# **SPORTS MEDICINE**

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# In Latest Chapter of NFL Concussion Litigation Saga, NFL Fights With Its Insurers—and Its Insurers Fight Amongst Themselves—Over \$1 Billion in Coverage

### By Joseph Samuel, Jr., Esq.

Nearly seven years after reaching a class-wide settlement—then estimated at roughly \$1 billion—with thousands of retired players who brought concussion-related lawsuits, the National Football League is now pressing its claims in New York state court to recoup those funds from various insurers. Meanwhile, disputes remain even among the insurers themselves about who is liable.

In a widely publicized 2015 settlement approved by the U.S. District Court for the Eastern District of Pennsylvania, the NFL agreed to set up an open-ended fund to compensate the alleged victims in a class of concussion lawsuits. Individual payouts from the fund were capped at \$5 million. Players were required to submit to baseline assessments and other medical examinations to determine their injuries. At the time, experts predicted that the fund would pay out at least \$1 billion. As of the Claims Administrator's latest status report in January 2022, the fund has already paid over \$861 million, including over \$830 million to members

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# Diagnosing CTE in the Living— Researchers and the Medical Community Inch Closer to the Goal Line

# By Jessica Rizzo, Esq. and Dylan Henry, Esq.

hen Antonio Brown disrobed in the middle of a Tampa Bay Buccaneers game this January, threw his clothes into the stands, and ran off the field, many rushed to play "armchair doctor," publicly speculating that the wide receiver was suffering from chronic traumatic encephalopathy ("CTE"), the progressive brain disease associated with repeated concussive and sub-concussive blows. The problem? CTE can only be diagnosed through postmortem brain autopsy. That means anyone who may be suffering from CTE is currently unable to be diagnosed with the disease (which is indicated by abnormal deposits of a protein in specific parts of the brain).

Speculation about Brown's erratic behavior follows the postmortem CTE diagnoses of his fellow NFL players Vincent Jackson, Phillip Adams, and Aaron Hernandez, who join the list of

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# SPORTS MEDICINE

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# Discovery Heats Up in Wrongful Death Litigation involving AEDs and High School Athlete

The discovery in a wrongful death lawsuit in Kentucky, where the parents of a high school athlete claimed the school, diocese, and the hospital were negligent, is leading to some interesting details.

First the background: Matthew Mangine was participating in a practice on June 16, 2020 when the incident occurred. His parents alleged in the lawsuit that there were many automatic external defibrillator (AED) devices on-site, none of which were used on Mangine after he collapsed.

Furthermore, the parents noted that the head coach, athletic trainer, and athletic director were not trained properly on how to use an AED. The fault for this, according to the complaint, rested with the defendants – St. Henry High School, the Diocese of Covington, and St. Elizabeth Medical Center, which employed the athletic trainer.

Specifically, the parents alleged that the coaches and trainers there when Mangine collapsed "were not equipped to deal with the situation present by Matthew's cardiac arrest, due in large part to the failures of the defendants to adequately and properly prepare them for such emergencies."

The complaint further states that "for many years, St. Henry and the Diocese have been operating their sports program, in conjunction with St. Elizabeth, in blatant and serious violation of the state law, KHSAA policies and the applicable standard of care."

The "violations" mentioned by the parents centered on the creation of an Emergency Action Plans (EAP) and training on AEDs.

"For well over a decade, the standard of care mandates that schools should have

an Emergency Action Plan," according to the complaint. The complaint also noted that the EAP was not specific to the venue of the practice field, as required.

### **Discovery Revelations**

Since the lawsuit was first reported in these pages, the coaches and athletic trainer at the school revealed that they were in fact trained on how to use an AED and knew what the signs were for sudden cardiac arrest in athletes.

However, they said the AEDs were not secured after Mangine collapsed because the EAP did not list their locations on the school's campus.

Furthermore, media reports suggested that the athletic trainer, Mike Bowling, did not have the necessary keys to access an AED, which was 50 yards from where the athlete collapsed.

KHSAA commissioner Julian Tackett has also made a few headlines, confirming that if the school didn't notify his association that it did not have an EAP, that would be a violation of the organization's self-reporting policy.

In a media interview, Tackett noted that it would be "a technical requirement" for the school "to certify that they've got them. I mean, at some point -- there's no way with 286 high schools and that many more middle schools, you're not going to have an army of people going out and checking.

He went on to give an example.

"It's no different (then) an academic rule (we have had) for years. We don't check transcripts. At some point, it is self-policing. It is. They've done it. They know the risk of not doing it. They know the liability of not doing it, and their peers are watching, so there is that accountability."



