

## ***Pediatric Sports Training Issues***

*Pediatric sports medicine, part II*

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In December 1982, I was privileged to be one of the authors writing a book chapter on "Sudden Death in Sports" for Dr. Nathan Smith, the Guest Editor for a Pediatric Clinics of North America issue on Sports Medicine. Some of the chapters covered from that issue will be visited again in this two-part issue on Pediatric Sports Medicine 20 years later!

Eight years after the 1982 edition, October 1990, Dr's Hergenroeder and Garrick combined as Guest Editors for another Pediatric Clinics of North America issue on pediatric sports medicine covering similar concerns, new issues, and other problems for physicians treating young athletes. Some of these issues and concerns of young athletes continue to confront physicians, parents, and coaches 20 years later.

Our intention and goals in these two-part issues is to both update and complement previous Pediatric Clinics issues from the past 20 years and to provide useful, new information. I have invited a broad spectrum of pediatric sports medicine colleagues to share their extensive knowledge and particularly to address the present issues and challenges for young athletes and their families.

This two-part issue on pediatric sports medicine should provide valuable and pragmatic medical information and current guidelines for physicians, trainers, coaches and school officials for promoting safe sport participation for young athletes!

Part One of Pediatric Sports Medicine covers two general sections involving sports medicine and youth. Section one depicts the unique medical issues as seen in pediatric-age athletes. Chapter one describes the parental and athlete's anticipation and expectations of sport participation, from the physician's view.

The increasing importance of assessment of neuromotor and cognitive development and sport readiness at certain age ranges should be recognized more readily after reading chapter two.

Problems such as chronic overuse injuries, youth obesity, "anticipating" larger and faster young athletes are just some of the sport issues and challenges confronting young athletes. How these sports issues should be addressed in the older high school and college athlete are summarized in chapter three.

The sport participation-explosion by young female athletes in sports and in all age groups has continued the past decade. Those unique sport-associated medical issues, problems and concerns occurring in young female athletes are highlighted in chapter four.

Section two of part one describes the wide spectrum of injuries that can occur in the skeletally immature, growing and mature youth when playing sports.

Information concerning catastrophic and major severe injuries resulting from pediatric sport participation with documentation largely provided by the national injury surveillance system is discussed in chapter five.

Brain, neck injuries and other upper spinal injuries with a special emphasis placed on their prevention, anticipatory treatment and rehabilitation needs for such injuries are particularly stressed in this chapter.

Those upper extremity injuries which involve the shoulder, elbow, forearm, wrist or hand in pediatric age athletes are overviewed in chapter six. Acute pediatric sport-related injuries that involve the lower extremity hip, thigh, knee and ankle areas are discussed from a diagnostic recognition and early treatment perspective in chapter seven.

Sport-related lower back and spinal injuries in young athletes cause great concern; their diagnosis, medical management and guidance is outlined in chapter eight. The concluding chapter (9) of volume one describes those young athletes with chronic musculoskeletal pain problems which may incapacitate them for continued sport participation.

Part Two of Pediatric Sports Medicine is separated into three sections. Section three describes four major pediatric body system areas where abnormalities and concerns can be either dangerous for the athlete's participation or significantly decrease the athlete's sport performance abilities.

Chapter ten discusses the wide spectrum of cardiac risk factors and medical cardiovascular participation guidelines for the young athletes from both the physician's and young athlete's perspective.

Recognition and management of those pulmonary and chest problems that either hamper a

young athlete's sport performance or pose dangerous health issues are discussed in chapter eleven.

Traumatic injury to the central nervous system (CNS), especially in contact sports, continues to be a challenge and critical issue in youth sports. In chapter twelve prevention, recognition and management guidelines are updated for the concussion type injuries.

Minor and major infection issues frequently occur in young athletes; diagnosis and current treatment guidelines are reviewed in chapter thirteen.

Section four provides anticipatory guidance information with sport injury profiles, training and some rehabilitation guidelines for young athletes involved in major American sports (chapter fourteen) and major international sports (chapter fifteen).

Chapter sixteen provides a concise discussion summary of current sport training methods and conditioning guidelines for the young athlete. The last section of volume two, Section five, describes young athletes that are challenged with special issues and concerns affecting or limiting active sport participation.

When young athletes have disabilities, either medical or physical, they must surmount these additional challenges to participate actively and safely in sports. Chapter seventeen describes such issues and guidelines for athletes with disabilities; safe participation areas are categorized and updated with current standards.

Drug abuse affects all youth including young athletes and presents difficult challenges for the new millenium. The concluding chapter (chapter 18) of volume two reviews these youth drug abuse areas and proposes management solutions.

The concluding epilogue raises the following issues and concerns. How will we as pediatric sports physicians develop our vision, goals and direction for the needs of pediatric sports medicine care over the next decade?

Will we upgrade the sports medicine teaching curriculums in our medical schools and residency training programs, thus enabling future physicians to proactively guide young athletes toward active and safe sport participation in their respective communities?

Will pediatric sports medicine growth continue not only in America but also thrive and further develop in the international world of pediatric and young adult sports? I am optimistic that this can

and will occur not only in America but that early "seeds of such growth" are now appearing in the larger world community of sports!

I would like to thank all the lead authors for their excellent articles and for meeting their time commitments on a wide spectrum of pediatric sport medicine topics.

I particularly want to thank Dr's Dilip Patel and Don Greydanus for their continued advice, input and their professional contributions to both issues. I have been fortunate to enjoy their friendship for many years and look forward working with them on future professional challenges!