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NATIONAL ATHLETIC TRAINERS' ASSOCIATION (NATA) 70TH CLINICAL SYMPOSIA & AT EXPO ADDITIONAL STORY IDEAS

Full-text copies of abstracts available upon request.

Children in low-income communities tend to be less physically competent

Children in low-resourced communities demonstrate lower competency in fundamental movement skills, which is a component of physical literacy (competency, confidence and desire to be active) than those in high-resourced communities, according to a study of 245 students ages 5 to 14. Low-resourced communities are those whose schools provide free or reduced lunch to more than half of students. Using the *PLAYfun* assessment tool with a scale of 0 (not competent) to 100 (proficient), the researchers determined students from low-resourced communities overall scored about 10 points lower in locomotor skills (such as skipping), about 12 points lower in balance (such as walking heel-to-toe) and about 20 points lower for lower-body object control (such as kicking a soccer ball), which may increase their risk of being injured compared to those from high-resourced communities. The researchers say the lower competency might be due to fewer opportunities for skill development and note athletic trainers can provide interventions for these communities.

Abstract:

19203MOBI *A Comparison of Physical Literacy and Landing Strategies Between Low-Resourced and High-Resourced Communities*

Embargoed for release at 11:15 a.m. PDT, Tuesday, June 25, 2019

Lindsay DiStefano, PhD, ATC, University of Connecticut, Storrs

Girl middle-school athletes more likely to suffer ankle injuries than boys

Ankle injuries are more common among middle school girls than boys – as is the case in high school – according to a study of 4,081 middle school athletes. Researchers identified 256 ankle injuries over two years, with the highest rates occurring in girls track and field, girls soccer and girls basketball. In sex-comparable sports, rates of girls' injuries were nearly twice as high as boys': 2.69 injuries per 1,000 exposures (one exposure equals one game or practice) for girls vs. 1.18 per 1,000 exposures for boys. The most common ankle injuries were sprains, swelling and soreness. The researchers note middle school athletes should work with athletic trainers on sport- and sex-specific injury prevention.

Abstract:

19F08FOIN *The Epidemiology of Ankle Injuries in Middle School Sports, 2015/16-2016/17 Academic Years*

Embargoed for release at 11:30 a.m. PDT, Tuesday, June 25, 2019

Military cadets with poor-quality movement more likely to suffer injury

Military academy cadets with poor-quality movement patterns are more likely to suffer a lower-body injury during their first year of service, according to a new study by investigators at the United States Military Academy at West Point. Researchers assessed 3,027 incoming freshmen from three classes prior to the start of school, using the Landing Error Scoring System (LESS). The LESS evaluates 17 movement patterns during a jump landing task that have been associated with an increased risk of lower extremity injury. Higher LESS scores reflect poorer movement quality. The investigators used a questionnaire (re: injury history, etc.), a Microsoft Kinect depth camera and PhysiMax motion capture software to assess the quality of each cadet's movement using the LESS. Based on the LESS scores, they determined: 493 (16%) had high- (LESS <3), 2,353 (78%) had moderate- (LESS 3-7) and 181 (6%) had poor-quality (LESS >7) movement patterns. Those with poor-quality movement patterns were 54% more likely to be injured in their first year of service than those with high-quality movement patterns. They note that athletic trainers may be able to work with incoming cadets with poor movement quality to help them improve their movement patterns and reduce injury risk.

Abstract:

19S46FOIN *Association Between Movement Quality Upon Entry to a US Service Academy and Lower Extremity Injury During One Year of Follow-Up*

Embargoed for release at 10 a.m. PDT, Wednesday, June 26, 2019

Kenneth L. Cameron, PhD, MPH, ATC, USMA at West Point, N.Y.

High school athletes have more vision problems after concussion

High school athletes may suffer more vision problems than college athletes after a concussion, leading to greater increases in symptoms, according to one of the first studies to look at vision tasks during the early stages of recovery from concussion. In the study of 73 athletes (27 high school and 46 college), researchers found two differences when testing athletes within 72 hours of their suffering a concussion:

- High school athletes had worse outcomes than college athletes on near point convergence (NPC), which tests the ability of the eyes to move in unison with each other to focus on something near (e.g. reading, looking at a cell phone): increased symptom rate of 2.19 for high school athletes vs. .82 for collegiate athletes.
- They also fared worse on vestibular ocular reflex (VOR), which tests the ability to move the eyes in the opposite direction of the head to maintain focus (e.g. reading while moving the head): increased symptom rate of 2.96 for high school athletes vs. 1.5 for collegiate athletes.

While concussions are dangerous for everyone, parents, coaches and teachers need to be aware that certain activities are more likely to increase symptoms in younger athletes. For example, they may find it more difficult to navigate the hallway at school during busy passing periods, or to focus on reading a book or looking at a cell phone.

Abstract:

19S57DOSP *Age-related vestibular and ocular motor symptom outcomes following sport-related concussion*

Embargoed for release at 11:15 a.m. PDT, Wednesday, June 26, 2019

Christopher P. Tomczyk, MS, LAT, ATC, Michigan State University, Lansing

Young athletes who specialize in one sport much more likely to be injured

An analysis of five studies of about 5,000 young athletes (7-18) found that those who focus on one sport and play it more than eight months of the year were 80% more likely to be injured than those who are less specialized, such as by playing several sports. The researchers also determined female athletes were more likely to specialize in a sport than males. They note the injuries aren't only detrimental physically, but often may have social and psychological ramifications for athletes. Athletic trainers can work with parents to help them understand the potential benefits of their child playing multiple sports.

Abstract:

19400UJOIN *Early sport specialization is associated with increased chance of injury*

Embargoed for release at 7 a.m. PDT, Thursday, June 27, 2019

Jennifer Medina McKeon, PhD, ATC, CSCS, Ithaca College, Ithaca, NY

High school athletes benefit from full-time athletic trainers

High schools with full-time athletic trainers are significantly more likely to adhere to concussion legislation requirements than those with part-time athletic trainers, suggests a study of 37 high schools (30 from Wisconsin, seven from Virginia). Researchers compared schools with various levels of access to athletic trainers: high access (full-time), moderate access (part-time) and limited access (one or no days a week). They found schools with full-time athletic trainers were more likely to have athletes sign a concussion information sheet than those with limited access to athletic trainers (93% vs. 75%) and ensure an athlete has written clinical clearance to return to activity after a concussion (93% vs. 83%). Athletic trainers help ensure athletes don't return to play too early, which can put them at risk for second impact syndrome and lead to brain swelling and a prolonged recovery.

Abstract:

19F13FOSP *Adherence to state concussion legislation in high schools with varying levels of access to certified athletic trainers*

Embargoed for release at 2 p.m. PDT, Thursday, June 27, 2019

Jacob E. Resch, PhD, AT, Univ. of Virginia, Charlottesville