# Is Youth Football Safe? Recent Study Suggests it Might Not Be as Dangerous as we Once Thought

By Dylan Henry, Esq., Kacie Kergides, Esq. and Kimberly Sachs, Esq.

ver the last decade, football has earned a reputation as being one of the most dangerous sports. Concussions and football are now inextricably linked, with major news outlets regularly reporting on chronic traumatic encephalopathy (CTE), the dangers of repeated blows to the head, and the long-term effects of traumatic brain injuries. Parents keeping their fingers on the pulse of concussions in football are becoming increasingly concerned about the long-term impacts of the high-risk sport, with some opting instead to steer their children to lower-risk, reducedcontact sports such as swimming, track, or baseball.

Existing literature on cumulative head impacts and tackle football seem to support this decision. A recent study, however, suggests that youth football is not as dangerous as critics once thought, at least in the short-term, for youth athletes who play football for a few consecutive seasons. The study, published on December 30, 2021, in JAMA (Journal of American Medical Association) Network Open, found that head impacts and concussions are not linked to problems with memory, attention, processing speed, or behavior in youth athletes between nine and twelve years of age.

The study, while promising, has its limitations. The study does not shed light on the long-term effects of repeated blows to the head, as it spanned only four years, nor does it measure the outcome of CTE or other neurodegenerative diseases (e.g., Alzheimer's, dementia), the signs, symptoms, and risks of which develop over time. Its sample size is also quite small, making the statistical power of the study quite insignificant. Nevertheless, the study provides some optimism in a world fueled by media hysteria (which frequently outpaces the science) surrounding the risks and dangers of football.

### **The Study**

The study ran from July 2016 to July 2020—a period spanning four football seasons. Researchers recruited male youth athletes from four separate football teams, and the seventy participants were between nine and twelve years old. Athletes dropped out of the study if they stopped playing football or if they did not attend pre- or post-season testing visits. In total, eighteen of the seventy participants completed all four years of the study.

The study, published on December 30, 2021, in JAMA (Journal of American Medical Association) Network Open, found that head impacts and concussions are not linked to problems with memory, attention, processing speed, or behavior in youth athletes between nine and twelve years of age.

The study monitored head impacts using helmet-based Riddell InSite sensors during practice and games. InSite is a helmet-based impact monitoring technology that collects and analyzes on-field head impacts. The study defined "head impact" as "any impact detected by the InSite sensor."

Prior to the study, the researchers documented each athlete's previous medical diagnoses (e.g., headaches, migraines, ADD/ADHD, anxiety, depression). The researchers also documented each athlete's concussion history as well as the athletes' participation in other contact sports, which the study defined as wrestling, ice hockey, soccer, lacrosse, or rugby.

Before and after each football season, participants completed several cognitive and behavioral assessments. These assessments included a symptom validity test, which tests for response validity. At the final post-season visit, players also reported whether they played other contact sports (defined as wrestling, ice hockey, soccer, lacrosse, or rugby).

### Results

At the end of the study, the researchers found that head impacts across four years of play were not associated with poor outcomes on cognitive or neurocognitive tests in youth football players. The cognitive and behavioral assessments remained stable throughout the four-year study period, and those whose scores did change during the study period had premorbid conditions, including ADHD. Thus, the researchers concluded that cognitive performance was more impacted by premorbid medical conditions (e.g., ADHD) than cumulative blows to the head.

### **Takeaways**

Most studies into the effects of youth tackle football have been retrospective, meaning they look backwards and examine past events and exposures



to see how they relate to established outcomes. Prospective studies, on the other hand, look forward in time, and follow participants before they develop the disease or outcome in question. There are several longitudinal studies out there endeavoring to research the long-term effects of repeated injuries in sport and in the military, including the NCAA-U.S. Department of Defense Concussion Assessment,

Research, and Education (CARE) Consortium, led by Steven Broglio, Ph.D. from the University of Michigan, which just recently earned a 10-year extension and \$42 million in funding to continue the research. But this study is one of—if not the—longest prospective studies to measure head impacts and neurocognitive outcomes in youth contact sport athletes. Its results—that there are no ties between youth tackle football and cognitive issues—are promising.

