

# INDIANA

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# JOURNAL

# Indiana AHPERD Journal

Volume 42, Number 3

Fall 2013

Indiana Association for  
Health, Physical Education, Recreation, and Dance

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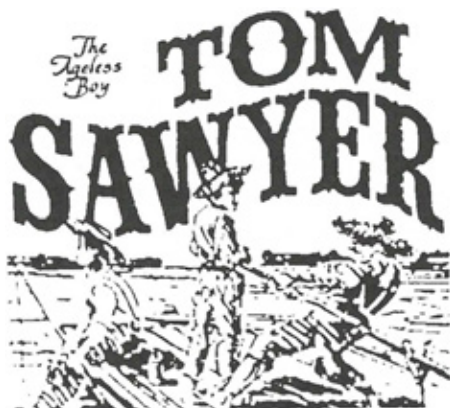
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# Mismatching by a Physical Educator<sup>1</sup>

Thomas H. Sawyer, Indiana State University  
Tonya L. Gimbert, Indiana State University

According to Court records, Student Pedro Godoy (Godoy) filed a suit against the school district (Central Islip Union Free School District) and teacher Otis R. Scerbo (Scerbo) seeking to recover damages for personal injuries allegedly sustained by Godoy while participating in a game of floor hockey during physical education class. Scerbo (teacher) was also playing and his hockey stick made contact with Godoy's right hand as Scerbo attempted a shot on goal and Godoy attempted to block the shot. Godoy alleged that the defendants negligently supervised the physical education class by allowing an adult teacher to participate in the floor hockey game, and by failing to provide adequate protective equipment for the students.

## Analysis of the Case

Godoy, on the date of the accident, was participating in a game of floor hockey as part of his physical education class. He was dressed in jeans, sneakers, and a t-shirt, and had no protective equipment on. Godoy testified that Scerbo and Godoy were playing on opposite teams because they were the only males present. Godoy, further stated that the girls on each team were not really doing anything, they were just standing by the goal[s]. Regarding the events just prior to the injury occurring, Godoy testified that Scerbo was setting up to take a slap shot, that he rushed over to Scerbo to block the slap shot, and Scerbo's stick struck his right hand.

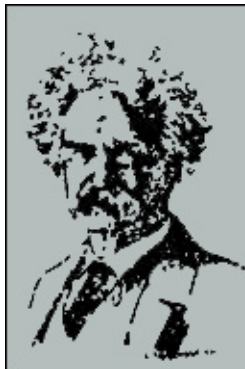
Scerbo testified that prior to playing each sport, he reviewed the rules and skills needed with each class. During the class in question, the game was 3-on-3, including goalies. He further stated that he and Godoy were on opposite teams, with two female students on each team, and one of the female students on each team was playing goalie. He testified that the accident

occurred when he went to take a shot and Godoy attempted to block the shot and Scerbo's stick came into contact with Godoy's hand.

When a student is voluntarily involved in an extracurricular sport, the school district owes a lesser duty to exercise ordinary reasonable care to protect students from unassumed, concealed, or unreasonably increased risks.

However, in this case, the record reveals that Godoy was participating in a compulsory physical education class. "It is well settled that schools are under a duty to adequately supervise the students in their charge and they will be held liable for foreseeable injuries proximately related to the absence of adequate supervision. Generally, the duty owed by a school district is to exercise the same degree of care that a parent of ordinary prudence would exercise in comparable circumstances.

Even applying this more exacting duty of care, the participation of Scerbo in a physical activity is not a violation of the duty of supervision if his or her conduct does not expose the student to any unreasonable risks". (950 N.Y.S.2d 693, 2012) Godoy claimed that Scerbo's participation in the game of floor hockey exposed Godoy to an unreasonable risk of harm because of Scerbo's superior age, knowledge, maturity, experience, and skills related to the activity. The school is under a duty to adequately supervise the



*The secret of getting ahead is getting started. The secret of getting started is breaking your complex overwhelming tasks into small manageable tasks, and then starting on the first one.*

Mark Twain

<sup>1</sup> This article is based on the Godoy v. Central Islip Union Free School District 37 Misc.3d 662, 950 N.Y.S.2d 693, 283 Ed. Law Rep. 1077, 2012 N.Y. Slip Op. 22244, Sept. 6, 2012.

students in its charge, and the school could be held liable for foreseeable injuries proximately related to the absence of adequate supervision. Further, the school (through the teacher) must take into consideration a participant's age, knowledge, maturity, experience, and skill level before allowing him or her to participate with others of lesser skill. Godoy held that Scerbo's participation in the game of floor hockey did expose student to unreasonable risk of harm because Scerbo was mismatched to play with the students due to his superior age, knowledge, maturity, experience, and skill level. Godoy claimed that, if Scerbo had been supervising rather than playing, he might have been able to prevent the sudden and unanticipated injury during play.

### Court's Ruling

"In this case it is uncontroverted that the Godoy's hand was suddenly struck when he attempted to block a shot. However, there is no evidence to show that Scerbo's participation in the game, and more particularly his taking the shot resulting in Godoy's injury, constituted negligent conduct on Scerbo's part due to his superior skill set. It cannot be said for certain that Scerbo should not have participated in the game or that he could have prevented the sudden and unanticipated occurrence if he had been supervising instead of playing. Therefore, there is no basis upon which to conclude negligence. The record shows only that it was a shot that any player would have taken whether a teacher or a student. A motion for summary judgment cannot be denied on the basis of a wholly unsupported conjecture. Similarly unsupported and without merit, is Godoy's claim that the defendants failed to provide adequate protective equipment to the students. Accordingly, the defendants' motion for summary judgment is granted, and the complaint dismissed." (950 N.Y.S.2d 693)

### Risk Management Recommendations

The following risk management recommendations are offered to reduce potential future liability issues when supervising a compulsory or voluntary physical education class:

- The physical educator has been prepared to teach a variety of activities and sport skills. He or she has superior age, knowledge, maturity, experience, and skill level compared to students in general. Therefore, physical educators should never play with or against students during class activities. Their role must be supervision and teaching, not participation in the activity with the students.
- The physical educator has been taught how to supervise and understands what they should be looking for during an activity. They have been educated to recognize foreseeable situations that could cause injuries. Therefore, the physical educator should be supervising and not playing with the students.
- Any contact physical activity should not be played without the appropriate safety equipment being provided to the students. In this case, the students

should have been provided such safety equipment as shin guards, protective gloves, and head gear.

- Students must not be allowed to play a contact physical activity until they have been provided appropriate instruction and adequate practice time to develop the skills needed to participate in the activity safely. Further, the students should be taught the rules of the game.
- The lesson plan developed for a unit on floor hockey must include a discussion of safety issues and safety equipment related to the physical activity.

### Reference

Godoy v. Central Islip Union Free School District, 37 Misc.3d 662, 950 N.Y.S.2d 693, 283 Ed. Law Rep. 1077, 2012 N.Y. Slip Op. 22244, 2012.

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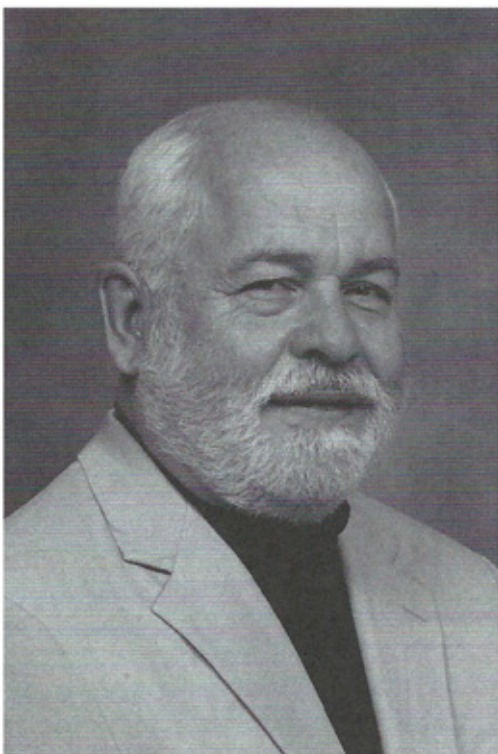


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# Thomas H. Sawyer, Ed.D., NAS Fellow

Professor Emeritus of Kinesiology, Recreation, and Sport  
Indiana State University

## Dr. Thomas H. Sawyer Retires from Indiana State University after 29 years (May 31, 2013)



Dr. Sawyer received his Bachelor of Science degree (1968) in Health, Physical Education, and Recreation and a Master of Physical Education degree (1971) concentrating on HPER and sport administration from Springfield College (Springfield, MA), the “Harvard” for Physical Education/Coaching and YMCA executives. He received his doctorate (1977) from Virginia Polytechnic Institute and State University (Virginia Tech or the Hokies) in higher education administration with a concentration in community college administration.

He has taught in higher education since 1969 (Virginia Military Institute (VMI) [1969-79], University of Bridgeport (UB), Bridgeport, CT [1979-81], Montana College of Mineral Science and Technology (Montana Tech) [1981-84], and Indiana State University (ISU) [1984-present day]). Dr. Sawyer earned the rank of full-professor at age 38. He has been a department head (Montana Tech), department chairperson (Indiana State University, Department of Physical Education), associate athletic director (Montana Tech), director of recreational sports (VMI, UB, and Montana Tech), baseball coach (Springfield College, VMI, and UB), track and field coach (VMI), soccer coach (UB, and Terre Haute South Vigo High School boys and girls teams), director of academic partnerships (ISU),

acting dean of continuing education (ISU), and a sports official (HS and college baseball, football, lacrosse, soccer, swimming, track and field, and volleyball).

Dr. Sawyer has written over 170 professional articles, numerous chapters in textbooks, and ten textbooks. He has made over 175 presentations at state, regional, national, and international conferences. He served on the board of directors for the American Association for Active Lifestyles and Fitness (AAALF). Dr. Sawyer served as AAALF’s president from 1998-2001. He served on the Board of Governor’s for AAHPERD (2006-2012). He was Chair of the Editorial Board for Journal of Physical Education, Recreation, and Dance (JOPERD, 1992-94) JOPERD and Chair of the Policy Board for JOPERD (2003-2004). Further, Dr. Sawyer also served as the president-elect, president, and past president of the Indiana AHPERD in 1991-93. He currently is the editor for the Indiana AHPERD journal/newsletter, the Law Review for JOPERD, The Physical Educator, the Journal for Facility Planning, Design, and Management, and formerly the editor of the Journal of Legal Aspects. Finally, he served as the treasurer and executive director of the Society for the Study of the Legal Aspects of Physical Activity and Sport.

Dr. Sawyer has been awarded the Caleb Mills Distinguished Teaching Award (ISU, 1995), the Howard Richardson Outstanding Performance Award (HHP, ISU, 1995), the Faculty Distinguished Service Award (ISU, 1997), Council on Facilities and Equipment honor award (1997), elected as a fellow to the North American Society for Health, Physical Education, Recreation, Sport, and Dance Professionals (2001), the Council on Facilities and Equipment honor award (2002), the Sport and Recreation Law Association honor award (2003), the American Association for Active Lifestyles and Fitness honor award (2003), and American Alliance for Health, Physical Education, Recreation, and Dance honor award (2004), NASPE Outstanding Sport Management Professional (2008), Indiana AHPERD Outstanding Sport Management professional (2008), Theodore Dreiser Distinguished Research and Creativity Award (Indiana State University, 2010), Lifetime Achievement Award (AALR, 2011), and numerous others.

He has three grown children. His oldest son is a Correctional Officer Specialist in the Federal Corrections Facility in Terre Haute and his youngest son is a Major in the Army Military Police stationed in Hawaii. His daughter is a stay-at-home mom. He has five grandchildren Alexandra (18), Grayson (9), Findley (8), Aubry (2 1/2), and Kollyn (6 mos.). He resides in Riley, IN.

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Thanks!

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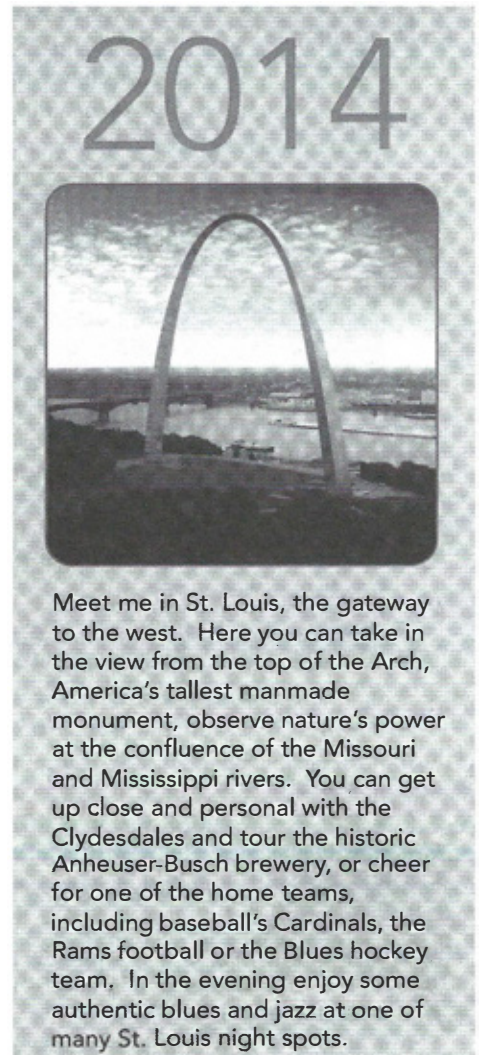
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# Youth Olympic Games: Altius, Fortius, Juvenis

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## Abstract

The Youth Olympic Games (YOG) was established by the International Olympic Committee (IOC) in 2010. The driving force behind the introduction of the YOG was to provide a vehicle through which to address obesity, inactivity, and to further challenge our nation's youth. Although there is an overwhelming need to address the concerns related to childhood obesity as well as the need to increase physical activity in our youth, some may argue that the IOC missed their intended target and instead, developed an international stage which may result in unintended consequences for our youth athletes. Critics of the YOG may site 'early specialization' as one of those unintended consequences. 'Early specialization' requires very young athletes to focus and train specifically on one sport, and it is often times the end result of developing an elite athlete at a young age. Given the implications that early specialization may have on young athletes, this literature review will explore the impact of 'early specialization' versus 'early diversification'. The purpose of this article is to investigate the unintended consequences of early specialization with respect to the athlete's physical and mental health as well as the effects on childhood obesity. Early diversification, the antithesis to early specialization, will be discussed as a viable solution to early specialization and its negative consequences.

Key words: Early Specialization, Early Diversification, Injury, Satisfaction

## Introduction

Citius, Altius, Fortius, which is Latin for "Faster, Higher, Stronger", is the motto for the Olympic Games. The aim of the Olympic movement is to be associated with health, sportsmanship, peace, education, and enjoyment – ideals encapsulated in the Olympic Charter (Judge, Petersen, Bellar, Gilreath, Wanless, Surber, & Simon, 2012). In an effort to reignite interest in Olympic sports within the current generation of adolescents, the International Olympic Committee (IOC) President Jacques Rogge,

with the approval of the General Assembly, led the development of the Youth Olympic Games (YOG), an Olympic Games for teenagers, beginning in summer 2010. Given that the YOG includes athletes from fourteen to eighteen years of age, the motto for the YOG could be Citius, Altius, Juvenis or "Faster, Higher, Younger."

