Sports specialized risks for reinjury in young athletes: A 2+ Year Clinical Prospective Evaluation

Neeru Jayanthi, MD1, Sara Iqbal, BA2, Cynthia LaBella, MD3, Dan Fischer BA2, Jacqueline Pasulka BA3, Lara Dugas, PhD2

Emory University Sports Medicine1, Loyola University Stritch School of Medicine2 and Lurie Children’s Hospital of Chicago3

Purpose/Background
We previously demonstrated the risks of sports specialized training and injury [1]. The purpose of our study was to identify rates of injury and re-injury on a population of young athletes in relationship to their sports specialization training patterns.

Methods and Study Design
A large multi-center prospective clinical cohort study following injured and uninjured athletes aged 8-18 years old at 6-month intervals for a maximum of 3 years, from 2010-2013. At each interval, subjects completed surveys reporting training volumes, degree of sports specialization, and Tanner stage. Additionally, subjects were given a clinical diagnosis, and their height and weight were measured. We compared data from subjects who were injured after baseline evaluation from uninjured subjects.

Results
There were 1191 subjects analyzed at baseline, with a total of 1083 follow up evaluations for up to 3 years of follow up. There were 39.4% (427/1083) injured follow up evaluations and 60.6% (656/1083) uninjured. Of the 427 injuries, 69.6% (297/427) had a reinjury (142 recurrent injuries and 155 subsequent injury (different location). There were 134 new injuries (previously uninjured).

Conclusions
- Young athletes are more likely to develop a reinjury than a new injury on follow ups up to 3 years.
- These injuries are evenly distributed between recurrent injury, subsequent injury and new injuries.
- Specializing <12 years old and female young athletes were more likely to develop injury
- Similar to baseline, there was a higher proportion of injured highly specialized athletes and a direct relationship to the degree of specialization

Significance of Findings
This is the first study to identify the risk of age of specialization and future injury risk as well as to identify longitudinally the risk of reinjury in young athletes.

References

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