Experts, however, caution that this study does not say that it is safe to play youth football; instead, more research is needed to fully understand the longterm effects of repeated exposures to



head impacts (not only from football, but from participation in all sport or work-related activities, because the brain does not really care what impacts it, just that it was impacted). While parents and coaches can lean on this study to alleviate some anxiety, they should continue to implement the safety measures currently in place. This includes reducing exposure to cumulative head impacts, especially during preseason and in practice, teaching proper tackling techniques, implementing return-to-play protocols and procedures, and following those procedures-to a tee-in the event of an injury.

It should always be a priority for

youth sports organizations to protect their athletes from head injuries. Football, or any contact sport, will never be a risk-free activity, and parents and coaches alike must be aware of the risks for injury and take all precautions necessary to protect their youth athletes from repeated blows to the head. This may entail delaying enrollment in football until age fourteen, something

the Concussion Legacy Foundation recommends, limiting full-contact practices, or investing in helmet technology. Whatever method parents and coaches so choose to protect their youth athletes, the undeniable fact is that football will always carry risk.

What this risk is, at least in the short term, is still unknown. Though this study suggests that everything we once thought about football may not be entirely accurate, its results are quite limited and do not shed light on the long-term effects of repeated exposures to head impacts. It should therefore not be used as a green light for abandoning or reducing precautions.



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# **High School Concussion Case Filed Decades Too Late**

By Jeff Birren, Senior Writer

ports-related concussion cases have re-Ceived a lot of publicity and this in turn continues to generate more cases. One such case was filed in the United States Federal Court in Florida. Plaintiff Maurice Jackson claimed that while playing high school football, he suffered severe blows to his head that caused "disorientation, a ringing sensation, hearing loss, nausea, and vomiting." Despite these asserted symptoms, Jackson was allegedly encouraged to continue to play, and, as a result, he has long term brain damage and other symptoms consistent with CTE. However, Jackson also alleged that this happened in 1990 and 1991, and that his contemporaneous symptoms were "clear" at the time of the injuries. Jackson finally sued in 2020. The District Court dismissed the case as untimely. Recently, the Eleventh Circuit affirmed in an unpublished opinion (Jackson v. Scott, Case No. 21-11572, Non-Argument Calendar ("Jackson") (1-4-22)).

### **Facts**

Jackson "played high school football at several Broward County, Florida high schools" (Id. at 4). His Complaint alleged that in games and practice he was required "to absorb consistent, sudden, and violent blows to his head." This caused the symptoms described above, and ultimately "long term brain damage." The intervening years were not always kind to Jackson, and "he is currently a prisoner of the state of Florida where he has been continuously incarcerated for the last sixteen years." Recently he "became aware of chronic traumatic encephalopathy and its association with football after reading several news articles and watching television programs on the topic."

Jackson filed his Complaint on December 23, 2020 (*Jackson v. Scott et al*, S.D. Fla., Case No. 0:20-cv-62656-WPD, ("*Jackson v. Scott*"), (12-23-20)). The defendants were "Ken Scott, his high school head coach during his junior and senior years," the Broward County School Board, "the Florida High School Athletic Association, and several other known and unknown individuals affiliated with the school board and FHSAA." He claimed: "the defendants violated his due process right to bodily integrity and showed deliberate indifference to his medical needs" (*Jackson*, at 4).

### In the District Court, Briefly

Jackson filed *in forma pauperis* and made a motion to proceed that way (*Jackson v. Scott,* Doc. No. 3). The Court granted that motion (Id., Doc. #7). He also made a motion for the court to appoint counsel (Id., Doc. #4), but that was denied (Id., Doc. #8). The Court then "screened his complaint under 28 U.S.C. §1915(e)(2)." That section requires the District Court "to dismiss the case at any time if the court determines that" it "fails to state a claim on which relief may be granted."

The District Court determined "that because Jackson sued under Section 1983, his claims were subject to a four-year statute of limitations borrowed from Florida tort law." It held that the claims "accrued in 1991, the date of the latest incident forming the basis of his complaint." The Court "concluded that the statute of limitations began to run at that time, that it had clearly expired, and that Jackson had therefore failed to state a claim upon which relief could be granted" (Jackson, at 4). The District Court dismissed the case on March 10, 2021 (Jackson v. Scott, Doc. #9), before the defendants made an appearance in the case. Jackson filed a motion to alter or amend the judgment (Id., Doc. #10, (4-5-21)), that was denied (Id., Doc. #11 (4-20-21)). Jackson promptly filed his Notice of Appeal (Id., Doc. #12, (5-5-21)).