The premise behind the YOG paints an exciting and promising picture for young aspiring athletes who desire to compete at the highest level at a very young age. However, enjoying the spoils of becoming a youth elite athlete often times comes at a high price. Recently, there have been several controversial issues surrounding youth sports participation. Critics are concerned that events such as the YOG will only encourage early specialization, performance enhancing drug use (steroids), and increased pressure from parents, coaches and society resulting in unintended consequences for our youth athletes. One of the unintended consequences of highly competitive youth sports, such as the YOG, has been the negative effects of an increase in 'early specialization' for young athletes (Baker, Cobley, & Fraser-Thomas, 2009). Traditional Olympic Games have experienced similar concerns regarding the age of participants. This concern has been acknowledged by the IOC as evidenced by past Olympic Games rule changes regarding the age of the participants. Past alterations to the rule structures of Olympic sport resulted in the raising the minimum age for participation in the sports of swimming, gymnastics and skating (Wong, 2011). In skating, a competitor must turn 15 by July 1 of the previous year to be eligible. In gymnastics, the athlete must be 16 in an Olympic year (Brennan, 2007). These changes were founded in concerns related to overtraining, over-exposure to the media, and overly intense competition for youth athletes. This age limit was intended to slow down the pace and help keep athletes, parents and coaches from doing too much too fast (Brennan, 2007). The rule change reflects the growing concern with highly competitive athletics at a young age; concerns which may naturally flow into creating similar

concerns with the age of participants in the YOG.

The concept of early specialization is scrutinized with critics voicing their concerns about the highly intense levels of training, immense pressure to succeed, required time commitments, and the effects they will have on the young athlete's physical, emotional, and mental well-being (Wiersma, 2000). The idea of elite youth athletes competing at the YOG directly contradicts the theory of egalitarianism by promoting the best of the best, not participation for everyone (Judge, et al., 2012). The majority of the 26 sports that are represented in the Youth Olympic Games already offer opportunities for the young elite athletes in their sport, either as members of a Junior National Team or through opportunities to participate in international competitions. The YOG have a number of stakeholder groups that are important to consider when discussing its growth potential, but one of the most vital would be the participants. The purpose of this article is to investigate the unintended consequences of early specialization with respect to the athlete's physical and mental health as well as the effects on childhood obesity. A discussion of early diversification is also included.

### **Unintended Consequences of Early Specialization**

Sports can be classified as either early or late specialization (Balyi and Hamilton, 2003). Early specialization sports often include artistic and acrobatic sports such as gymnastics, diving, and figure skating. These differ from late specialization sports in that very complex skills are learned before maturation since the skills cannot be fully mastered if taught after maturation (Judge & Gilreath, 2009). Late specialization sports, such as athletics (track and field), combative sports, cycling, racquet sports, rowing and all team sports require a generalized approach to early training (Balyi & Hamilton, 2003). The subject of early specialization versus early diversification continues to be a topic of discussion and research. Supporters of early specialization will point to consistent evidence linking quantity of training with level of proficiency attained. The earlier in life an athlete begins focused training, the greater chance they have of achieving exceptionality in their chosen domain (Baker, 2003, p. 87). However, critics of early specialization point to evidence which links early specialization with unintended physical and mental consequences for youth participants.

### **Physical Consequences**

It is vital for coaches to understand and recognize the potential physical risks that can be linked to over-training and early specialization. This type of concern could potentially be compounded as each symptom interacts with one another. Research related to the physical concerns of early specialization frequently reference overuse injuries (Fraser-Thomas, 2007). Overuse injuries are steadily rising in youth sports. Bach & Schilling (2008) reported 3.8 million children sought treatment for sport-related injuries in the previous year. The increase of overuse injuries is often a direct result of early sport specialization (Oates, 2011, p. 9). Several recognized medical associations have

issued statements noting the important role coaches play in the prevention of injuries. Over-exercising children before they have reached skeletal maturity can have severe and long-term consequences on the athlete's career as well as cause permanent damage that may affect daily life not related to sport (Oates, 2011, p10). Overuse injuries are more common in youth sports than acute injuries and account for up to 50% of all injuries reported (Gould, 2004, p. 16). Poor mechanics is the number one cause of overuse injuries which can be a result of improper technique of a technical skill (Gould, 2003).

Interestingly, research indicates that the incidence of injury and illness during the first Youth Winter Olympic Games was similar to the Vancouver Olympic Games. Head injuries accounted for 10% of total injuries during both the YOG and Vancouver Games (Blank, 2012). However, one concern is that head injuries in youth may result in greater negative consequences than head injuries in older athletes, and have the potential to be far more detrimental to the athlete's career in the long run. Research also indicates that injuries in the youth athlete may affect developing musculoskeletal structures which may potentially result in long-term damage (Blank, 2012). In addition to physical concerns, critics argue that there are also mental (social/emotional) concerns related to early specialization.

### **Mental Consequences**

The consequences of early specialization include more than physical exhaustion and injury; it also includes mental consequences which manifest through performance anxiety, feelings of isolation, and burnout as a result of extreme pressure from parents, coaches, and society. (Fraser-Thomas, 2007). Although synchronized swimming is not currently included in the YOG, one may extract meaningful evidence which connects to synchronized swimming with the effects of early specialization and burn out. For example, when one considers the discipline of synchronized swimming, the demands placed on athletes to train up to 10 hours a day, 6 days a week at such a young age could end many hopeful athlete careers before they reach their prime. The average age for an Olympic synchronized swimmer is 25; much older in comparison to many early-specialization sports like gymnastics and diving. The sport of synchronized swimming requires early specialization to achieve the ultimate dream goal, The Olympic Games. However, for synchronized swimmers, this too often results in burn out. This trend further strengthens the argument against early specialization in sport; stating that it increases the burnout/dropout rate of athletes (Baker, 2003, p. 88).

At a time in USA Synchronized Swimming when coaches are currently grooming 10 year olds for Olympic competition at age 22 and are literally "fast tracking" 13-15 year olds by moving them to a training center in California, it is difficult to imagine a world without early specialization. The burnout rate in synchronized swimming is extremely high. Perhaps a significant contributor to the high dropout rate is a lack of fun, an inability to enjoy a typical social life, and unbalanced relationships between



athletes and coaches. It is a telling sign when many former Olympians, some Gold Medalists, state that they would not support their daughter's participation in synchronized swimming. It may be reasonable to believe that the effects of early specialization for synchronized swimmers in hot pursuit of the Olympic Games may be similar to that of youth athletes training to participate in the YOG.

Early specialization may create parental and coaching expectations to "be the best". Those expectations may result in an unintended consequence by increasing dropout rate in youth sports. Approximately 80 percent of kids will drop out of youth sports by age 13 citing lack of fun and outside adult pressure as the reasons (Why Kids Ditch, 2006). In an effort to reduce overuse injuries and dropout rate of youth athletes, perhaps coaches and parents should consider early diversification as a means to more fully develop the young athlete.

### Impact on Childhood Obesity

Childhood obesity is a growing epidemic in the United States. Almost half of America's youth do not take part in regular vigorous exercise with only 18% of youth age 14-17 meeting the daily recommendations for physical activity (A Growing Problem, 2013). This has consequently led to the increasing rates of overweight and obese adolescents (Small, Anderson, & Melnyk, 2007). The national average of overweight and obese children (ages 8-12) has almost quadrupled in the last twenty-five years. Lack of physical activity and poor nutrition are the two most widely acknowledged factors contributing to obesity. Many studies have been performed in the recent

years to consider various causative factors that make a child more susceptible to becoming obese. Results indicated socioeconomic and geographic gradients along with a child's lifestyle (including inactivity and sedentary lifestyles) as the main risk factors for obesity (Veugelers & Fitzgerald, 2005). Yet, it seems counterproductive to push athletes towards a YOG in hopes of addressing the decline in physical activity in youth.

Although there is not a direct correlation between the high obesity rate and participation in the YOG, early specialization may be a contributing factor. Many kids are foregoing sports or all together dropping out because they are perceived as too fat or slow. Additionally, the negative feedback they receive back from coaches, peers, and society often discourages youngsters from participating in athletics. Young athletes and families also encounter the cost of participation. Sport can be expensive; especially when pushing early sport specialization. The largest factor reported in determining youth activity is parental resources (Gould, 2004, p. 17). One Ohio family reported spending \$8,921 in 2010 on sport related expenses (Hyman, 2012, p. 2). The increasing cost of participating in sports presents an undeniable barrier for lower socioeconomic families. The costs associated with special camps, trainers, and coaches needed to achieve the desired "elite" status, makes it nearly impossible for lower socioeconomic families to participate in elite youth sports. According to Veugelers and Fitzgerald (2005), children whose parents had college degrees and made over \$60,000 were at a reduced risk of becoming overweight as compared to children who resided

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in urban areas and in neighborhoods where the average income was considerably lower (Veugelers & Fitzgerald, 2005). The costs involved with competitive youth sports may contribute to the possibility that elite youth sports may only increase the gap between fit and unfit adolescents. It is becoming increasingly difficult for the average American family to financially fund their child's athletic interest. This contributes to a higher dropout rate at a younger age, and children filling their time with non-athletically related interests such as playing video games and watching TV. Sedentary activity for more than one hour a day is directly linked with an increased risk of becoming overweight. Given this direct correlation, it is vitally important to encourage youth to participate in physical activity.

### **Early Diversification**

There are many positive take home messages that an event like the YOG can provide for parents, teachers and coaches of these young athletes. First and foremost, sports are intended to offer a fun and challenging way for children to express their individuality and abilities. Youngsters should be encouraged to participate in a number of different sports with the goal of having fun and learning fundamentals. Coaches and parents play a major role in this aspect of a child's life (Gould & Carson, 2004), and are encouraged to introduce their children to a wide variety of physical activities. The concept of participation through a wide variety of athletic and sporting disciplines is referred to as 'early diversification'. Early diversification is the new "it phrase" in sport training.

Although the effect of diversified training decreases as the level of expertise increases (Baker, 2003, p. 92), this type of cross training during the initial introduction to sport and the first few years of training may actually result in greater benefit for the athlete through increased satisfaction and decreased risk of overuse injuries. The term, 'early diversification', is a concept that is challenging 'early specialization' as an effective tool for coaches and parents to incorporate while training youth athletes. Advocates for 'early diversification' cite injury prevention as a significant benefit (Judge and Gilreath, 2009). Children who play multiple sports have fewer injuries and continue to play longer and at higher levels than children who specialize in one sport before puberty (Brenner, 2007).

This research may most significantly impact parents of elite youth athletes. Some parents, especially those who were athletes themselves, may have a somewhat skewed view of the level of dedication required to become an athlete. Given the implications of the research, parents may wish to consider this data when working with coaches to develop training schedules for their youth athletes. Using this information to make informed decisions may provide the support needed for parents to encourage diversity in training, include a variety of interests, and to provide a healthier and well-rounded lifestyle in an effort to more fully engage and increase satisfaction for their youth athlete.

Collegiate coaches most often recruit model children of early specialization. Limiting practice hours to 20 hours

per week, per NCAA regulations, may present a significant challenge for some coaches. Given the above implications of early specialization, a coach may wish to find ways of making the sport fun again while remaining extremely competitive. Fifteen minutes of playing water polo or jumping off the diving boards may buy two additional hours of productive and focused training. Collegiate coaches have a small window, four years, to make their athletes love the sport to which they have dedicated so much time. It is vital for coaches to bring together a well-balanced approach to training that also encourages the athlete to experience joy, satisfaction, and fun in the sport they love. A well-balanced coaching philosophy may include the concept that the development of the young woman/man is priority over the development of the athlete.

In order to develop healthy and appropriate attitudes towards sport, mind, and body, the sport community may wish to consider implementing creative ways to encourage youth athletes to get involved and stay involved in sport. For example, if youth teams rewarded athletes for attendance instead of wins, there may be a significant increase in participation of the targeted group – which is the inactive youngster. Rewarding attendance and participation may also significantly change coaching style and resource allocation. Perhaps the intended target group would benefit most if youth sports focused more energy on promoting sportsmanship and fun. The belief that fun and enjoyment play vital roles in participation is supported through evidence collected from a study of 20 swimmers. The study included swimmers in two specific groups; 10 swimmers which are currently engaged in the sport, and 10 swimmers which have dropped out of the sport. Both groups spoke of play opportunities during the early years of training as being a positive contributing factor to the element of fun and sport enjoyment (Fraser-Thomas, 2007, p. 650). Youth athletes are children. Children's needs are different than that of adults. It is key to remember that children are not mini-adults, physiologically or psychologically. Because of this, children need to have fun in order to enjoy the activity.

### **Conclusion**

Irrespective of the potential problems related to youth sport, the IOC's quick decision to enact the YOG lacks pragmatism because its promotion rests on the idea that the Olympic Games are *ispo facto*, a positive experience for the promotion of Olympic ideals. The obscuring of these messages can be attributed, in part, to the excessive commercialism and nationalism that structures the way the Olympic Games are designed, promoted, played, and represented in the media. The Youth Olympic Games may just be a minor league created by the IOC to indoctrinate young people into Olympic sports. Nearly all International Governing Bodies already include a Junior World Championship in their discipline. The addition of the Youth Olympic Games seems to be excessive and without warrant. Adding a competition to a Junior National Team's schedule may add undue stress, increased budget problems, and divert interest in the already well-established Junior World Competitions.

Parents may likely be the most important group to consider when focusing efforts to increase awareness of the links between early specialization with injury and athlete satisfaction. Parents and coaches alike may benefit from reading the \*\*\*Injury Prevention Toolkit for Coaches. Armed with research and findings, parents may be more aware that placing their son in Pee-Wee football at age five and only training his right throwing arm and not allowing him to play soccer in fear he may injure his knees, will not develop a Mini Payton Manning. As a parent, coach, and athlete, it is difficult to accept that the Serenas (Williams), Tigers (Woods), and (Michael) Jordans are one in hundreds of millions. But the chance of being on a competitive roster while maintaining a healthy relationship with yourself, friends, family, and community is 100% possible for most anyone to attain.

When described as an international initiative to introduce children to sport and to the values of fair competition (Helmut , 2008, p. 53), the Youth Olympic Games seem like the greatest idea since desegregation. The selling point of these games is to address obesity and inactivity as well as to further challenge the youth of our Nation through the provision of an Olympic education, experiences and values. These experiences and values seemingly taught to participants of the YOG are invaluable; but does this simply further the gap between the fit and unfit; the skilled and unskilled, or the haves and have nots?

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Students  
Graduate Students  
Teachers At All Levels

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## HEART HERO

Diego, age 8

*"I've always known that my heart is different because my mom and dad have always taken me to the heart doctor. Doctors are going to switch the two bottom pieces of my heart around. Helping people with different hearts is important so doctors can find cures for kids like me!"*

Hoops For Heart a national education and fundraising event created by the American Heart Association and the American Alliance for Health, Physical Education, Recreation and Dance. Middle school students have fun playing basketball while becoming empowered to improve their health and help other kids with heart-health issues. And it's a great way to satisfy the physical education standards as determined by the National Association for Sport and Physical Education and the American Association for Health Education.

Funds raised through Hoops For Heart give back to children, communities and schools through the American Heart Association's work:

- Ongoing discovery of new treatments through research
- Advocating at federal and state levels for physical education and nutrition wellness in schools
- CPR training courses for middle and high school students

### Hoops For Heart helps students:

- Learn the value of community service and contribute to their community's welfare
- Join with other children to help kids who have heart problems
- Develop heart-healthy habits while being physically active
- Learn basketball skills they can use for the rest of their lives
- Earn gift certificates for free school P.E. equipment from U.S. Games

With your support, we can help protect and improve children's health. Your efforts to educate your students and raise funds for research and outreach are vital to improving kids' lives.

