

Interview with an Expert: Overuse Injuries and Burnout in Youth Sports

Source: Safe Kids Worldwide blog on March 5, 2014

Earlier this year, the American Medical Society for Sports Medicine (AMSSM) released new guidelines about overuse injuries and burnout in youth athletes. Safe Kids Worldwide had the chance to talk with sports medicine physician Dr. John P. DiFiori, lead author of the guidelines and President of AMSSM, about why AMSSM tackled this issue, how overuse injuries can stop kids from reaching their full potential and how parents, coaches and young athletes can avoid overuse injuries and burnout.

Why did the AMSSM decide to write this extensive paper on Overuse Injuries and Burnout?

Unfortunately, both overuse injuries and burnout (or loss of interest in sport), are problems in youth sports. The growing emphasis on competitive success has led to increased pressure to begin high-intensity training at young ages, and this may be a significant contributing factor to these issues. In fact, overuse injuries are more common than we think, because in many cases young athletes will try to continue to participate despite their injury.

Some parents, coaches and young athletes believe that specializing in one sport at a young age is necessary for long-term success, but this paper seems to question that approach.

Early single sport specialization is not a guarantee for long-term success. The current literature indicates that with the possible exception of some early entry *continued on next page...*

Overuse Injuries and Burnout

in Youth Sports

NEW EVIDENCE-BASED RECOMMENDATIONS

Participation in youth sports can be an enjoyable experience and offers many benefits such as increased self-esteem, peer socialization and general fitness. However, the growing emphasis on competitive success has led to increased pressure to begin high-intensity training at young ages. Consequently, overuse injuries and burnout have become common.

In response, the American Medical Society for Sports Medicine released evidence-based recommendations on Overuse Injuries and Burnout in Youth Sports. (1) Read on to find out what sports medicine physicians recommend to help young athletes participate more safely and enjoy the many benefits of youth sports.

U.S. YOUTH SPORTS



Competition

An excessive focus on early intensive training and competition at young ages - rather than skill development - can lead to overuse injury and burnout.




More Common Than You Think

Some overuse injuries may not initially cause a young athlete to miss practices or games. And since most injury definitions focus on time lost from sport, overuse injuries are under-represented in injury reports and publications.



44 million

Estimated number of children aged 6-18 years who participate in some form of athletics. Some participate in more than one sport. (2)



SPORT DIVERSIFICATION

Early sport specialization is not a guarantee for long-term success in sports and may increase risk for overuse injury and burnout. Sport diversification at young ages is encouraged.

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THE ISSUES

Overuse Injuries



A result of repetitive activity without needed rest.

Burnout



A result of chronic stress that causes a young athlete to withdraw from participating in a sport that was previously enjoyable.

Long-Term Consequences

Both issues can result in long recovery periods. Some overuse injuries may cause long-term health consequences that can be more serious than you think.

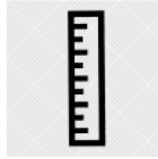
RISK & PREVENTION



A history of prior injury is an established risk for overuse injuries.



Adolescent female athletes who have irregular menstrual cycles are pre-disposed to bone-stress injuries.



Carefully monitor athletic activity during a child's growth spurt, when injury risk seems to be greater.



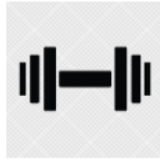
Limits on sports-specific repetitive movements (e.g. pitch counts) and scheduled rest periods are recommended.

WHO CAN HELP?



Athletes

If you are injured or think you may be reaching burnout, tell a parent, coach or physician. Limit weekly and yearly participation time.



Coaches

Pre-season conditioning programs can reduce injury rates in young athletes.



Physicians

Be familiar with specific high-risk injuries, such as stress fractures of the femoral neck, tarsal navicular, anterior tibial cortex and physis, and effort thrombosis.



Parents

Avoid overscheduling. Too many practices and competitive events can lead to injury and loss of interest in sport.

How can a sports medicine physician help?

A sports medicine physician has specialized training in both the treatment and prevention of illness and injury. Sports medicine physicians provide comprehensive care for athletes and other active individuals. They also serve as excellent resources for individuals who wish to become more active or begin exercise programs. To find a sports medicine physician in your area, visit www.amssm.org.

