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FAMILY PRACTICE BOARD REVIEW MANUAL

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Sports Medicine for Pediatric and Adolescent Athletes

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Table of Contents

Introduction	2
Preparticipation Physical Evaluation	3
Common Sports Injuries in Children	6
Summary Points	10
Board Review Questions	10
Answers	11
References	11

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INTRODUCTION

Sports medicine is the clinical discipline involving the sciences of exercise and sports that concerns both athletic performance and care of injury. The American College of Sports Medicine defines sports medicine as a multidisciplinary field dealing with the physiologic, biomechanical, psychological, and pathologic variables associated with exercise and sports.

Annually, 25 million scholastic athletes and 20 million community-based pediatric and adolescent athletes participate in organized sports in the United States; with this high volume of activity, sports participation carries an inherent risk for injury.^{1,2} In an 8-year longitudinal study of high school sports, researchers reported that 48% of athletes sustained at least 1 injury

per season, with 35% incurring an injury resulting in at least 1 day of activity lost.³ Although most sports injuries (80%) sustained by pediatric and adolescent athletes involve the musculoskeletal system, the majority of injuries are relatively benign and easily treated with conservative measures (eg, protection, rest, elevation, compression). In contrast, sports injuries involving the central nervous system, although rare, have a major impact on the affected athlete and are some of the most catastrophic athletic injuries seen, causing 70% of traumatic deaths and 20% of permanent disability related to sports.⁴ These statistics underscore the importance of injury prevention programs and education. Specifically, the preparticipation physical evaluation (PPE) is a major clinical tool used by physicians to ensure the safety and maintain the health of pediatric and adolescent athletes in training and competition.¹