**Call 1-800-AHA-USA1 or visit [heart.org/hoops](http://heart.org/hoops) to get your school involved.**



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# Using Different Bioelectrical Impedance Analysis Devices to Assess Body Fatness Could Produce Great Measuring Deviation

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## Using Different Bioelectrical Impedance Analysis Devices to Assess Body Fatness Could Produce Great Measuring Deviation

Measuring fatness and leanness of the body is a key component for everyone who wants to promote good health and physical fitness. Obesity is a serious health problem, and percent body fat is strongly associated with the risk of chronic diseases such as coronary heart disease, hypertension, dyslipidemia, diabetes mellitus, and certain cancers (Yusuf et al. 2004). Unfortunately, it is estimated that more than 60% of Americans aged twenty years and older are overweight or obese and 34% of this age group are obese. Among children and teens aged two through nineteen, 16% are obese and 32% are either overweight or obese. Thus, the measurement of body composition has been of interest to health care providers, fitness professionals, and physical educators for years. Accurately measuring body composition is very important because it may result in physiological, psychological, and health related problems if individuals are misinformed about healthful body fat levels or have a distorted body image.

Body composition has been studied using different methodologies, each with its own advantages and limitations (Lukaski, 1987; Deurenberg, 1992; Jebb & Elia, 1993). Several methods are available for body fat estimation. Each requires different equipment and technician training. The costs associated with each method also vary greatly. In epidemiological studies, surrogate measures of body fatness such as body mass index (BMI), waist circumference, waist-hip ratio and skin fold thickness have been used extensively. However, it should be realized that these techniques may not precisely characterize persons by body composition (percentage of body fat or muscle mass), and there is substantial variation across age, sex and ethnic groups (Dagenais et al. 2005). For example,

many childhood obesity studies have used BMI, but it is an inaccurate measure of adiposity, especially in more obese children. Research and clinical techniques for measuring body composition include hydrostatic or underwater weighting (densitometry), dual-energy X-ray absorptiometry (DEXA), magnetic resonance imaging (MRI), and air displacement plethysmography (ADP) such as the Bod Pod. However, these techniques are expensive, inconvenient for the participant, and not feasible to conduct in the field because they require large specialized equipment trained professionals. For these reasons, their use in large epidemiological studies and the general public is limited and not feasible. Accordingly, simple, rapid, inexpensive and reasonably accurate measurement of body composition is frequently required for community studies, physical fitness training, school education and programs, or routine clinical use.

Bioelectrical impedance analysis (BIA) has become a popular method in research laboratories, hospitals, private clinics and wellness centres to assess body composition across a spectrum of ages and body weights. BIA is a safe, non-invasive, easy-to-administer, and portable method used for assessing body composition from the estimate of total body water. A variety of different BIA analyzers are now commercially available that range in utility and price. Recent attention has been given to the leg-to-leg and arm-to-arm BIA system, which has several operational advantages when compared with the conventional arm-to-leg approach. Lower-body (foot-to-foot) and upper-body (hand-to-hand) BIA analyzers are the two available devices that have been marketed for many years. The Tanita BIA analyzers measure lower body impedance between the right and left legs to estimate % body fat, while the Omron Body Logic analyzer, which is handheld, measures upper body impedance between right and left arms. Although it is not possible

to obtain impedance data from these analyzers, both devices provide the general public with an inexpensive, simple, and reasonably accurate means of assessing or self-assessing percent body fat (%BF) (Heyward 2010). Studies on accurately estimating body composition by upper- and lower-body BIA analyzers have indicated that they provide reasonable good estimates. Although their daily precision is good, their accuracy for the assessment of an individual's body fatness remains unclear. There are also issues as to whether a partial body assessment will be representative of the whole body, independent of body size proportions.

The measurement accuracy and precision of %BF by using bioelectrical impedance analysis can be affected by different type of instrumentation. There are about 29 different models of foot-to-foot BIA analyzers available in markets produced by the Tanita Corporation. Research found that estimates of %BF by foot-to-foot BIA analyzers agreed well with skinfolds estimates in collegiate wrestlers (Utter et al. 2001) and with DEXA estimates of fat-free-mass (FFM) in children (Tyrrel et al. 2001). Cable et al. (2001) studied to determine the validity of the Tanita foot-to-foot BIA analyzer (TBF 105) in estimating body composition in males. The data indicate that the Tanita Body Fat Analyzer accurately assesses FFM in a heterogeneous group of males when compared to underwater weighing. Similar results were also presented in another study (Utter et al. 1999) that no significant difference was found between underwater weighing and BIA in estimating the FFM of the obese and nonobese women (all subjects combined,  $r = 0.78$ ,  $P < 0.001$ ,  $SEE = 3.7$  kg) or in estimating decreases in fat mass during 12 weeks of energy restriction, exercise, or both in obese subjects ( $F[3.85] = 1.45$ ,  $P = 0.233$ ).

A hand-to-hand BIA analyzer was developed by Omron Healthcare, Inc. It is lower-cost and now commonly used by schools, home, general health clinics, and exercise or physical fitness facilities. The available data indicated that the Omron hand-to-hand analyzer provided reasonably accurate estimated of %BF. A study reported that the Omron hand-to-hand analyzer had slightly smaller prediction errors with 2.9 kg standard error of estimates for men and 2.2 kg for women (Gibson et al. 2000). However, other researchers reported that individual prediction errors from this analyzer could be high and the estimated data would misclassify or give false negatives for 24% of the obese females and 44% of the obese males (Deurenberg-Yap, Schmidt, van Staveren, Hautvast, & Deurenberg. 2001; Deurenberg and Deurenberg-Yap, 2002). Demura et al. (2002) conducted a study of Japanese men. They compared the accuracy of relative %BF based on three BIA methods, between hand and foot, between hand and hand, and between foot and foot to two-component model reference measures of %BF obtained from hydrostatic weighing method. The subjects were 30 Japanese healthy young adults aged 18 to 23 years, including 15 males and 15 females. Measurements were made three times for each BIA method and also twice according to the underwater weighing method. They found that the relationship of %BF between the underwater weighing method and each BIA

method was mid-range or more ( $r=0.765-0.839$ ). The mean difference between reference and predicted %BF values was slightly smaller for hand-to-hand (2.2% BF) than for the foot-to-foot (3.2% BF) analyzers. In addition, the error in estimating %BF was related to subject factors, such as the age, body fatness, and level of physical activity.

Studies on accurately estimating body composition by upper- and lower-body BIA analyzers have indicated that they provide reasonable good estimates. However, Instrumentation is an important factor that could affect accuracy of BIA methods estimating %BF. Do upper (hand-to-hand) and lower (foot-to-foot) body BIA analyzers produce same or similar estimates of body composition? To answer this question, researchers conducted a study to investigate if there have differences in %BF estimates measured by hand-to-hand and foot-to-foot BIA analyzers in college male students who came from physical education (PE) and Non-PE majors (Huang, Richard, & Hasenour, 2010). Forty-nine participants with age range of 18-24 years were recruited. Among them, 20 students were from PE major and 29 in non-PE major. BIA measurements were taken by using the Omron F-BIA (foot-to-foot) and H-BIA (hand-to-hand) Analyzers. Subjects were measured following the manufacturer instructions and other guidelines of professional organizations. Preliminary statistical analyses to the collected data have shown the following results. The %BF estimated by H-BIA and F-BIA methods was 14.57 8.98% and 22.39 8.56% for PE students and 12.07 6.28% and 22.26 4.29% for Non-PE, respectively. There was a very high relationship between %BF estimates from two devices for PE group, but a low relationship for Non-PE. Significant mean differences were observed between two %BF values measured by H-BIA and F-BIA in both groups: the mean difference of 7.84 4.80% for PE group, and 10.19 6.76% for Non-PE, respectively. The results of this study indicated that regardless of student major, %BF estimates was much higher by using the F-BIA than the H-BIA, approximately 7.8% to 10.2% of difference. The mean difference in estimating %BF was more in Non-PE group; but the error of estimation tended to be greater in PE group. For Non-PE students, %BF estimates measured by two BIA devices may not be corresponded.

In summary, BIA has emerged as a portable and simple-to-operate instrument to evaluate body composition by healthcare professionals, educators, and general public. The development of the hand-to-hand and foot-to-foot BIA analyzers have provided professionals and general public with a fast, easy-to-use, inexpensive, and relatively accurate method of estimating %BF. Accurately estimated body composition is an important clinical indicator of health and health risk. Available data indicated that %BF estimates measured by two different BIA devices (H-BIA and F-BIA) may not be corresponded to produce the same or consistent body composition measures. Great variability of %BF estimates could exist while using different BIA devices. It is highly recommended to use the same BIA device consistently for assessing %BF.

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Figure 1. Omron HBF-306 Body Fat Analyzer (Hand-To-Hand)



Figure 2. Omron HBF-400 Body Fat Monitor and Scale (Foot-To-Foot)



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## IAHPERD Fall Conference 2013

The Indiana Association of Health, Physical Education Recreation and Dance (IAHPERD) State Conference is Wednesday October 30, 2013 until Friday November 1, 2013. It will again take place at the Wyndham Indianapolis West. Wednesday October will be the Awards Banquet where we will celebrate those individuals receiving the many different awards presented by IAHPERD as well as the scholarships presented to graduating high school students of 2013 and those already in the area of higher education. It will begin that evening at 6:30 pm.

On Thursday October 30th the day begins with registration at 7:30am with a Keynote Presentation at 8:30 am of which everyone is very excited to hear. The Keynote Speaker at this year's event is the 2012 Olympic 10 meter Diving Gold Medal winner David Boudia. Again, this should provide something for all that attend. After his presentation, there will be a full day of sessions; including an undergraduate poster completion, followed by our ALL Conference Social that evening at approximately 5:00 pm. There will be plenty of food, fun and prizes that evening.

Friday November 1st will find another full day of sessions. Friday will start with registration at 7:30 am and then be followed by sessions beginning at 8:30 am and running until the close of the day at 3:30 pm.

Sessions will be offered from all areas of IAHPERD and with a wide range of topics. These include such offerings as: *Ballet 101 (or should we say pas de deux), Sport Stacking and Speed Stacking, Geocaching: Yes I Want to Learn How to Have Fun and Geocach, Let's Talk Sex from the Health Council, Superstars Competition, Water Fitness Activities and Water Games, Dodgebee and GaGa – Two Terrific Games for all Ages, Quickie Websites for PE Teachers, Finding Money to Supplement Your Advocacy Project and Sport Specialization Talking Tips* to name just a few. Overall we will have upwards of 75 different sessions over that Thursday and Friday.

We will be including something new this year as well. There will be two 3 hour sessions of CPR, one in the morning the other in the afternoon, on Thursday in which individuals may enroll to maintain or obtain their certification to work towards their teaching license.

As in previous years we will also be providing professional growth point verification for all those who need to list them for their evaluations and teaching licenses.

We anticipate a great event and hope to see everyone there.



Jump Rope For Heart is a national event created by the American Heart Association and the American Alliance for Health, Physical Education, Recreation and Dance. Students have fun jumping rope while becoming empowered to improve their health and help other kids with heart-health issues.

### Jump Rope For Heart helps students:

- Learn the value of community service and contribute to their community's welfare
- Develop heart-healthy habits while being physically active
- Learn jump rope skills they can use for the rest of their lives
- Earn gift certificates for free school P.E. equipment from U.S. Games

Your efforts to educate your students and raise funds for research and outreach are vital to improving kids' lives.

**Call 1-800-AHA-USA1 or visit [heart.org/jump](http://heart.org/jump) to get your school involved.**

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**Heart**  
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American Alliance for Health, Physical Education, Recreation and Dance

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# 2013 Undergraduate Research Poster Competition

IAHPERD is pleased to announce the call for posters for the undergraduate research poster session to be held at the 2013 state conference. Students from all HPERD-related undergraduate majors, such as Teacher Education, Exercise Science, Health, Adapted Physical Education, Recreation, Dance, Fitness Studies, and Sport Management, are invited to participate.

## Poster submission:

To apply for the poster session, please include the following in a Word attachment via email to Keith Buetow: buetowk@msdmail.net, conference coordinator or, Guoyuan Huang, ghuang@usi.edu, Vice President of Higher Education and Research:

- (a) Title of the Research Project
- (b) Name of the undergraduate student; please include (i) name of college or university currently attending (ii) class standing [ie. Freshman, Sophomore] (iii) undergraduate major and area of emphasis (within Physical Education) and (iv) email address]
- (c) Faculty Mentor (and e-mail)
- (d) An abstract highlighting the research project; maximum 250 words.

## Important Notes:

1. Posters will be reviewed and scored by the Higher Education/Research Council of IAHPERD. The winning poster will receive a \$250 cash award.
2. Only one poster, per student, will be accepted for the competition.

3. The posters will be located in a high traffic area of the conference and will be viewable by all conference attendees.
4. The posters need to be set up by 8:30 am, on Thursday the opening day of the conference. The posters need to be taken down on Thursday no later than 12:00 noon.
5. The undergraduate student must be present at their poster from 9:45 a.m. to 10:45 a.m. on Thursday to answer questions from the committee and from the general attendees.
6. The winning poster will be notified by announcement at the All Conference Social on Thursday afternoon.
7. Students must be registered for the conference in order for their poster to be displayed.

## Poster Guidelines

1. All posters must fit into a 36" x 48" space.
2. Display boards will be provided for displaying posters; please bring tacks and/or tape to secure the poster.
3. The content on the poster should be readable from a distance of 4-6 feet.
4. The poster should reflect standard research components including: introduction, methods, results, and conclusions.

## Dates

Submissions due: Proposals accepted now through September 23, 2013

Notification to poster presenters: Those accepted into the session will be notified via email by October 1, 2013.

# Competition: 2013 Undergraduate Research Poster Competition

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**IAHPERD 2013 State Conference and Exposition Registration Form**  
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**October 30-November 1, 2013**  
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**Pre-Registration Deadline: Postmarked by September 30**  
**Online registration at [www.inahperd.org](http://www.inahperd.org)**

- Membership is  new in 2013  renewal in 2013  
 Membership Type  professional  student  retiree  
 I am a  Jump Rope for Heart Coordinator  Hoops for Heart Coordinator

PRINT First Name \_\_\_\_\_ MI \_\_\_\_\_ Last name \_\_\_\_\_

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Preferred Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ County \_\_\_\_\_

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- Primary Interests (select up to three)  Health  Physical Education  Recreation  Dance  Adapted Physical Education  
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CPR: Thurs a.m. _____ or Thurs p.m. _____	\$30	n/a	\$70	n/a	\$30	n/a	\$50	n/a	
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Online registrations will not be accepted after midnight October 20, or if mailed, must be postmarked October 15. After October 20, those wishing to register for the state conference are asked to register onsite beginning 7:30am on Thursday, October 30 at the conference registration desk at the Wyndham West Indianapolis.

