



A SNAPSHOT

Leon Root, MD, Pediatric Outreach Program

2016–2019

Background



Sports-related injuries are on the rise, with lower extremity and overuse injuries being most common among young athletes¹



Studies have found injury prevention programs to be effective in reducing the risk of sports-related injuries³



Injury to the anterior cruciate ligament (ACL) is a major risk factor for the development of osteoarthritis in later life²



Nationally, 60 million children and adolescents participate in organized sports

About this Program



History

Launched in 1987 as a general musculoskeletal screening program



Program Structure

Students are:

- Screened for musculoskeletal conditions and injuries
- Assessed to identify deficiencies in movement quality
- Educated on how to improve movement technique



Current Goal

Aims to prevent injuries in young athletes participating in sports through musculoskeletal screenings and education at no cost



2-hour sports-injury prevention screening

- Musculoskeletal evaluation
- Movement quality assessment
- Vital signs and vision assessment



Audience

Young athletes playing on sports teams with risk of lower extremity injury



Interactive movement quality workshop held after screening



Partnerships

NYC middle and high schools in diverse communities

For more information please contact Vilma Briones at brionesv@hss.edu

HSS Education Institute

¹ Patel, D. R., Yamasaki, A., & Brown, K. (2017). Epidemiology of sports-related musculoskeletal injuries in young athletes in United States. *Translational pediatrics*, 6(3), 160–166. doi:10.21037/tp.2017.04.08

² Lohmander, L. S., Englund, P. M., Dahl, L. L., & Roos, E. M. (2007). The long-term consequence of anterior cruciate ligament and meniscus injuries: osteoarthritis. *The American journal of sports medicine*, 35(10), 1756-1769.

³ Mugele, H., Plummer, A., Steffen, K., Stoll, J., Mayer, F., & Müller, J. (2018). General versus sports-specific injury prevention programs in athletes: A systematic review on the effect on injury rates. *PLoS one*, 13(10).



Program Reach and Impact

Reached
323
students

22
screenings held

Sports screened:



basketball



baseball



football



lacrosse



volleyball



soccer



track

Musculoskeletal Evaluation

146

students referred for follow-up care



101

for musculoskeletal conditions



44

for vision deficits



7

for high blood pressure

Interactive Movement Quality Workshop

Increase in knowledge of proper techniques:

47%

Planks

15%

Lunges

13%

Deceleration

13%

Landing

Movement Quality Assessment



94%

run forward and backward without pain



97%

maintain balance when running with direction change

Improved lower extremity alignment needed when jumping on:



One leg

60%



Two legs

80%

Improved Self-Management Skills



100%

reported they could apply what they learned to move safely

Program Satisfaction



100%

were satisfied with the program