepubescents ages five to nine performed jumping drills that required them to absorb forces up to eight times their body weight experienced no effect on their normal growth.

Here is evidence that youth plyometrics generate results.

There are various scientific articles that show plyometrics can work in youth players. [Click here to read the article from my website.](#)

In addition another study showed that short-term plyometric training programs increases athletic performances in prepubescent boys. Those improvements were

maintained after a period of reduced training. [1](#)

Another study showed that plyometric exercises can improve Squat Jump and Running Velocity in prepubertal boys. More specifically, this program selectively influenced the maximum velocity phase, but not the acceleration phase.

One final note:

Please be more cautious than exuberant when training your youth athletes. It is better to give your athletes something easier and not get injured than to give something very intense and risk injury. Remember, the purpose of plyometrics is to improve performance. If your athletes get injured they could lose any improvements made.