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# IAHPERD

Indiana Association for Health, Physical Education,  
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Where: Dallara IndyCar Factory in Speedway · Time: 9am-4pm · Date: November 1

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- 8:15 a.m.—Registration begins at 8:15 followed by the events below.
- 9 a.m.—Sport Management Scholarship Showcase (student research presentations)
- 10 a.m.—Motorsports Management Panel Discussion
- 11 a.m.—Managing Large Sporting Events Panel Discussion
- 12 p.m.—Networking Lunch followed by Speed Networking (spend time with at least 4 industry professionals)
- 1:30 p.m.—Facility Tours (Indianapolis Motor Speedway and Dellara IndyCar Factory tours last one hour each)



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simulators, and a lunch of your choice.

- Please check one of the following sandwiches:
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- Chicken Salad
- Turkey
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- Club Sandwich (turkey, ham, salami, bacon)

\*All lunches include fruit, chips, cookies, and soft drink  
or water.

The IAHPERD Sport Management Council serves undergraduate and graduate sport management students, faculty, and practitioners with unique professional development opportunities through sharing best practices, conducting data driven research, and networking.

# 2013 IAHPERD CONFERENCE SPORT MANAGEMENT SCHOLARSHIP SHOWCASE Call for Papers

The *Sport Management Scholarship Showcase* provides a forum for graduate and undergraduate students to present on a wide spectrum of sport management topics through poster and model presentations. Students are encouraged to share results of original research as well as apply management principles to identify best practices, solve problems, and foster innovative management in the sport environment.

Students will gain valuable experience interacting with the professional community as they discuss the issues, trends, and impacts related to sport event management; finance, economics, and budgeting; marketing and promotions; sponsorship and sales; facility planning, design, and management; legal aspects and risk management; sport media and communications; broadcasting and journalism, policy development and governance; public relations, and tourism in amateur and professional settings.

Speakers will provide a 2 minute podium presentation in addition to displaying accepted posters.

This is a juried exhibition. Awards may be presented to the top submissions.

Please send electronic submissions to Dr. Kimberly J. Bodey at [Kim.Bodey@indstate.edu](mailto:Kim.Bodey@indstate.edu). If you have questions, contact Dr. Bodey at 812-237-2186. **DEADLINE:** Friday, September 27, 2013 @ 11:59PM EDT

The *Sport Management Scholarship Showcase* proposal should include the following:

1. Presentation title (10 words or less)
2. Speaker(s) contact information  
Name(s) – list each author  
Institution  
Email address(es) – include for each author  
Faculty Sponsor (required)
3. Short description (≤50 words – printed in Showcase program)
4. Abstract (300-500 words – printed in upcoming IAHPERD Journal)
5. Primary content area (indicate one of the following): (a) event management; (b) finance, economics, and budgeting; (c) marketing and promotions; (d) sponsorship and sales; (e) facility planning, design, and management; (f) legal aspects and risk management; (g) sport media and communications; (h) broadcasting and journalism, (i) policy development and governance; (j) public relations, (k) tourism, and (l) other.
6. Category (indicate one of the following): (a) undergraduate – original research, (b) undergraduate – management applications, (c) graduate – original research, or (d) graduate – management applications
7. Format (indicate one of the following): (a) poster/slides – (3 fold) table mounted, (b) model – table mounted, and (c) laptop computer – table mounted **Note: Wall mounted posters will not be allowed.**

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**Scholarship Showcase: Call for Papers**

# A Coach's Guide to the Recognition and Management of Athletic Injuries

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## Abstract

Millions of young athletes take part in sport activities each year. Ideally, developmentally appropriate training activities are balanced with commensurate competitive events to create a safe and productive environment for athletes participating in sport. Sport injuries are often inevitable. Injuries, particularly soft tissue injuries, benefit from the application of basic first aid knowledge, until a more thorough examination by a physician, athletic trainer, or physical therapist can diagnose and treat the injury. A coach is an integral part of the athletic health care team, and is often the "first responder" when an athlete is injured. With the proper comprehension, coaches may appropriately recognize and manage such injuries. A coach should have knowledge in the phases of the injury response process, understand the different types of injuries that occur, and be able to administer appropriate acute injury management strategies until the athlete can be seen by a qualified healthcare professional. The purpose of the article is to provide a research-based coaches guide to the recognition and management of athletic injuries.

Key words: athletic trainer, medical staff, sports medicine

## Introduction

About 38 million children and teens participate in some form of organized sports in the United States (Barron, et al, 2009). Merkel and Molony (2012) reported that roughly 3.5 million athletes 14 years and younger seek treatment for sport related injuries per year. Several recognized medical associations have issued statements about the important role coaches play in the prevention of injuries (American Academy of Orthopedic Surgeons, 2007; American Academy of Pediatrics, 2001; National Athletic Trainers Association, 2004). Moreover, some coaches may lack the injury prevention knowledge needed, and as a result, need to take an active role

in learning the necessary knowledge and skills to develop sound sport training programs (Barron, et al, 2009). Many sports injuries can often be prevented with the proper knowledge applied by coaches regarding proper training programs. The coach is not a physician or sports medicine professional but can benefit from knowledge in the following areas:

- Knowledge and understanding of the mechanics and type of athletics injuries
- Recognition and immediate care of injuries
- Knowledge regarding appropriate medical referral
- Awareness and importance of therapeutic rehabilitation services
- Expertise in training program design to minimize the chance of injury
- Understanding how to modify training programs to gradually return the athlete to full activity

The purpose of the article is to provide a research-based coaches guide to the recognition and management of athletic injuries.

## Emergency Action Plans

Injuries will inevitably occur regardless of how diligent a coach maybe with preventing and recognizing injuries, constructing training plans, or how safety-conscious they are. Providing immediate care is a critical step in determining the location and the severity of an athletic injury, and a coach may be forced to provide basic first aid until medical personnel arrive (Pfeiffer & Mangus, 2005). All personnel related to the institution or organization have a duty to develop, implement, and evaluate an emergency action plan (EAP) (Anderson, et al, 2002). Coaches should be trained in automatic external defibrillation, cardiopulmonary resuscitation, first aid, and prevention of disease transmission (Andersen, et al, 2002). EAPs should be developed in conjunction with local emergency

medical services personnel to ensure that proper medical treatment is given quickly and accurately (Andersen, et al, 2002). The EAP identifies the personnel involved in carrying out the plan and should be specific to the athletic venue and include the following (Andersen, et al, 2002):

- Every institution or organization that sponsors athletic activities must have a written emergency plan.
- Emergency plans must be written documents and should be distributed to athletic trainers (and students, where applicable), team physicians, institutional safety personnel, administrators, and coaches.
- The equipment needed to carry out the tasks required in the event of an emergency.
- Establishment for a clear mechanism of communication.
- Incorporate the emergency care facilities to which the injured athlete will be taken.
- The documentation supporting the implementation and evaluation of the plan.

The EAP should be reviewed by medical, administrative, and legal representatives of the sponsoring organization on an annual basis (Andersen, et al, 2002). Furthermore, it is imperative that the EAP be rehearsed annually, so as to practice for situations that may occur (Andersen, et al, 2002).

### **Injury Response Process**

Once tissue is damaged, the healing process begins immediately in a predictable series of physiological steps (Pfirfer & Mangus, 2005). The length of the healing process will vary depending on the injury, the tissue damaged, and the extent of the injury. For example, cartilage has a poor blood supply so the healing capacity is limited. The healing process for ligament, tendon, and muscle is not limited due to the extensive vascular supply, but varies depending on the extent of the damage. The initial healing process can take anywhere from 4-6 weeks with scarring (or lying down of scar tissue) continuing on for several more weeks to months (Prentice & Arnheim, 2013). Bone injuries heal similarly to soft-tissue although its repair capabilities are somewhat more limited. The strength of the scar is the most important factor with soft-tissue healing, whereas bone injuries have many other variables which play a part in the healing process such as torsion, bending and compression. Again the extent of the damage to the bone also affects the healing time and may result in immobilization anywhere from 3 to 8 weeks (Prentice & Arnheim, 2013).

#### *Acute Inflammatory Phase*

The first stage of the repair process is referred to as the *inflammatory response phase* or *acute inflammatory phase*. This portion can take up to 3 to 4 days (Pfirfer & Mangus, 2005). When tissues are damaged due to injury, millions of cells are damaged or destroyed. This causes an alteration in the metabolism and liberation of the chemicals that start the inflammatory response. Inflammation is characterized by redness, swelling, pain, often an increase in temperature and some loss of function (Prentice & Arnheim, 2013). Three main chemical mediators are released when cells are damaged: histamine, leukotrienes, and cytokines.

Histamine causes vasodilation (increase in vessel size increasing blood flow) and increased cell permeability. Leukotrienes help various leukocytes (white blood cells) adhere to the damaged cell walls and aid in permeability allowing plasma and neutrophils to penetrate the vessel walls. Cytokines are controllers of leukocyte activity and help attract phagocytes (white blood cells) to areas of inflammation (Prentice & Arnheim, 2013). Immediately after injury the initial blood flow to the injured area is restricted (vasoconstriction), and then a few minutes later vasodilation occurs increasing the blood flow. This is controlled by the chemical mediators. Platelets then begin adhering to exposed collagen walls of the damaged vessels and, along with leukocytes, begin forming a platelet plug. Fibrin, a component of clotting, begins to form a clot around twelve hours post injury. The injured area then becomes closed off during this inflammatory phase (Pfirfer & Mangus, 2005; Prentice & Arnheim, 2013).

#### *Fibroblastic Repair Phase*

The second stage of the repair process, the *fibroblastic repair phase*, can last anywhere from 4 to 6 weeks (Prentice & Arnheim, 2013). Tissue repair has already begun during this phase, and specialized cells begin breaking down the damaged cells allowing room for the regeneration of new tissue (Pfirfer & Mangus, 2005). The proliferation and regeneration of tissue leads to the formation of scar tissue (in soft-tissue). Fibroblasts (fiber-producing cells) begin to produce collagen fibers that are placed in a random fashion within the forming scar. The strength of the scar tissue in the wound increases as more collagen fibers are produced (Prentice & Arnheim, 2013).

#### *Maturation/Remodeling Phase*

The final stage of the repair process is the *maturation* or *remodeling phase*. This is a long-term process. It may last anywhere from several weeks, months, or even years. During this phase the collagen fibers that form the scar tissue become realigned in accordance to the tensile forces to which the scar is subjected (Prentice & Arnheim, 2013). Angiogenesis, formation of new capillaries, begins shortly after the initial injury, but continues to mature throughout this phase (Pfirfer & Mangus, 2005).

### **Classification of Musculoskeletal Injuries**

Orthopedic injuries typically occur to two different tissue types, either soft tissue (i.e. muscles) or skeletal tissue (i.e. bones) and are either acute or chronic in nature (Knight, 2008; Pfirfer & Mangus, 2005). All injuries, regardless of tissue type, are by nature acute, but if they are not properly taken care of they may turn into chronic injuries (Prentice & Arnheim, 2013). Coaches should work within the limits of their knowledge and should confer with certified athletic trainers, team physicians, or licensed physical therapists when they suspect that their athlete(s) have sustained a soft-tissue or skeletal injury. Taking rapid action when the injury is first discovered is an important key to a quick recovery and return to play for the injured athlete.

#### *Acute*

Acute injuries are injuries that have a sudden rapid onset that typically result from a single traumatic event

(Pffifer & Mangus, 2005). There is some type of force, whether it is a compression, tension, shearing, bending, or torsion that is applied either internally or externally to the body that causes these acute injuries (Prentice & Arnheim, 2013). Acute injuries usually take the form of sprains, strains, and contusions (Knight, 2008); however, joint dislocations/subluxations, separations, and bone fractures are also common acute injuries (Prentice & Arnheim, 2013). Acute injuries are common in sports involving higher amounts of speed, such as soccer, and in contact sports, such as football and wrestling (Yang et al., 2012). Management of acute injuries requires a specific diagnosis and immediate treatment (Prentice & Arnheim, 2013).

#### *Chronic*

According to the National Athletic Trainers' Association chronic injuries, or often called overuse injuries, are a type of sport-related injury that occurs from accumulative trauma or repeated use and stress. Chronic injuries differ from acute injuries in that the "single traumatic event" is absent and there is a history of repetitive minor injuries (Yang et al., 2012). The imbalance between the loading of the mechanical stress placed on the body, and lack of adequate recovery time can often lead to overuse injuries (DiFiori, 2010). Examples of chronic injuries include tendinitis, bursitis, medial tibial stress syndrome (shin splints), and stress fractures (Yang, et al., 2012). Athletes that participate in sports with repetitive movements, such as swimming, running, and rowing, are more susceptible to develop overuse injuries (Pffifer & Mangus, 2005; Yang et al., 2012). Identifying the cause of these types of injuries, decreasing the mechanical stress, and modifying training regimens are important for the healing of overuse injuries (Prentice & Arnheim, 2013).

### **Types of Soft Tissue Injuries**

Injuries within this category include trauma to the muscles, fascia, tendons, ligaments, joint capsules, and/or blood vessels/nerves. The most common type of injuries to the soft-tissue structures are strains (muscles/tendons), sprains (ligament/joint capsules), and contusions (bruises) (Pffifer & Mangus, 2005). A study done by The Ohio State University College of Medicine on the epidemiology of high school athletic injuries (Darrow et al., 2009), found that complete and incomplete ligament sprains made up 29% of the most common injuries to high school athletes. Soft-tissue injuries are characterized by their acute onset, swelling (edema), discoloration (ecchymosis), and loss of range of motion or function (Starkey, Brown, & Ryan, 2010).

#### *Sprains*

Sprains occur when the joint is stretched or forced outside of its normal anatomical limits. This results in the stretching or tearing of the ligament(s) and/or stretching of the joint capsule (Starkey, Brown, & Ryan, 2010). The severity of the sprain depends on many factors including the forces involved, and to what extent the ligament is damaged. In a first degree sprain, there is some stretching of the ligament with only slight tearing/separation of the fibers. Mild pain and some loss of function are associated

with the damage, and mild swelling may occur. In a second degree sprain, there will be partial tearing of the ligament(s) which will cause instability of the joint. Swelling and loss of function is increased as is the level of pain. In a third degree sprain, there is a complete tear or rupture of the ligament causing noticeable instability in the joint. Significant hemorrhaging, swelling, and pain will ensue immediately after the rupture (Starkey, Brown, & Ryan, 2010; Pffifer & Mangus, 2005; Prentice & Arnheim, 2013).

#### *Strains*

Strains occur to muscles, tendons, or musculotendinous junction (MTJ) which is the junction between the two. They are caused by an excessive stretch or tension or an overloading force in the muscle fibers (Starkey, Brown, & Ryan, 2010). Strains, just like sprains, are classified as either first, second, or third degree. In a grade one strain, the muscle fibers have been stretched and some may even be torn. Pain is especially evident with resistance, and some swelling may take place. A grade two strain does involve some actual tearing of the muscle fibers. A noticeable divot or depression in the muscle belly may be seen or felt. Significant ecchymosis or bruising will be noticed as will a significant loss of function. A complete rupture of the muscle or tendon occurs in a third degree strain. There is a complete loss of function, and an obvious defect can be seen. Pain, swelling, and ecchymosis will rapidly increase post injury (Starkey & Ryan, 1996; Pffifer & Mangus, 2005; Prentice & Arnheim, 2013).