Created by:



The American Medical Society for Sports Medicine (AMSSM) is a multi-disciplinary organization of sports medicine physicians whose members are dedicated to education, research, advocacy and the care of athletes of all ages. AMSSM members serve as team physicians at the youth level, NCAA, NFL, MLB, NBA, WNBA, MLS and NHL, as well as with US Olympic teams. Founded in 1991, the AMSSM comprises more than 2,500 sports medicine physicians whose goal is to provide a link between the rapidly expanding core of knowledge related to sports medicine and its application to patients in a clinical setting. www.amssm.org

References:

(1) American Medical Society for Sports Medicine. *Overuse Injuries and Burnout in Youth Sports* position statement 2014. Available at: <http://www.amssm.org/Publications.html>.

(2) National Council of Youth Sports. *Report on trends and participation in organized youth sports 2008*. Available at: <http://www.ncys.org/pdfs/2008/2008-ncys-market-research-report.pdf>, accessed May 10, 2013.

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sports such as gymnastics and figure skating, participating in multiple sports and then specializing in one sport at a later age is more likely to lead to success, and reduce the rates for overuse injury and burnout. Based upon these findings, we recommend early sport diversification. This will allow children to experiment with different activities and find the ones that they enjoy the most.

Can overuse injuries ever end a young career or cause a problem that will affect children later in life?

Fortunately, most overuse injuries can be successfully treated without resulting in any permanent problems. However, many overuse injuries require lengthy recover periods, often longer than acute injuries such as strains and sprains. That said, there are some overuse injuries that can in fact damage growth and result in long-term health consequences.

What advice do you have for children, parents and coaches to prevent overuse injuries and burnout?

- **For young athletes** – if you are injured or think you may be reaching burnout, tell a parent, coach or physician about it. Don't ignore a problem that is persisting.
- **For parents** – Avoid overscheduling. Too many competitive events can lead to injury, and in the long run may cause burnout.
- **For coaches** – when working with your young athletes, remember that one size does not fit all when it comes to training. Children develop physically and cognitively at different rates, so chronologic age is not a good way to set benchmarks.

The guidelines, *Overuse Injuries and Burnout in Youth Sports: A Position Statement from the American Medical Society for Sports Medicine*, are available at www.amssm.org.

For more information on sports safety for young athletes, see our sports medicine topics at www.sportsmedtoday.com.

AMSSM has partnered with Safe Kids Worldwide in efforts to reach the youth sports world with safety messages and preventative practices. For more information on Safe Kids Worldwide, visit www.safekids.org.

5 Things to Ask Your Doctor if You Think You've Been Concussed

AMSSM member Kim Harmon, MD, a sports medicine physician, concussion expert and lead author of AMSSM's position statement, *Concussion in Sport*, said there are five things you can ask your doctor if you have had a concussion or think you may have been concussed.

- 1 When should I get further evaluation?** If you think you have been concussed, you should see someone knowledgeable about concussion who can make an assessment about whether or not you have had a concussion.
- 2 When should I think about going to the emergency room?** Worsening symptoms such as persistent or worsening nausea or vomiting, severe worsening headache, worsening unsteadiness or loss of balance, amnesia, worsening mental status and worsening drowsiness.
- 3 Do I need a CT scan or MRI?** Only if your doctor is concerned that something other than a concussion may be occurring.
- 4 Should I be awakened frequently to make sure I'm OK after my concussion?** No. Disrupting sleep in someone who has a concussion will worsen the symptoms. You should have a responsible person with you after a concussion.
- 5 When can I return to play?** This decision is different for everybody and needs to be individualized and with guidance from a medical professional. In general, however, you can try some easy exercise only after all your symptoms have returned to their pre-injury baseline and then increase the intensity gradually as long as your symptoms don't increase.

Concussion in Sport: A Position Statement from the American Medical Society for Sports Medicine, are available at www.amssm.org.



COACH'S CORNER

With Spring Training in full swing, here are some tips to help avoid baseball-related injuries this season:

- 1** Give adequate rest for pitchers in between starts and be aware of pitch counts as guidelines. Both USA Baseball and Little League Baseball have guidelines available for review.
- 2** Teach fundamental skills well, especially in younger age groups. Correct throwing mechanics can go a long way in injury prevention.



- 3** Always include a good warm-up before workouts and a stretching routine for cool down.
- 4** Physical conditioning is essential to limit fatigue in later innings, especially in pitchers.
- 5** Encourage players post-season to have a period of "active rest" in which they participate in a sport without significant overhead throwing.