### In The Eleventh Circuit

Jackson proceeded "*pro* se" (*Jackson*, at 4). He appealed both the dismissal of his Complaint and the denial of his motion to alter or amend the judgment (*Jackson*, at 5). The Circuit first took up the dismissal

of the Complaint. Jackson argued that his claims were timely because CTE "is a 'degenerative disease' that 'may not manifest to any medically detectable degree for many years.' We disagree."

The appellate court reviews a "dismissal de novo and takes all allegations in the complaint as true." However, the District Court may dismiss the complaint "if it is apparent from the face of the complaint that the applicable statute of limitations bars the claim." Such a dismissal is reviewed de novo. The statute of limitations for "Section 1983 claims is borrowed from the forum state's residual personal injury statute of limitations, which in Florida is four years." The statute begins to run "when 'the facts which would support a cause of action are apparent or should be apparent to a person with a reasonably prudent regard for his rights .... This requires only that the plaintiff know or should know (1) that he has suffered an injury that forms the basis of his action and (2) who has inflicted the injury" (Id.).

The Court held that the District Court "did not err in dismissing Jackson's Section 1983 claims as untimely." "According to his own allegations, symptoms from the injuries forming the basis of his action were 'clear' when the injuries occurred." Moreover, the injuries "were so obvious that a television reporter approached the sideline during the 1991 game concerned about Jackson's 'apparent and visibly injured condition." Jackson's argument that "his coaches showed deliberate indifference is premised on the allegation" that the injuries were "obvious" and "significant." He also "knew the identities of the individuals that allegedly inflicted his injuries by urging him to continue playing in the game." Thus, the facts "that he now relies on to support his Section 1983 action were apparent to him in 1991" and that is "when his cause of action accrued and when the statute of limitations began to run." Approximately



"twenty-nine years passed between the time his cause of action accrued and when Jackson filed his complaint" (Id. at 6). The claims were therefore untimely, and the Circuit affirmed the dismissal.

# Motion to Alter or Amend the Judgment

The denial of the *Federal Rules of Civil Procedure 59(e)* motion is reviewed for abuse of discretion, and it will be affirmed unless the District Court "has made a clear error of judgment or applied the wrong legal standard." The motion "may only be granted on the grounds of newly discovered evidence or manifest errors of law or fact." It "may not be used to relitigate old matters or to raise arguments that could have been raised prior to the judgment."

The Circuit held that the District Court "did not abuse its discretion" in denying the motion. Jackson failed to show that the court below "made a clear error of judgment or applied the wrong standard in dismissing his Section 1983 claims as untimely." He may have recently "learned of additional long-term consequences of his football injuries" but he had alleged "that his injuries were apparent to him and others in 1991." Finally, because the District Court "dismissed all of the Section 1983 claims over which it had jurisdiction, it did not err by declining to exercise supplemental jurisdiction over any remaining state constitutional claims."

### Conclusion

Jackson can file a motion for certiorari in

the Supreme Court, where the odds will be daunting. He can also contemplate trying to file his "state constitutional claims" in the appropriate state court. Athletes have endured concussions since sports began but it is only in recent decades that the severity of the problems have come into focus. Nevertheless, many athletes knew at the time that they had concussion-related injuries, and Jackson holds that is when the statute of limitations begins. For those wishing to file such decades-old claims, Jackson should be considered when writing the complaint, and counsel will have to contend with its reasoning when opposing a motion to dismiss or summary judgment. Time and tide wait for no one, and so it can be with the statute of limitations.

# NCAA Committee Adjusts THC Test Threshold, Adopts Level Set by World Anti-Doping Agency

The NCAA is changing its cannabinoid testing policies. At its Feb. 22-23 meeting, the Committee on Competitive Safeguards and Medical Aspects of Sports increased the THC threshold and recommended a reconfiguration of the penalty structure for student-athletes who test positive for THC.

CSMAS aligned with THC threshold levels established by the World Anti-Doping Agency, raising the threshold for studentathletes from 35 to 150 nanograms per milliliter. The threshold adjustment is effective immediately and applicable to drug tests administered in fall 2021 or later. Any future change to the NCAA threshold may occur in response to changes initiated by WADA and remain subject to CSMAS review and approval.

"Reconsidering the NCAA approach to cannabis testing and management is consistent with feedback from membership on how to better support and educate studentathletes in a society with rapidly evolving public health and cultural views regarding cannabis use," said Dr. Brian Hainline, the NCAA's chief medical officer. "Marijuana is not considered a performance- enhancing substance, but it remains important for member schools to engage student-athletes regarding substance use prevention and provide management and support when appropriate."