#### *Contusions*

Contusions, or bruises, are one of the most frequent athletic injuries. They are caused by a direct blow from an external object which compresses the tissue underneath. These types of injuries can occur in any sport, but are most common in contact sports such as football, basketball, and soccer (Pffifer & Mangus, 2005; Prentice & Arnheim, 2011). Contusions are fairly common, but can become life-threatening if they occur to tissues surrounding vital organs such as the kidneys or brain (Pffifer & Mangus, 2005). Pain, swelling, and discoloration (ecchymosis) are common signs and symptoms of contusions. With severe muscle contusions, or if the area of muscle tissue is subjected to repeated blows, ectopic bone production may form as a result of the bleeding in the muscle (Prentice & Arnheim, 2013; Starkey, Brown, & Ryan, 2010). This condition is called heterotopic ossification and can cause significant atrophy of the muscle as well as limiting the joint's range of motion (Starkey, Brown, & Ryan, 2010). Proper muscle contusion injury management, consisting of icing the affected muscle in a stretched position, maintaining range of motion, and padding the area to protect it from additional blows will help prevent the occurrence of heterotopic ossification (Starkey, Brown, & Ryan, 2010).

### **Types of Bony Injuries**

Soft-tissue injuries are much more common in athletes. However, skeletal injuries are often more traumatic due to the intense forces producing them. The presence of growth plates in growing adolescents provides a new set of concerns when a skeletal injury occurs (Starkey,



Brown, & Ryan, 2010). Approximately 15% of growth plate injuries result in growth arrest (Merkel & Moloney, 2012). Dislocations and subluxations are also common skeletal injuries that occur at joint articulation sites.

#### *Fractures*

In a study performed by the Ohio State University College of Medicine, fractures accounted for 36.0% of injuries sustained by high school athletes throughout the nation (Darrow et al., 2009). According to a definition by Pfiffer and Mangus (2005), a fracture is defined as “a break or crack in a bone.” Fractures can be either closed (simple) or open (compound). In a closed or simple fracture, the fractured bone does not break the skin. In an open or compound fracture, the fractured parts of the bone break through the skin and cause a serious risk of infection (Pfiffer & Mangus, 2005). Some signs and symptoms of fractures include: obvious deformity, point tenderness with swelling, pain with movement, and history of injury (mechanism) (Prentice & Arnheim, 2013; Pfiffer & Mangus, 2005). The different types of fractures are classified according to the location of the fracture in comparison to the rest of the bone, the shape (greenstick, spiral), direction (oblique, transverse), onset/duration (stress fractures) and magnitude of the fracture (compression, comminuted). Stress fractures result when a bone is being subjected to a repeated overloading stress that exceeds its own ability to recover. The fractures develop overtime and signs and symptoms can often be confused with those of other similar conditions (Pfiffer & Mangus, 2005). A specific point tender spot can be found with palpation of the bone and compression of long bones may cause an increase in pain; however, the history of a chronic condition will provide evidence to back up the clinical findings (Starkey, Brown, & Ryan, 2010).

#### *Dislocations*

Dislocations (luxations) result when there is a complete separation of two articulating bones with at least one of the bones displaced from its normal alignment. In a subluxation, the bones separate, but then go right back into the correct place (Prentice & Arnheim, 2013). Dislocations most commonly occur at the shoulder, elbow, and finger joints. With a dislocation a deformity is always present, but heavy musculature may sometimes disguise it, so it is important to compare the affected area bilaterally with the unaffected joint (Pfiffer & Mangus, 2005; Prentice & Arnheim, 2013). In most cases, dislocations will stretch or tear supporting soft-tissue such as ligaments, joint capsules, or muscle tendons (Starkey & Ryan, 1996; Pfiffer & Mangus, 2005; Prentice & Arnheim, 2013). Dislocations should be treated as fractures, and should be evaluated by a physician or certified athletic trainer (Prentice & Arnheim, 2013). A coach or athlete should never attempt to relocate a dislocated joint.

### **Injury Management**

A coach is an integral part of the athletic health care team, and is often the “first responder” when one of their athletes is injured (Pfiffer & Mangus 2005). A coach should be confident in their ability to identify an injury and have

basic knowledge of injury management. It is very important for a coach to understand the injury response process, and how the application of injury management strategies will affect this process. Anything done to impede the healing process as a result of improper injury management, conditioning and training, or the rehabilitation process could cause a delay in the athlete’s return to participation (Prentice & Arnheim, 2013).

#### *Proper Use of Ice and Heat*

An important aspect in the successful treatment of athletic injuries is the implementation of the correct type and duration of therapeutic modalities. Therapeutic modalities are not designed to heal injuries, but to provide an optimal environment for healing to occur. Cryotherapy (therapeutic uses of cold) such as ice bags, ice cups, cold whirlpools, and thermotherapies (therapeutic uses of heat) such as moist heat packs, ultrasound, and diathermy are some of the most common modalities used in athletic training rooms (Pfiffer & Mangus, 2005).

#### *Cryotherapy*

Cryotherapy is widely used as a mechanism to manage inflammation caused by acute injuries (Deneger, et al, 2010; Prentice & Arnheim, 2013). Initial management of any musculoskeletal injury should include the use of RICE: Rest, Ice, Compression, and Elevation (Prentice & Arnheim, 2013). A study done by Hubbard and Denegar (2004) found that ice reduces tissue temperature, blood flow, pain, and metabolism. RICE should be used for the first 72 hours following an injury, as this is the acute inflammatory phase of the injury response process.

There are many different types of cryotherapy that can be utilized depending on the location of the injury and to what degree it is injured. The simplest form of cryotherapy is an ice bag or commercial ice pack, although an ice bag is preferred because of its ability to better conform to the skin. Ice bags are most effective when applied directly to the skin and paired with compression (Holcomb, 2005; Deneger, et al, 2010; Prentice & Arnheim, 2013). Ice should be applied for 20-30 minutes every two hours throughout the day (Holcomb, 2005; Deneger, et al, 2010; Prentice & Arnheim, 2013). When not applying ice in conjunction with compression and elevation, the injured area should typically remain compressed and elevated as much as possible (Prentice & Arnheim, 2013), unless the use of compression is contraindicated (as in the case of anterior compartment syndrome of the lower leg). Commercial ice packs are not generally recommended for use as they cool the skin down too rapidly, causing frostbite (Deneger, et al, 2010; Prentice & Arnheim, 2013). If the exterior bag or casing of a commercial ice pack is damaged, the chemicals could burn the skin. Ice cup massage is another inexpensive method used to cool and massage the skin. It is best used in the fibroblastic repair phase (subacute phase) for injuries to tendons, muscle bellies, bursae, or myofascial trigger points. Ice cup massage should not be used to treat acute inflammation due to the inability to apply compression during this type of treatment (Prentice & Arnheim, 2013; Denegar, et al, 2010). Cold whirlpools and

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cryocompression units allow for cooling of an entire limb, and active range of motion. Cryotherapy should be avoided in situations where the athlete suffers from Raynaud's disease, has had previous frostbite, poor circulation, or in very old or very young athletes (Denegar, et al, 2010).

#### *Thermotherapy*

Heat has been used for ages in the athletic training setting. The therapeutic effects of using heat include increasing the extensibility of the tissues, decreasing joint stiffness, reducing pain and muscle spasm, decrease in inflammation, and increases the blood flow (Prentice & Arnheim, 2013). It is critical to not apply thermotherapy in the acute inflammatory phase (first 72 hours) of the injury, as this will increase swelling to the area and delay healing. Thermotherapy is best applied 3-4 days following the injury when the acute symptoms have been controlled.

The most common form of thermotherapy is the use of superficial heat. Due to the subcutaneous fatty layer beneath the dermis, superficial heat such as a moist heat pack or heating pad, will only heat the skin except in areas of little fat. Warm whirlpools are another widely used form of superficial heat. Like the cold whirlpool, the warm whirlpool allows an entire limb or joint to be treated and permits active range of motion to occur simultaneously (Denegar, 2000). With the application of superficial heat, caution must be used to make sure that the moist heat packs have proper insulation around them, and that the whirl pool temperatures are within the recommended limits in order to prevent burns (Denegar, 2000).

#### *Other Injury Management Devices*

In addition to the use of ice and heat modalities, there are other appropriate injury management strategies to implore following an injury. The use of a compression wrap is arguably just as important or more important than the use of ice, and the athlete should be encouraged to wear that compression wrap at all times until the swelling is controlled (Prentice & Arnheim, 2013). As a general rule of thumb, if an athlete receives an injury to the lower extremity where putting weight on the injury could cause further damage or this injury is accompanied by difficulty walking (i.e., noticeable limping), the athlete should be referred to the athletic trainer, who will fit the athlete with crutches (Merkel & Moloney, 2012; Prentice & Arnheim, 2013). Likewise, if an athlete sustains an injury to the upper extremity, and movement of the extremity is contraindicated or the athlete is unable to move the affected joint, that athlete should also be referred, and either a sling or immobilizer will be fit (Prentice & Arnheim, 2013). The athlete may need to be fitted with other devices specific to that injury (e.g. ankle brace, walking boot, knee immobilizer, steel-toe insert), so it is vitally important to the recovery of the injured athlete to refer them to the athletic trainer or other appropriate healthcare professional. Application of these devices will ensure that the injury receives the rest it needs to heal correctly and efficiently.

#### *Therapeutic Rehabilitation*

Once the pain of the injury has been managed, the rehabilitation process can begin. The goals of

rehabilitation vary from athlete to athlete and injury to injury, but the main objectives are the same; to restore flexibility and range of motion (ROM), muscular strength and endurance, and proprioception, coordination, agility, and proprioception (Houglum, 2010). The rehabilitation process uses both therapeutic modalities (e.g. ice, heat) and exercise rehabilitation (Prentice & Arnheim, 2013). It is important that the injury is not re-aggravated throughout the rehabilitation process. Timing plays a very important role as well. The sooner therapeutic exercise can be safely introduced into the recovery process, the sooner the athlete can return to full participation. Rehabilitation must be specific to the individual and progress in according to a pre-determined sequence. The intensity of the rehabilitation must challenge the patient and the injured area without re-aggravation to the injured area. Having a compliant athlete will help the rehabilitation process progress to be carried out in a consistent manner (Houglum, 2010).

Coaches play an important role in rehabilitation with regards to the injured athlete's restrictions in practice and competition. Communicating with the certified athletic trainer on a daily basis is necessary to gain information on the athlete's progression, any new restrictions, or practice modifications that need to be implemented. The coach can also support the rehabilitation process through ensuring that the injured athlete remains to be an integral part of the team by including the athlete in practices, meetings, strategy sessions, and assisting with other practice/game duties (Houglum, 2010). Oftentimes, an athlete will be more compliant with his/her rehabilitation plan if the coach provides encouragement and continues to involve the injured athlete with the team to the greatest extent possible.

#### **Conclusion**

Coaches must be knowledgeable in the area of program training design, implementation, and proper technique in order to appropriately prevent injuries. Regardless of the coach's knowledge, injuries are bound to occur. It is critical that coaches have a basic understanding of how to act in an emergency situation, as well as how to proceed in a non-emergency situation. Coaches are not expected to be medical experts, but it is important that coaches correctly manage injuries until appropriate medical personnel can intervene, and assist the medical personnel when needed. Having the applicable emergency response training (e.g. automatic external defibrillation, cardiopulmonary resuscitation, first aid, and prevention of disease transmission) is critical, as well as having a thorough understanding the institution's emergency action plan. In the case of a non-emergent injury, coaches should have a basic understanding of the type of injury that was sustained, and how to management that injury until medical personnel can take over for the care of the athlete. Lastly, coaches are a critical link in implementing a safe return to activity protocol for the athlete. Therefore, having a basic level of knowledge will assist the athlete in a full return to athletic participation.

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# Disordered Eating: What Coaches Should Know

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## ABSTRACT

A lean body type is associated with enhanced strength and performance in many competitive sports. To attain low body weight, athletes may increase training and decrease food intake. This manuscript describes disordered eating patterns, potential impacts on the team, and provide recommendations for how a coach can handle the situation if he or she suspects disordered eating.

## KEY WORDS

Anorexia nervosa, bulimia nervosa, female athlete triad, nutrition, athletes

### Disordered Eating: What Coaches Should Know

Athletes tend to be highly competitive, highly-achieving, and self-disciplined individuals (Mahan & Escott-Stump, 2000). A lean body type is associated with enhanced strength and performance in many competitive sports. This is true for both male and female athletes. To attain low body weight, athletes may increase training and decrease food intake.

We tend to think of athletes – especially those at intercollegiate or elite levels of competition – as being “healthy” (Thompson & Sherman, 1999). This presumption of healthy may be created by their athletic performance or by what they are able and willing to endure through training and conditioning. Yet, in the name of commitment and competition, athletes engage in behaviors that are far from healthy. This manuscript will describe disordered eating patterns, potential impacts on the team, and provide recommendations for how the coach can handle the situation if he or she suspects disordered eating.

### Disordered Eating

In the United States, 20 million women and 10 million men suffer from a clinically significant eating disorder at some time in their life, including anorexia nervosa, bulimia nervosa, binge eating disorder, or an eating disorder not otherwise specified (EDNOS) (Wade, Keski-Rahkonen, & Hudson, 2011). Moreover, many individuals struggle with body dissatisfaction and sub-clinical disordered eating attitudes and behaviors, and the best-known contributor to the development

of anorexia nervosa and bulimia nervosa is body dissatisfaction (Stice, 2002). There is evidence to suggest by age 6, girls start to express concerns about their weight or shape. As many as 40-60% of elementary school girls (ages 6-12 years) are concerned about becoming too fat. This concern continues through the lifespan (Smolak, 2011).

**Anorexia nervosa.** Anorexia nervosa is defined by the National Eating Disorders Association (NEDA) (2010) as a serious life-threatening disorder characterized by deliberate self-starvation and the following: (a) refusal to maintain body weight at or above a minimally normal weight for age and height (<85% expected); (b) intense fear of gaining weight or becoming fat-even though underweight; (c) disturbance in the way one’s body weight/shape is experienced such as, self-evaluation and denial and (d) presence of amenorrhea (absence of at least 3 consecutive periods). Anorexia nervosa can be classified as a restricting type and binge eating/purging type. Athletes suffering from anorexia nervosa may become so thin that they develop lanugo – fine hair on their body, often on the face, to help warm the body (National Eating Disorders Association, 2010).

**Bulimia nervosa.** Bulimia nervosa is defined a life-threatening disorder characterized by recurrent episodes of binge eating usually followed by self-induced vomiting or some form of purging as a means of controlling weight (e.g., vomiting, laxatives, diuretics, other medications, fasting, or excessive exercise) (National Eating Disorders Association, 2010). One of the reasons bulimia is hard to detect in athletes is that an intense training regimen can mask and coincide with purging. The case of avoiding detection may keep the athlete in denial as well.

**Physical signs and symptoms.** Medical complications associated with disordered eating practices can affect multiple organ systems (Berner, 2009). The cardiovascular system may exhibit heart rhythm changes or low blood pressure. The endocrine system may be affected by low blood sugars, decreased hormone levels, menstrual dysfunction in women, delayed onset of puberty, and stunted skeletal growth in younger athletes. Athletes may experience changes

in bowel regularity, such as constipation or abdominal pain. Fluid and electrolyte imbalances may occur, resulting in dehydration and muscle cramps. The athlete may develop anemia, hair loss, dry skin and nails, and dental decay can occur from regular purging (NEDA, 2010).

