Injury Prevention Program Shown to Help Youth Soccer Players

A person need only travel to the nearest park to see that soccer is the most popular sport in the world. There are nearly 240 million amateur players worldwide (about 3 million youths in the United States alone). With so many people playing soccer, there are bound to be a few joint sprains and muscle strains. The most common injuries are caused by trauma. Overuse is the culprit in 9% to 34% of trauma cases. Ankles, knees, and thigh or calf muscles are the most prone to injury.
Researchers have extensively studied risk factors for soccer injuries and potential preventive actions like warm-up, protective equipment, and good playing field conditions. Approximately 85% of these injuries occur in players 23 years old and younger, with 45% occurring in players younger than 15. A recent study in the American Journal of Sports Medicine expanded on previous research to show the success of a prevention program on reducing soccer injuries.

A Review of the Study

Researchers in Switzerland studied 194 male youth soccer players (average age 16) over one year. They compared injuries among players who received an injury prevention program with a control group of players who did not receive the prevention program. The majority of the players were defenders or midfield players (61%).
All players enrolled in the study received:

- A clinical examination of the spine, hip, knee, and ankle
- A soccer test of flexibility, speed, strength, and endurance
- A self-administered survey of medical history, psychological characteristics, and aspects of training and soccer play.

The team physician collected information on injuries and physical complaints that lasted for more than two weeks or resulted in missing the next match or training session. Players in the prevention program group had 20% fewer injuries than those in the control group—with the greatest effects seen for mild, overuse, and training injuries. “Match injuries”, or those caused by contact with another players, are more difficult to prevent. All in all, these results suggest that comprehensive prevention programs can decrease the incidence of soccer injuries in young players.

A Little More About the Prevention Program

The injury prevention program used in this study was based on the latest scientific research on risk factors and prevention of soccer injuries. The program emphasized general prevention rather than prevention of specific injuries.
Features of the Program General interventions such as:

- Improvement of warm-up
- Regular cool-down
- Taping of unstable ankles (only if truly unstable)
- Adequate rehabilitation
- Promotion of the spirit of fair play

Specifically designed "F-MARC Bricks", which are 10 sets of exercises to improve the following:

- Stability of the ankle and knee joints
- Flexibility of the trunk, hip, and leg muscles
- Coordination, reaction time, and endurance

A three-tiered approach to educating and supervising the coaches and players

- Coaches: received courses, practical demonstrations, and individual consultations by a sports scientist
- Players: received results of the baseline exam and were instructed on improving individual weaknesses
- Team Physiotherapist: attended one training session per week and supervised warm-up, cool-down, performance of F-MARC Bricks, and rehabilitation of injured players

What These Findings Mean

It comes as no surprise that injury prevention techniques for soccer players can reduce injuries. The question is how this information can be used. One way is to try and incorporate injury prevention strategies (including factors like the quality of equipment and playing fields) into youth soccer programs. Additionally, avid soccer players can use good techniques and injury-prevention practices to decrease their personal risk of injury.

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Resources:
American Academy of Pediatrics
"http://www.aap.org/"
Federation Internationale de Football Association
"http://www.fifa.com/"
Sources:
Junge A, Rosch D, Peterson L, et al. Prevention of soccer injuries: a prospective intervention study in youth amateur players. Am J Sport Med. 2002;30:652-659.