Five Things Physicians and Patients Should Question

1

Avoid ordering a brain CT or brain MRI to evaluate an acute concussion unless there are progressive neurological symptoms, focal neurological findings on exam or there is concern for a skull fracture.

Concussion is a clinical diagnosis. Concussion is not associated with clinically relevant abnormalities on standard neuroimaging with CT or MRI. These studies should be ordered if more severe brain injury is suspected. CT is best utilized for skull fracture and intracranial bleeding, whereas MRI may be ordered for prolonged symptoms, worsening symptoms or other suspected structural pathology.

2

Avoid ordering an abdominal ultrasound examination routinely in athletes with infectious mononucleosis.

Splenic enlargement is common in patients with infectious mononucleosis. The spleen is at increased risk for splenic rupture in the first 3–4 weeks of infection. This has led many clinicians to utilize ultrasound to determine if splenic enlargement is present. However, because individual splenic diameters vary greatly, comparing splenic size to population norms is not a valid method to assess splenic enlargement.

3

Don't prescribe oral contraceptive pills as initial treatment for patients with amenorrhea or menstrual dysfunction due to the female athlete triad (defined as low energy availability with or without disordered eating, menstrual dysfunction and low bone mineral density).

The cause of female athlete triad is an imbalance between energy intake and energy expenditure that leads to menstrual dysfunction (abnormal or loss of periods) and low bone mineral density. Historically, some physicians have used oral contraceptive pills (OCPs) to regulate the menstrual cycle in this disorder. However, the underlying cause for the menstrual dysfunction is energy imbalance. Treatment includes increasing caloric intake and/or decreasing energy expenditure (exercise) to restore normal menses, which can take up to 12 months or longer. Additionally, OCPs do not increase bone density in females affected by the triad. By restoring menses, OCPs can mask energy imbalance and delay appropriate treatment. We recommend a multi-disciplinary approach to treatment that includes a physician, dietitian, mental health professional (when appropriate) and support from coaches, family members and friends.

4

Avoid ordering a knee MRI for a patient with anterior knee pain without mechanical symptoms or effusion unless the patient has not improved following completion of an appropriate functional rehabilitation program.

The most common cause of anterior knee pain is patellofemoral pain syndrome. Magnetic resonance imaging (MRI) is rarely helpful in managing this syndrome. Treatment should focus on a guided exercise program to correct lumbopelvic and lower limb strength and flexibility imbalances. If pain persists, if there is recurrent swelling or if mechanical symptoms such as locking and painful clicking are present, and radiographs are non-diagnostic, an MRI may be useful.

5

Avoid recommending knee arthroscopy as initial management for patients with degenerative meniscal tears and no mechanical symptoms.

Degenerative meniscal tears may respond to non-operative treatments such as exercise to improve muscle strength, endurance and flexibility. Other treatment options include mild analgesics, anti-inflammatory medication, activity modification or corticosteroid injection. If mechanical symptoms such as locking, painful clicking or recurrent swelling are present, or if pain relief is not obtained after a trial of non-operative treatment, arthroscopy may be warranted. If significant osteoarthritis is also present, other surgical options should be considered.

Choosing Wisely®

An initiative of the ABIM Foundation

HOW THIS LIST WAS CREATED

The American Medical Society for Sports Medicine (AMSSM) has identified this list of clinical recommendations for the Choosing Wisely® campaign.

The goal was to identify common topics in the practice of sports medicine that, supported by a review of the literature, would lead to significant health benefits and a reduction of common procedures that can be unnecessary or cause harm. For each item, evidence was reviewed from peer-reviewed literature and several sports medicine consensus statements.

The list was initially generated and drafted by AMSSM's Quality Measures Subcommittee. It was then edited and approved by AMSSM's Practice and Policy Committee and the Board of Directors.

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AMSSM is a multi-disciplinary organization of 2,500 sports medicine physicians dedicated to education, research, advocacy and the care of athletes of all ages. The majority of AMSSM members are primary care physicians with fellowship training and added qualification in sports medicine who then combine their practice of sports medicine with their primary specialty. AMSSM includes members who specialize solely in non-surgical sports medicine and serve as team physicians at the youth level, NCAA, NFL, MLB, NBA, WNBA, MLS and NHL, as well as with Olympic teams. By nature of their training and experience, sports medicine physicians are ideally suited to provide comprehensive medical care for athletes, sports teams or active individuals who are simply looking to maintain a healthy lifestyle. Find a sports medicine physician in your area at www.amssm.org.