**Behavioral and psychological characteristics.** The very characteristics that make athletes excel in their sport—perfectionism, competitiveness and concern with performance—can put them at higher risk for developing disordered eating (Berner, 2009). Disordered diet and weight control behaviors may be transient, or they may develop into persistent patterns of unhealthy behavior that could signal a more serious problem. Characteristics of disordered eating may include: (a) self-critical comments about body weight or body shape; (b) avoidance of eating; (c) secretive eating, (d) unusual weighing behavior; (e) excessive exercise or ongoing, (f) exercise while recovering from injury and against medical advice; (g) social withdrawal; (h) depression; (i) vomiting; (j) binge eating; (k) excessive use of the restroom; (l) Routinely disappearing after eating or using laxatives and/or diuretics (Papathomas & Lavalley, 2012).

### Disordered Eating and the Team

Coaches play a significant role in physical and psychological health of athletes (Berner, 2009). Coaches create training environments conducive to successful athletic performance as well as emotionally rewarding sport experiences. Often it is the coach who is the first person to notice an athlete's physical changes or unhealthy attitudes or behaviors, frequently, before friends or family do.

According to NEDA (2010) coaches play an influential role in the way athletes think about nutrition, body weight, and eating patterns. When presenting nutritional messages, coaches should emphasize that "all foods fit" while avoiding judgmental statements such as "good" or "bad" food. Keep information simple and remind athletes that proper nutrition aims to prevent illnesses and injury, speed recovery between workouts, maintain a healthy body weight and composition, and improve performance (Mahan & Escott-Stump, 2000).

When one or more athletes on a team are struggling with an eating disorder, it can dramatically affect the whole team (Papathomas & Lavalley, 2012). A coach may feel unsure about how to address this issue. Admittedly difficult, it is best to discuss any concerns with the athlete for the following reasons:

- (a) Athletes struggling with disordered eating may put themselves at increased risk for injury (NEDA, 2010).
- (b) Research has shown eating disorders and disordered-eating patterns can be contagious, especially in groups of young women and girls (Mahan & Escott-Stump, 2000). Team members often eat or change clothes together. Body size composition and meal portions of teammates are constantly being observed, sometimes even scrutinized.
- (c) Athletes who show signs of an eating disorder may assume they are doing okay if an adult does not

intervene to tell them otherwise. Other athletes on the team may interpret a coach's silence the same way (NEDA, 2010).

- (d) Athletes are highly attuned to their teammates. Often athletes will discuss their concerns about a team member to teammates. This may become a distraction – such as worry about teammate health or uncertainty over how to deal with the problem – which diminishes their focus on individual and team goals (NEDA, 2010).

### Recommendations for Action

The following recommendations are offered when a coach suspects disordered eating among his or her athletes.

**Say something.** Take warning signs and behaviors seriously. Disordered eating is a complex problem (Sundgot-Borgen & Torstveit, 2010) so do not attempt to diagnose or treat suspected disorders. But remember, if you suspect an athlete is at risk for disordered eating or engaged in disordered eating then you should take steps to help.

Meet privately with the athlete (>18 years) or athlete and parents or guardians (<18 years) to discuss your concerns. Focus on the evidence and what the athlete is able to tell you about her or his feelings. Talk about athlete fears regarding being suspended from the team, losing a starting position, or scholarship. Finally, help the athlete (and parents) identify and contact an eating disorders specialist for professional screening.

If the athlete denies the problem, yet there appears to be substantive evidence, consider conditional participation. Express your concerns for the athlete's welfare in a kind and compassionate way, but be firm in your resolve that a professional screening must occur. Restrict practice or training participation to 1 hour per day or full practice 1-2 days per week. Allow participation in all other team meeting and activities. The restriction is lifted once the athlete completes the professional screening.

**Be an active member of the recovery team.** Physicians, therapist, dieticians, and the coach can contribute as active members of the recovery team. The primary goal is to restore the athlete (and parents) to physical and psychological health (Mahan & Escott-Stump, 2000). Sometimes health care professionals see the impaired athlete as having a destructive commitment to a trivial activity. The athlete, parents, and coach, on the other hand, believe achievement in the sport setting as worthy of single-minded determination and significant sacrifice. If the recovery team members are to work together to help the athlete overcome the eating disorder, they must include dedication and discipline, in the life of the athlete (Papathomas & Lavalley, 2012).

The coach should also establish pathways for athletes to remain connected to the team and its individual members. Very often teammates are part of the athlete's primary support system. Even if an athlete is not competing, it is a good idea to involve the athlete in the routine activities of the team as much as possible.

**Be patient.** For many athletes, recovering from an eating disorder is very difficult because weight, shape, and physicality are closely tied to one's identity (NEDA, 2010).

The idea of having to give up control of training and weight can be terrifying. Recovery involves addressing underlying feelings, fears, and insecurities the athlete managed through disordered eating. This takes time and hard work. New or different priorities must be established. For these reasons, it is important to be kind, compassionate, sympathetic, and most importantly, patient.

**Educate your staff and team.** Provide staff and athlete's with access to accurate information regarding body composition, nutrition, healthy weight gain or loss, and sports performance in order to change perceptions and diminish reliance or misinformation or myths. Seek local professionals – physicians, nurses, nutritionists, or other wellness experts – who can provide resources and answer questions. Post bits of key information and reliable links in accessible places such as locker room bulletin boards, team websites, Facebook pages, and other preferred social media sites. Enlist team leaders to help create a healthy eating environment so athletes are not competing to see who can eat the least amount of food. When it comes to healthy eating and body image, peer-to-peer communication is often better received than the coach's pronouncements. Finally, encourage all staff members including athletic trainers and massage therapists as well as team members to recognize and report warning signs of disordered eating to the head coach.

**Meet individually with athletes.** Take the time to speak one-on-one with all athletes about their performance and fitness goals. If meeting goals requires a change in weight then discuss how to do this gradually, with the help of a sports nutritionist or other qualified person. If it is necessary to deliver a critique or comment pertaining to weight, size, or shape be sure to do it in private or in a space where the conversation may not be overheard by other members of the team. Again, be kind, compassionate, sympathetic, and most importantly, patient. Allow time for the information to be processed. Check for understanding by asking questions, "How did you interpret what I just said?" and "How does this make you feel?" Then the coach should reaffirm his or her commitment to help the athlete achieve the goal in a realistic manner.

### Conclusion

While many coaches have improved their knowledge and management of athlete eating disorders in recent years, many more coaches have not. Further, many coaches still do not view eating disorders as a serious health risk in need of intervention. Therefore, accessible information and training is needed to help coaches recognize and manage disordered eating among team members.

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# Managing Risk in Recreation and Sport Facilities

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## Managing Risk in Recreation and Sport Facilities

### ABSTRACT

America's society is becoming increasingly litigious. With the current economic depression, individuals are without employment and often without health insurance, increasing the possibility that individuals will try to establish negligence on the part of recreation or sport facilities to pay for an injury they incurred while on the premises. Recreation and sport facilities must be proactive and reduce their exposure to this type of risk as much as possible.

### KEY WORDS

Negligence, sport facilities, sport injuries, third party liability

## Managing Risk in Recreation and Sport Facilities

Lawsuits filed against sports and recreational facilities and activities increased 150% from 1977 to 1987 (Judge, Bellar, Petersen, & Wanless, 2010). Recreation and sport facility managers must be proactive and reduce their exposure to this type of risk as much as possible. This manuscript will answer the question: how do recreation and sport facility managers reduce the exposure to third-party liability claims related to participant and spectator injury?

### Injuries in Recreation and Sport Facilities

Before one can determine the proper way to prevent participant injuries, the sport manager must understand recreation and sport participant injury statistics. Sport facilities account for 30.7%, schools are responsible for 19.7%, and recreation areas (i.e., parks, beaches, etc.) are to blame for 11.8% percent of injuries (Conn, Annett, & Gilchrist, 2003). Approximately 30% of all sports and recreation injuries occur in individuals 15-24 years old (Conn, Annett, & Gilchrist, 2003). Additionally, males account for 68.3% while females account for 31.7% of all sports and recreation injuries

(Conn, Annett, & Gilchrist, 2003). These statistics are critical to a sport manager when deciding on potential programming for a recreation facility. For example, a sport manager may decide additional safeguards are necessary if a facility chooses to provide programming that attracts adolescents and young men ages 15-24 because of their high injury rates.

The sport manager should also consider body location of injuries, type of injuries, and injury rates per sport. Conn, et al (2003) found lower extremities injuries (38.9%) are slightly more common than upper extremities injuries (31.2%) in recreation and sport settings. Head/neck injuries (14.8%) and torso injuries (7.7%) may also occur. Sprains and strains (31.5%) are more common than fractures (22.0%), open wounds (12.7%) and contusions (10.8%).

Waterman, et al (2011) reported the incident rate of lower extremity sprains and strains by sport. Sprint football has an incident rate (52.25 injuries/per 100,000) followed by team handball (34.72 injuries), soccer (30.5 injuries), basketball (24.75 injuries), and cross country (23.58 injuries). Basketball, football, and soccer were found to have the highest injury rates regardless of injury type and location (Epperson, 2012). These statistics should be a key part of a sport facility's decisions on sports programming. The Consumer Product Safety Commission is one website that provides vital injury statistics for recreational sports and can be a great resource for sport managers (<http://www.cpsc.gov/en/Research--Statistics/Sports--Recreation/>). A sport manager must always remember that the higher risk of injury means a higher risk of liability.

### Negligence in Recreation and Sport Facilities

To understand the liability risks faced by recreation and sport facility managers, one must first understand the definition of negligence and the evidence needed to prove negligent conduct. Negligence is the failure to act with a standard of care that a reasonably prudent



person would act in a similar situation (Connaughton & Carroll, 2006). In order for a sport manager to be found guilty of negligence, four things must be proven: (a) duty of the facility to protect patrons from foreseeable, unreasonable risks; (b) breach of that duty by the sport facility, thus resulting in a lack of care to the patron(s); (c) breach of the standard of care must be the cause of the patron's injury (proximate cause); and (d) breach must result in damage to the patron's person, property, or interest (Wong, 2002).

Some common case areas that involve negligence include inspecting facilities, constructive notice, participant safety, and spectator safety.

**Inspecting facilities.** Inspecting facilities is an area of risk management often taken for granted. When sport managers do not stay vigilant they leave their facility open to major liability. In the case *Turk v. Town of Westborough* (as cited in Delay & Peterson, 2012), the plaintiff – high school student – filed suit against the defendant – public school – for negligence that resulted in an injury while weight lifting. The plaintiff had been properly instructed on how to lift properly and did not have a spotter when the incident occurred even though he was required to do so (DeLay & Petersen, 2012). Regardless of the plaintiff's fault in the incident, the facility was still found to be negligent in not properly maintaining the weight room resulting in uneven floor mats and gaps in the mats (DeLay & Petersen, 2012). The uneven mats were the cause of the plaintiff's injuries.

**Constructive notice.** Constructive notice is the determination that a facility had knowledge of a facility nuisance (e.g., hole in the soccer field) before an incident occurred. *Range v. Abbott Sports Complex et. al.* (as cited in Connaughton & Carroll, 2006) provided an example of this. The plaintiff was participating in a soccer game at the sports complex when he stepped into a small hole and fell, severely and permanently injuring his knee. The Supreme Court eventually ruled the hole had been created by a small animal well before the game started and found the sports complex negligent and liable for the injury. In both the *Turk* and *Range* cases, facility inspections should have uncovered the issues and the liability could have been avoided.

**Participant safety.** Additional liability concerns a sport manager must be cognizant of include participant equipment and supervision. In *Locilento v. Coleman Catholic High School* (1987), the court ruled in favor of a student who had been injured during an intramural, tackle football game. The school did not provide the proper equipment to protect the plaintiff's shoulder and the failure to do so was the proximate cause of the injury. In *Shorten v. City of White Plains* (1995) a third party injured the plaintiff after skating recklessly for about an hour. The court determined the injury could have been avoided if proper supervision of the skating rink had been in place and therefore ruled against the skating facility. Similarly, in *Nunez v. Recreation Rooms and Settlement, Inc.* (1996), a 9-year old girl was skating when she fell and broke her arm. It was discovered that the fall occurred when she was

skating away from a group of children who were pushing and playing rough. The court cited the lack of supervision and ruled in favor of the plaintiff. Sport managers must adequately supervise all participants and ensure proper equipment is being worn.

**Spectator safety.** Spectator safety is being considered in its relation to risks inherent to the game being played (i.e., a foul ball going into the stands) not as it relates to entering and exiting the game or safety from rowdy fans; however, these should not be ignored by the sport manager. Overwhelmingly, courts have ruled in favor of sport facilities when spectators are injured by the game being played (Khare, 2010). The courts cite primary assumption of risk as long as the risks inherent to the sport are common knowledge or obvious to a reasonable person (Khare, 2010). While this is good news for the sport facility, precautions must still be taken. For example, baseball facilities are expected to have protective screening protecting the seats behind home plate. If this screening is inadequate or damaged and a spectator is injured by a foul ball, primary assumption of risk will not apply and the facility may be liable for the damages.

### Recommendations

There are five key recommendations for the sport manager in charge of managing the risk for a recreation or sport facility:

1. Sport and recreation facility managers should consider providing additional safeguards when sport offerings with high injury rates are offered. This means programmers must consider the age, gender, and injury incidence rates for each sport being considered. Remember 30% of injuries occur with ages 15-24 years, 68.3% of injuries happen to men, and basketball and football are the sports with the highest injury rates (Conn, Annet, Gilchrist, 2003; Epperson, 2012).
2. All activity spaces and equipment should be inspected regularly and documented with an inspection checklist. Replace old or broken equipment and surround playing surfaces with safe zones. Look for holes, debris, and exposed hard surfaces on or around the playing surface (Borkowski, 2004). Documentation of inspections is critical to eradicating a constructive notice claim.
3. Appropriate supervision must be established. Lack of supervision gives patrons the freedom to use equipment and facilities improperly, increasing the likelihood of injury. Lack of supervision also provides the opportunity for roughhousing or rowdy play. Lack of supervision can be ruled the proximate cause of an injury.
4. Participants and spectators must be protected from risks and educated on risks of the game. Use protective fencing, nets, informational signs, and consent forms to ensure spectators understand all risks of a sport. Special attention may need to be paid to "unique" intramural and/or club sports where spectators may not know the inherent risks.
5. There must be insurance coverage, a risk management plan formed through a comprehensive risk assessment,

and an emergency action plan in place. Utilize the help of a knowledgeable insurance or risk management professional to complete these activities.

### Conclusion

The threat of patron injury and facility liability can never be completely eliminated at a recreation and sport facility. However, sport managers can greatly reduce the risk for the patrons and the facility through proper risk management. Today's litigious society will likely continue and it is up to the sport manager to protect his/her facility from negligence claims.

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# Academically Underprepared Student-Athletes: A Dilemma in Higher Education

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## Abstract

Division I institutions frequently admit academically underprepared student-athletes to stay competitive in intercollegiate athletics. This practice is called into question when student-athletes fail to meet admissions standards set by institutions, but are still admitted based on athletic ability. This paper provided an argument for and against the admission of academically underprepared student-athletes to Division I institutions. Two theoretical perspectives were taken to further frame each position. Pragmatism was used in support of the affirmative essay, while a Marxist anthropology perspective was taken in support of the negative essay.

