

Injuries in youth sport: An evidence-based injury prevention warm-up

Injuries in sport are common. In fact, injuries are best looked upon as a side effect of the exercise prescription. While the benefits of organized sports are unquestionable, the risks of injury are real and the results of injury can often be devastating for the player and team. Soccer is unquestionably the most popular sport worldwide. In Canada soccer is the most popular youth participation sport.¹

Attempts at injury prevention in sport have been generally disappointing when subjected to an evidence-based analysis. Successful interventions have generally been limited to specific injuries (e.g., ankle braces for ankle sprains).² Some of the traditional injury prevention advice (such as stretching before you play) has shown to be of questionable value.³ However, new research from the Oslo Sport Trauma Research Center has given those interested in injury prevention in sport some hope.

The 11+ is an injury prevention warm-up created by the Oslo Sport Trauma Research Center that has been proven in a recently published randomized controlled trial⁴ to significantly decrease injuries in adolescent female soccer players. Using the 11+ they were able to show a statistically significant decrease in severe injuries, overuse injuries, and overall injuries.

The 11+ consists of a combination of running, strengthening, and balance drills. I have introduced the 11+ program to the local soccer clubs in my area and have implemented it with the 12 year old girls' soccer team that I am currently coaching. The warm-up is generally well received, however, it does have pros and cons.

Pros

- It has been proven to work.
- It was proven to work using volunteer coaches (not professional coaches or physiotherapists/trainers).
- The players seem to enjoy it and it is not difficult for the players or coaches to learn.

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Cons

- It takes 20 minutes to perform (and should probably be done in its entirety) and should be done two to three times per week. This does create logistic problems for the teams/clubs as field time is limited.
- Coaches complain that it takes up too great a proportion of their limited practice time. We have found that this problem can be solved by creative scheduling on the part of the club (e.g., have the players arrive early and have a small area set aside for the warm-up).
- The warm-up is done without a ball, which is a significant paradigm shift for soccer coaches.
- The program does require an effort from the coach to learn the drills and some focus from the players on doing it properly.

The warm up can be downloaded for free from at <http://f-marc.com/>

11plus/index.html. This includes a description of the drills and video demonstration that are extremely useful in teaching the techniques.

The 11+ should be considered the current gold standard in injury prevention in adolescent female soccer. All adolescent female soccer teams should probably be performing this warm-up. By extrapolation—at least until we have more evidence—this warm-up should also probably be performed by male teams and should probably be expanded to other age groups. It should also be considered by other “soccer-like” sports such as rugby, field hockey, football, basketball, and so on.

We physicians are in the perfect position to promote this warm-up in an evidence-based discussion with our patients—let's get the word out.

—Carl Shearer, MD
President, Section of Sport and Exercise Medicine

References

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