**Keywords:** student-athletes, academically underprepared, admissions, higher education,

## Academically Underprepared Student-Athletes: A Dilemma in Higher Education For Essay

Division I universities should undoubtedly admit academically underprepared student-athletes. Institutions around the country admit academically underprepared students regardless of their athletic ability. The student-athlete population, however, is supported by comprehensive programming, facilities, staff, and resources that are in place to promote student-athlete academic success. In defining academic preparedness, test scores and high school grade point average are not necessarily reflective of a student's academic potential. A student's academic history does not exclusively dictate his or her academic future. The National College Athletic Association (NCAA) has legislation in place to ensure that a student-athlete's athletic success is contingent on academic performance; this provides student-athletes and institutions with incentives to achieve. Ultimately, a student-athlete once admitted to college regardless of academic preparedness has essential programming for academic success and retention, and is monitored carefully by both the institution and NCAA.

Institutions nationally admit academically underprepared students, including the student-athlete population. Remedial courses are offered and utilized by all students, and as a result institutions should not associate academically under preparedness as exclusive to student-athletes. According to Attewell, Lavin, Domina, and Levey (2006):

The majority of colleges in the United States are unselective: They admit almost every high school graduate who applies and can pay tuition. Many schools combine open access with requirements that weaker students take remedial or college prep courses in academic areas in which they have problems. (p.916)

Based on the national trend of admitting underprepared students it is unnecessary to question admitting underprepared student-athletes, because in this regard they are similar to their peers.

Often academic preparedness is evaluated using standardized test scores and high school GPA. Several studies have questioned the effectiveness of standardized test scores in predicting student-athlete success. Ting (2009) stated:

As I expected, SAT scores were comparatively weak or invalid (e.g., SAT-reading scores) predictors of 1st year academic success, particularly student-athlete persistence. Several noncognitive predictors (i.e., NCQ scale scores) were found to anticipate 1st year GPA: Positive Self Concept, Preference for Long Term Goals, Demonstrated Community Service, and Acquired Knowledge in a field. (p. 222)

Petrie and Russell (1995) also found that test scores alone are not indicative of future academic performance. It is then unrealistic to assume that a student's persistence can solely be predicted from test scores, which are often used in the college admissions process.

The NCAA is at the forefront of student-athlete data and has collected data on all student-athletes from high school to graduation dating back to 1994 (Petr & McArdle, 2012). What the NCAA has

found with this data is, “While high school grades and test scores were the best predictors of freshman academic outcomes, first year college outcomes are much better predictors of eventual graduation” (Petr & McArdle, 2012, p.35). Armed with that knowledge the NCAA mandates that every Division I institution provide academic support for its student-athletes. In fact half of the 73 biggest athletics programs in the country have at least doubled their operating budget for services and tutors in the last ten years (Wolverton, Kelderman, & Moser, 2008). With dedicated staff and resources student-athletes regardless of their academic preparedness are being provided the best possible educational programming to help them achieve in the classroom.

Recently NCAA legislation has increased the initial academic eligibility standards for student-athletes to take effect in 2016. They have done this with the understanding that academically underprepared students can be successful in college under the right circumstances. The NCAA argues that the right circumstance is a freshman year free of athletic competition so student-athletes that do not meet initial eligibility standards can focus solely on academic achievement. If this legislation were in place today only 15 percent of freshman would be required to sit out their first year of competition (Paskus, 2012). That is a relatively low number compared to the general student population. As Paskus (2012) postulates, “Having a year to transition should assist student-athletes who are most at-risk of academic difficulties in college, but I expect outcomes will have a lot to do with how student-athlete and especially institutions use that year” (p.47). In essence the NCAA and therefore its member institutions are tasked with providing every possible opportunity for academically underprepared student-athletes to achieve in the classroom. With this new legislation student-athletes will still receive grant and aid, and have four years of eligibility. Additionally, “The first focus of the recent research grows from the finding that, while high school academic characteristics are fairly good predictors of freshman performances, they are not nearly as good at predicting graduation from college” (Petr & McArdle, 2012, p.40).

Continuing academic eligibility standards are used to monitor the progress of student-athletes throughout four years of college. NCAA metrics such as the APR (Academic Progress Rate), GSR (Graduation Success Rate), and progress towards degree requirements create accountability among the Division I institutions that result in an institutional commitment to academically underprepared student-athletes. It is simply not enough to admit an academically underprepared student-athlete; the institution has an obligation to provide them with the resources to succeed in higher education. LaFordge and Hodge (2011) point out that, “Academic accountability is an institutional responsibility” (p. 234).

Division I universities should admit academically underprepared student-athletes the same way it admits academically underprepared non student -athletes. Results have shown that test scores are not the most accurate

measure of a student-athletes academic potential, and as a result the first year college experience proves to be more effective in predicting student-athlete graduation. Division I institutions have developed effective programming to meet the needs of academically underprepared student-athletes and follow a host of NCAA academic standards to ensure that student-athletes are succeeding academically regardless of their level of academic preparedness upon entering college.

### **Supporting Theoretical Perspective: Pragmatism**

Theoretically pragmatism makes meaning of the world based on concrete information and real world applications (Ormerod, 2006). As Ormerod (2006) wrote, “Morality lies in outcomes rather than principles. Therefore, it is the means that should be considered rather than ends” (p. 908). Similarly Marks (1992) argued “...Pragmatism is particularistic and contextual; it locates action, thought, and meaning within specific situations, discarding the search for absolute truth and absolute knowledge” (p. 165). Essentially the argument can be made for the admittance of academically underprepared student-athletes because higher education has implemented an effective system to support these students, in some regard rendering the philosophical argument of their admittance unnecessary. What follows is an essay in support of the admittance of academically underprepared student-athletes from the theoretical perspective of pragmatism.

Education is an opportunity and a journey. Institutions of higher education should continue to admit academically underprepared student-athletes. Higher education and the NCAA have programming in place to effectively to graduate unprepared student-athletes. Education is about the experience and knowledge it provides its student body. Denying a student, any student, the opportunity to benefit him or herself through higher education is simply not an option. Providing underprepared student-athletes with an education ultimately betters the individual student, the institution, and the community. Admitting underprepared students provides an educational experience to those who desperately need it, enhances collegiate culture through athletics, and promotes a positive image for the institution.

To begin this argument it would serve us well to remember that the current support system for academically underprepared student-athletes is an effective one. Why would we question a policy in which we already have programming, personnel, and facilities that address the academic needs of at-risk student athletes? Therefore it is imperative we work within the system to maximize effectiveness. There are comprehensive study programs, well-trained advisors, counselors, learning specialists, tutors, and mentors devoted to ensuring the academic success of student-athletes. Student-athletes continue to graduate at a rate higher than the average student population. These students are tracked by the NCAA through progress toward degree requirements that measures yearly progress in degree programs to ensure there are university incentives for students to graduate on time. The NCAA has addressed the fundamental dilemma of admitting at-risk students into

college by requiring institutions to do the following: provide academic support services, abide by initial eligibility and continuing eligibility standards, and providing real time consequences of athletic cultures that do not value academic success.

The level of academic preparedness a student enters college with is nominal in comparison to what they will gain with a college education. Academically underprepared student-athletes may have not had the educational opportunities based on their socioeconomic status, race, and family histories. A student should not be denied the opportunity to better themselves and their lot in life as a result of these circumstances. Academically underprepared students may begin college with remedial skills, but with the academic support units providing tutoring, study programs, and time management these students are given the necessary assistance to navigate through the rigors of college. These student-athletes will graduate as leaders, with an education that otherwise would not have been afforded to them. As a result of a college education student-athletes can contribute to society through gainful employment, provide their families with financial support, and contribute to their communities in meaningful ways.

The admission of at-risk students also benefits institutions. One obvious benefit is the skill and talent these students sometimes bring to their respective athletic teams. Their ability to excel athletically can result in wins and therefore promotes a positive image for the institution. Additionally, athletics enriches the college experience for the student body. Athletics achievements increase giving to universities, and generate increased interest of potential students (Goff, 2000). A thriving collegiate athletics program is an integral part of the collegiate experience. In order to create and foster a successful athletics department institutions admit the most talented student-athletes and those students come with a range of skills and abilities.

College athletics is a billion dollar industry (Branch, 2011). As long as college sports are entrenched in the fabric of our society universities will continue to admit underprepared but highly talented student-athletes to win games. The question then becomes not if we should admit these students but how can higher education and the NCAA continue better programming and services to ensure these students can thrive in a college setting. How can educators rise to the occasion and develop a way to retain academic integrity and provide academically underprepared students with a meaningful experience? How can the NCAA enforce academic policies to emphasize the student component of "student-athlete"? Educators and the NCAA must work within the current system to advocate for the well being of the students and balance that with the educational missions of their member institutions. By structuring academic units with education as the key mission, combined with progressive student development, and life skills programming institutions can fulfill the obligation of ensuring underprepared students are given the tools they need to thrive in college.

Every individual deserves the opportunity to attend college; when that opportunity is granted based on athletic talent institutions are obligated to provide all student-athletes, regardless of skill level, the essential tools to succeed and ultimately graduate. This is how our current system operates and pragmatically it is imperative that administrators, faculty, coaches, and students work collaboratively to improve academic services. A student-athlete is more than a test score and a grade point average; they are an individual institutional investment on and off the field.

### Against Essay

Division I universities should under no circumstances admit academically underprepared student-athletes. When a university puts athletic ability over academic ability it sacrifices the integrity of the institution. Often academically underprepared student-athletes are in need of remedial education courses and struggle through the rigors of collegiate academics. Universities have compromised their mission to ultimately win athletic competitions. Academically underprepared student-athletes put an immense strain on student-athlete support staff, faculty, and university resources. According to Gurney and Southall (2013):

Exclusive multimillion-dollar, athlete-only academic support units were built to house academic advisers and an army of learning specialists and tutors to remediate those with skills deficiencies. Many institutions hired staff to follow athletes to class to check their attendance. (para. 11)

Recent NCAA legislation reflects the need to raise initial eligibility standards to ensure the academic success of student-athletes. Ultimately, admitting academically underprepared student-athletes corrupts the educational mission of universities, places these underprepared students in an environment in which they cannot succeed, and creates an institutional climate ripe for academic integrity violations.

Each institution is responsible for its admission policies and standards. When a student-athlete fails to meet the academic requirements set by the institution they will make an exception referred to as a special admit. The University of Oklahoma serves an example of special admits in college athletics. "Nearly 60% of athletes at the University of Oklahoma are "special admits," meaning they did not meet the university's admissions requirements, says Gerald Gurney, senior associate athletic director" (Wolverton, et al., 2008, p3.). Student-athlete special admits would not be admitted to their chosen institution if not for athletic ability.

The NCAA is the governing body for Division I college athletics. The membership follows their conscience in the student-athlete admissions process. Recently the NCAA reevaluated initial academic eligibility standards to prohibit academically underprepared student-athletes from competing in collegiate athletics their freshman year if they fail to do the following: "earn at least a 2.3 G.P.A. in core courses, meet an increased sliding scale standard (e.g. SAT scores of 1000 requires a 2.5 high school core

course GPA), complete 10 of 16 core courses prior to the start of the senior year of high school, seven of 10 courses must be completed in English, math and science" (NCAA, 2012). This new legislation will take effect in 2016. To put these reforms into perspective Paskus (2012) states that, "In effect, roughly 35% of freshman football players and 41% of freshman men's basketball players would be in the midst of an academic redshirt rather than their first year of competition" (p. 47). The NCAA institutes reform when there is a great call to do so. By adopting this reform the NCAA is legislating to institutions that academically underprepared student-athletes are ill equipped to handle higher education and collegiate athletics in a way that results in retention and academic success.

The ramifications for admitting academically underprepared student-athletes are not only severe for the institution; students suffer. According to Arum and Roksa in their 2011 book *Academically Adrift*, "Many students come into college with such inadequate levels of preparation that they must spend much of their early coursework on remedial education classes where gains in higher-order critical thinking and complex reasoning are unlikely to occur" (p. 126). The problem with academically underprepared student athletes taking remedial courses is that it inhibits student-athletes ability to meet continuing eligibility requirements, specifically NCAA progress towards degree benchmarks. Bettinger and Long (2009) contend that:

Additionally, remediation may be harmful in that it increases the number of requirements and extends the time to degree, which may lower the likelihood of degree completion. Finally, there also can be a stigma associated with remediation, and this psychological burden could negatively affect outcomes and discourage additional student effort. (p.739)

Low levels of academic preparedness combined with the time constraints and pressure of collegiate athletics is a recipe for disaster. Student-athletes reported that they had greater academic difficulty based on group membership (athletics), trouble earning good grades, and being taken seriously by professors (Aries, McCarthey, Salovey, & Banaji, 2004).

Universities have compromised academic standards to achieve on the playing field. Proof of that resides in the resources devoted to student-athlete academic success. Facilities, staff, and university resources devoted to helping academically underprepared student-athletes succeed are astounding. According to Wolverton, et al. (2008):

Spending has surged for several reasons: Competition for players has eased admissions standards in recent years; while the National Collegiate Athletic Association's academic progress requirements have stiffened. That means it's easier for an athlete to get into college but harder to stay eligible for sports. (para. 4)

Division I institutions have entrenched themselves in a student-athlete support services arms race to implement damage control for admitting students that simply do not meet the universities minimum academic standards.

University of Oklahoma again serves as an example, "On average, Oklahoma's academic services office spends \$6,213 per student on its 470 athletes—almost twice what the program spent 10 years ago" (Wolverton, et al., 2008, para. 26). What perhaps is the most alarming is that millions of dollars are being spent on facilities and staff to serve 400 to 800 student-athletes at institutions of 20,000 to 30,000 students. The student body does not benefit from any of the resources provided specifically for student-athlete academic success.

Allowing academically underprepared student-athletes into college creates atmosphere rife with academic integrity issues. Students that cannot function at a remedial level are still required to meet NCAA academic benchmarks. If they fail to do so the institution faces penalties that are designed to make it difficult for them to compete athletically. The NCAA Academic Progress Rate (APR) is a real time measure of retention and academic success. Laforge and Hodge (2011) note:

"An APR score of 925 has become the NCAA standard for potential institutional penalties that could result in loss of scholarships. In other words, teams that appear to be heading toward a Federal Graduation Rate of less than 50% could be subject to penalties." (p. 223).

This means academically underprepared students must be eligible and stay in school or institutions suffer consequences. With so much at stake coaches, administrators, and students are under an immense strain to ensure students lacking in basic skills are progressing through college.

In summation, by admitting academically underprepared student-athletes Division I institutions are compromising their academic mission. Remediating these students puts an immense financial strain on support staff, and university resources. Academically underprepared student-athletes are forced into remedial classes that make it more difficult to graduate and meet NCAA requirements. The NCAA has intervened to elevate initial academic standards to promote academic success and retention of its member institutions. By admitting these students universities find themselves in a never-ending cycle of meeting the academic needs of students that fail to meet university academic standards.

### **Supporting Theoretical Perspective: Marxist Anthropology**

As Ormerod (2008) described "At the center of Marx's thinking is his criticism of capitalism: capitalists appropriate the benefits of industry leaving the laboring class in misery" (p. 1588). The theoretical perspective of Marxist anthropology applies Marxist theory to society. Marcus and Menzies (2005) stated, "It is the goal of Marxist anthropologists to influence the development of society by contributing to the consciousness of the world proletariat, and contribute in some small way to its transformation from 'a class in itself' to 'a class for itself'" (p. 21). Marxist anthropology provides a platform to evaluate the issue of academic underprepared student-athletes in higher education. In applying this theoretical perspective student-athletes serve as a laboring class. The following essay argues

against the admission of academically underprepared students-athletes supported by the theoretical perspective of Marxist anthropology.

The culture of higher education and collegiate athletics must be evaluated by the economic and social constructs that surround it. When you strip this down, what remains is a class system that is perpetuated by those who stand to benefit the most. One measure of success in collegiate athletics is competitions won. So in this model the product is athletic wins. Athletic wins means elevated status for universities, and on occasion financial gain. The infrastructure in place to create these wins is collegiate athletic departments, and the superstructure that governs those departments is universities. Ultimately, universities dictate policy, funding, and facilities that college athletic departments utilize in the production of wins. The mode of production in this scenario is the labor of student-athletes.

In essence what we have is a system in which universities rely on the performance of student-athletes to win competitions. In order to gather the best labor, universities place that skill set above others to meet that particular need. This creates a university class system in which students-athletes are the labor class. The ruling class is university administration. Administration promotes the ideology that to manufacture wins; admissions, services, and facilities need to be governed in a specific fashion that is different than those provided for the general student body class. By lowering admissions standards for student-athletes, universities are increasing the quality of their labor force to ultimately produce more wins. The result is a class of students who are valued for their ability to produce athletically, while not having the same level of academic preparedness as the majority of the student body. This has the potential to create a tenuous relationship between the student-athlete class and the general student body class, especially when the student-athlete population is a nominal percentage of the general student body.

University administration, by creating a system that benefits their agenda creates a class of people that are held to a lower academic standard than the general population. It also creates a class that is academically outcast for their inability to compete at the same academic level of their peers. The overarching problem for administration is that athletic wins in higher education should be held in much lower regard than its definitive product, education. Higher education's measurable products are the students it graduates and those students' contributions to society, not athletic wins.

A dramatic cultural change is the only feasible way to address the issue of lower admission standards for student-athletes because ultimately higher education, like American society, values winning. To produce winning in higher education sacrifices are made. The general student body, and faculty need to rise up against administration and stand by the conviction that the benefit of an athletic win (product) is slight compared to the educational standards of an institution.

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## First Lady Michelle Obama visits D.C. school to promote exercise and active lifestyles

By Emma Brown, Published: September 6

First Lady Michelle Obama traveled across the Anacostia River on Friday to Orr Elementary, where she urged educators in the District and across the country to keep pushing for healthy food and more physical activity in schools.

America's campaign against childhood obesity is ushering in a "cultural shift" that's beginning to make a difference, Obama said. But there's still a long way to go, she added — and schools must take a lead role in helping kids build good habits.

"We're currently on track to raising the most inactive generation in our nation's history," Obama said. "And it's time for us to do something about it, starting right now."

Flanked by D.C. Schools Chancellor Kaya Henderson and retired pro basketball star Shaquille O'Neal ("one of the few people on Earth who can make me feel small"), Obama called on educators to commit to her "Let's Move! Active Schools" program and to offer at least 60 minutes of physical activity each day — before, during or after school.

"As educators, you play such a pivotal role in this effort," she said. "We have the potential to transform the health of an entire generation of young people."

Two other sports stars also joined the group: Olympic gymnast Dominique Dawes and Olympic sprinter Allyson Felix.

Henderson announced that all 111 D.C. traditional schools have signed up for Obama's program, making the District the first school system in the nation to go "all in for this exciting and empowering program."

Obama's visit and Henderson's commitment came on the heels of parents' protest that the D.C. school system — which cut the minimum requirement for recess this year to 15 minutes a day — does not devote enough time to exercise. Officials decided last week to raise the minimum to 20 minutes — still too little, in many parents' eyes.

"There's not enough time in the day to fit in everything," said spokeswoman Melissa Salmanowitz, adding that the backlash over recess shows that the schools need longer than their current 6.5-hour day. "But we're fully committed to providing physical activity before, during and after school."

Orr Elementary, where poverty is so pervasive that all the students qualify for free and reduced-price meals, is one school that has made an effort to ensure that kids are eating well and moving during the day.

"I know play is important," said Principal Nikeya Wilson, who is new to Orr and tried to schedule the school's 20-minute recess to fall after students' language-arts block and before math.

"Students are more engaged after they've had time to get their wiggles out," she said.

Vending machines are stocked with healthy snacks, and every morning, the school offers a free exercise program called "BOKS," designed by the athletic company Reebok. Dozens of Orr students crowded into the school's multi-purpose room to share a BOKS session with Obama and O'Neal.

"You guys are leaders. You guys are an example for the whole country," Obama told the students, who were squealing and jumping and clapping their hands over their mouths in excitement. She urged them to stay active, eat their vegetables and take school seriously.

"When I was your age, I never missed a day of school," Obama said.

"Whoa!" said one impressed little boy.

The children jogged and skipped and cajoled hugs out of the first lady. They leapt as high as they could in an effort to high-five seven-foot-one O'Neal. Some succeeded. Others whiffed.

O'Neal, who was promoting Reebok's effort to expand BOKS to schools around the country, said he hadn't realized how important schools are for kids' exercise until he went to Miami and met parents who were scared to let their children outside in violence-racked neighborhoods.

"I was blind to the issues," he said. "We have to come up with more, smarter ways to keep kids active in school."

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## CDC Reveals Positive Physical Education Trends Over Past Decade

By Bryan Toporek on August 30, 2013 3:15 PM

Since the turn of the millennium, the proportion of states and districts paying closer heed to students' physical fitness has increased significantly, according to a new study from the Centers for Disease Prevention and Control.

The "2012 School Health Policies and Practices Study" (SHPPS), released this week, found that the percentage of districts requiring elementary schools to teach physical education increased by more than 10 percentage points over the past 12 years. In 2000, 82.6 percent of districts required phys. ed. in elementary schools; by 2012, that figure jumped to 93.6 percent of districts.

In addition, 58.9 percent of districts required and 32.4 percent recommended that elementary schools provide students with regularly scheduled recess. (The American Academy of Pediatrics spoke out last December about the unique role of recess in the development of children.)

At the middle school level, the percentage of states that provided lesson plans or learning activities for phys. ed. increased from 30.6 percent in 2000 to 60.8 percent in 2012, the CDC found. Additionally, the percentage of states that provided tools for evaluating students' progress in middle school phys. ed. similarly jumped from 33.3 percent in 2000 to 64.0 percent in 2012.



Professional development for physical education teachers also showed a significant increase at both the state and district level since 2000. More states and districts either provided PD or funding for PD in: administering or using fitness tests; encouraging family involvement in physical activity; implementing methods to increase the amount of class time students are engaged in moderate-to-vigorous physical activity; and teaching movement skills and concepts.

Nationwide, as of 2012, 86.1 percent of districts had adopted a policy stating that schools will follow any national, state, or district phys. ed. standards, with an additional 4.5 percent of districts encouraging this practice. This represents nearly a 20 percentage-point increase from 2000, when only 66.5 percent of districts had such a policy.

Of these districts, 61.4 percent required schools to assess student achievement based on the phys. ed. standards used by their district.

More than 90 percent of districts required elementary, middle, and high schools to teach PE. Roughly three-fourths of districts have specified time requirements for elementary, middle, and high school classes.

"Schools play a critical role in the health and well-being of our youth," said Dr. Tom Frieden, the director of the CDC, in a statement. "Good news for students and parents—more students have access to healthy food, better physical-fitness activities through initiatives such as 'Let's Move,' and campuses that are completely tobacco-free."

All of this increased attention to students' physical fitness appears to be paying off. Childhood-obesity rates in the U.S. have more or less stabilized over the past decade, according to a report released earlier this month by the Trust for America's Health and the Robert Wood Johnson Foundation.

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## Not your grandmother's gym class

By Dorene Internicola, Reuters

NEW YORK (Reuters) - Physical education in the United States has come a long way since the one-size-fits-all regimen of jumping jacks and rope climbing that was the bane of the baby boomer generation.

Today, where children learn can determine the type of fitness lessons they receive.

"We have schools with rock climbing walls, Zumba classes, inline skating - amazing stuff that I would have loved to have when I was a kid," said Carly Braxton, senior program manager for advocacy at the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD), a nonprofit group that promotes physical activity and education.

Even in schools constrained by local budgets or indifference, Braxton said, imaginative physical education teachers are finding innovative ways to get kids moving, from snow shoeing in cold climates to treasure hunting in warm ones.

"Where there's a big Native American population, they'll bring in tribal games, hunting and fishing," said Braxton, whose organization is one of the managing

partners of first lady Michelle Obama's Let's Move Active Schools program.

"Physical education people are among the most flexible people in the world when it comes to using the community and the environment," she added.

Federal guidelines recommend children and adolescents, aged 6-17 years old, get at least one hour of physical activity daily, but in the schools where they spend much of their day, mandates for movement vary greatly.

Thirty-eight U.S. states mandate physical education in elementary, middle/high and high school, according to the 2012 Shape of the Nation Report: Status of Physical Education in the USA, which is released by the National Association for Sport and Physical Education (NASPE) and the American Heart Association.

But most states do not require a specific amount of instructional time and more than half allow exemptions, waivers, and/or substitutions, the report showed.

"Education is such a local issue," said Braxton. "You see this variation. Even in states with stricter mandates, these mandates don't have a whole lot of teeth."

Physical inactivity is associated with obesity, which affects 17 percent of children and adolescents in the United States - triple the rate from just one generation ago, according to the U.S. Centers for Disease Control.

Braxton said physical activity translates to lower absenteeism and higher academic performance.

"Research shows if you're sitting for more than 17 minutes, your brain activity starts to slow down," said Braxton. "If you're sitting in a math class, even just a one-minute brain break, where maybe the kids play rock/paper/scissors with their legs instead of their hands (can help)."

Dr. Jacalyn Lea Lund, professor at the Georgia State University and past president of NASPE, believes physical education is undervalued in classrooms increasingly driven by testing.

"Our kids get squirmy and stressed out. We know activity can relieve a lot of stress," Lund said.

"There's a really good program called Take 10, where children take little activity breaks to do anything from dance to music to throwing bean bags at targets," she said. "People found it makes a huge difference."

Jessica Matthews, a spokesperson for the American Council on Exercise, a non-profit group that educates people about fitness, applauds teacher-initiated activity breaks, as well as the introduction of cutting edge programs such as yoga and martial arts, to local school districts.

She said physical activity and physical education are not interchangeable.

"Both are important," said Matthews, an exercise physiologist and former teacher.

With physical education, she said, children refine their motor skills, acquire specific abilities and set a foundation for lifelong fitness.

"The physical education teacher does more than just have kids run around the gym," she said.

(Editing by Patricia Reaney and Sandra Maler)

# Guidelines for Authors

This journal is published in May, September, and February by the Indiana Association for Health, Physical Education, Recreation, and Dance. Articles that share opinions and ideas, as well as those based on serious scholarly inquiry are welcomed and encouraged. Each article scholarly article is reviewed by the editor and at least two reviewers who are selected on the basis of areas of interest and qualifications in relation to the content of the article.

## Preparing Manuscript

Manuscripts are to conform to the Publication Manual of the American Psychological Association (APA; 6th ed.) style. To facilitate the review process, the author(s) should use double-spaced type and include line numbers as well as page numbers. Papers must not exceed a total of 28 pages including references, charts, tables, figures, and photographs. There should be an abstract not to exceed 500 words. Further, all charts, tables, figures, and photographs will be after the references. Papers deviating from the recommended format will not be considered until they are revised.

## Electronic Submission

Electronic submission of manuscripts is required at [thomas.sawyer@indstate.edu](mailto:thomas.sawyer@indstate.edu). The manuscript order is: (1) blind title page, (2) abstract, (3) key words, (4) text, (5) references, (6) author notes, (7) footnotes, (8) charts, (9) tables, (10) figure captions, and (11) figures. The cover letter will be a separate file. Including author(s) name and affiliation and contact information of corresponding author.

## Cover Letter

The cover letter must include all contact information for the corresponding author, and employers of the remaining authors. The following statements must be included in the cover letter:

- "This manuscript represents results of original work that have not been published elsewhere (except as an abstract in conference proceedings)."
- "This manuscript has not and will not be submitted for publication elsewhere until a decision is made regarding its acceptability for publication in the Indiana AHPERD Journal."
- "This scholarly inquiry is not part of a larger study."
- "This manuscript has not been previously published or submitted for publication elsewhere, either in identical or modified form."

## Authors

List multiple authors in the order of proportionate work completed. Also indicate research reports supported by grants and contracts. Include biographical information on all authors (title, department, institution or company, and full address).

## Authors' Statement

The author must provide a signed statement certifying that the article has not previously been published or submitted for publication elsewhere either in identical or modified form.

## Deadlines Journal

- Spring Issue – March 1
- Fall Issue – July 1
- Winter Issue – December 1

## Newsletter

- Spring Issue – Feb. 15
- Fall Issue – Sept. 15

## Send it in ...to the Editor

A new idea that you have penned,  
Share it with a Indiana AHPERD friend.  
On the Journal pages, let it end.  
We sure do want it... send it in!  
It may be an article you did write  
In sheer frustration one weary night.  
But, someone else it may excite.  
...Send it in.  
Is it a cartoon that you have drawn?  
Did you compose a unique song?  
Could our whole profession sing along?  
...Well, send it in.  
Some folks are inspired by poetry  
And works of art let others see  
The inner thoughts of you and me.  
Please, send it in.  
Then, there are works that scholars do,  
Great research... we need that, too.  
But, you know we must depend on YOU  
To send it in.  
Won't you share with us your thought  
That we all just may be taught?  
My, what changes could be wrought  
If you'd just send it in.

Tom Sawyer  
Indiana AHPERD Journal Editor

# Leadership Opportunities on Councils

**FUNCTION.** The duties and responsibilities of the Program and Regional Councils are to:

1. Work closely with the Program Director or Regional Coordinator to promote the special program area.
2. Attend annual IAHPERD Leadership Conference. (Hotel and meals paid for by the Association.)
3. Solicit programming for the State Conference or Regional Workshops.
4. Serve as host to greet and direct presenters during the

- conference.
5. Serve as presider for the various programs in your special area. Support includes introducing presenter, assisting during the presentation (distribute handouts), and providing presenter with the special gift from the Association.
  6. Make nominations to the Awards Committee chair for Teacher of the Year and Association awards.

**PROGRAM AREAS.** The various program areas include:

1. Adapted Physical Education

2. Aquatics
3. Council for Future Professionals
4. Dance
5. Fitness
6. Health
7. Higher Education/ Research
8. Jump Rope and Hoops for Heart
9. Physical Education: Elementary
10. Physical Education: Middle School
11. Physical Education: Secondary
12. Recreation

13. Sport
  14. Sport Management
  15. Technology
- INTERESTED?** To apply for a leadership position on a council, send an email of interest to Dr. Mark UrteI, Nominating Committee Chair, at [murtel1@iupui.edu](mailto:murtel1@iupui.edu). For additional information, go to the IAHPERD website at [www.Indiana-ahperd.org](http://www.Indiana-ahperd.org), click on About, Constitution, Operating Codes, and scroll down to the leadership position of interest.

## INDIANA AHPERD APPLICATION FOR MEMBERSHIP

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### OPPORTUNITY FOR INVOLVEMENT

Involvement is the key word to making a contribution to your professional association. The IAHPERD provides an opportunity for involvement through the choices below and we encourage each of you to become active participants by serving on a committee or by holding an office. Please, check any position listed below that interests you.

### HELP NEEDED:

- \_\_\_\_\_ Would you be willing to become involved?
- \_\_\_\_\_ District level
  - \_\_\_\_\_ State Level
  - \_\_\_\_\_ Committee Involvement
  - \_\_\_\_\_ State Office
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