The committee also recommended that each division consider changes to the current penalty structure for student-athletes who test positive for THC during NCAA drug testing. Drug testing penalties are legislated under NCAA bylaws, so each division will be required to separately adopt new legislation before changes are made.

The proposed new penalty structure:

- First positive test: No loss of eligibility if the school provides a management plan and education for the student-athlete.
- Second positive test: No loss of eligibility if the school provides additional management and education and confirms the student-athlete was compliant with the original management and education plan. However, the student-athlete must be with-

held from 25% of regular-season contests if they were not compliant with the original management and education plan.

• Third positive test: No loss of eligibility if the school provides additional management and education and confirms the student-athlete was compliant with the previous two treatment and education plans. However, the student-athlete must be withheld from 50% of regularseason contests if they were not compliant with the previous management and education plan.

"These adjustments to the NCAA drug testing program were approved after careful consideration and extensive discussion of the recommendations made by the Drug Testing Subcommittee, which has been meeting since last fall," said Dr. Stephanie Chu, Colorado team physician and CSMAS chair. "The updated cannabis testing policies create a clear pathway for student-athletes to participate in education and management programs specific to their needs at the campus level."



# Cleveland Browns Head Team Physician James Voos, MD, Chairman, University Hospitals Dept. of Orthopaedic Surgery, Elected Vice President of NFL Physicians Society

ames Voos, MD, Head Team Physician of the Cleveland Browns and University Hospitals' Chairman of the Department of Orthopaedic Surgery, was named Vice President of the NFL Physicians Society (NFLPS) during the group's annual meeting at the 2022 NFL Scouting Combine in Indianapolis, Indiana. Timothy McAdams, MD, of Stanford University, was elected for a two-year term as President, to be followed by Voos as President in 2024.

"Dr. Voos has been a strong member of the NFLPS Board of Directors for the past few years. He will be a great Vice President and I look forward to serving with him in this important role," said McAdams.

Dr. Voos, who also serves as the Jack & Mary Herrick Distinguished Chair, Orthopaedics and Sports Medicine, is a nationally renowned expert in the care of athletes and active patients of all ages, specializing in sports-related injuries of the knee, shoulder, and elbow. Dr. Voos is board-certified in orthopedic surgery and sports medicine and has obtained the subspecialty Certificate of Added Qualification (CAQ) in sports medicine. "It is an honor to serve the NFL Physicians Society in this role. We are committed to advancing health and safety initiatives for football into the future," said Voos.

Prior to serving as Chairman, Dr. Voos successfully launched and integrated the multispecialty University Hospitals Sports Medicine Institute serving as Division Chief of Sports Medicine and Medical Director to care for more than 50 Northeast Ohio professional, collegiate, youth and club organizations. Dr. Voos is now spearheading creation of the worldclass Drusinsky Family Sports Medicine Complex at UH Ahuja Medical Center's Phase 2 Expansion, featuring a sports performance center, outpatient rehabilitation space, sports walk-in clinic and dedicated high-tech imaging. Additionally, he is Medical Director for the Cleveland Ballet.

While at the NFL combine, Dr. Voos also was selected to serve as Course Co-Director for the AOSSM/NFLPS/NFL Football Sports Medicine Course in 2023 and served as research presenter on tibia fractures in professional football players. UH Sports Medicine physicians are committed to the health and safety of football players at all levels and continue the tradition of research and translating new knowledge from pee wee to professionals.

Also at the combine, Sean Cupp, MD, Associate Director, Sports Medicine Institute, and a Cleveland Browns team physician, was chosen to serve on the NFL Mental Health Subcommittee.

Dr. Voos earned his medical degree from the University of Kansas where he was elected president of the Alpha Omega Alpha honor society. He went on to complete an orthopedic surgery residency and sports medicine fellowship at the U.S. News & World Report #1 ranked Hospital for Special Surgery in New York. While in New York, he served as assistant team physician for the New York Giants and WNBA New York Liberty. Previously, he was a team physician for the Kansas City Chiefs and head physician for the Kansas City Ballet.

The NFL Physicians Society was founded in 1966. Its mission is to provide excellence in the medical and surgical care to the athletes in the NFL and to provide direction and support for the athletic trainers in charge of the care for these athletes.

# Face mask use among athletes while exercising has no significant effect on physiologic parameters

Millions of athletes worldwide have been wrestling with the challenges of working out under stay-at-home orders and evolving COVID-19 mandates and concerned about wearing a face mask if training in public or outside. To date, there has been no systematic review of existing literature that provides a clear consensus on whether wearing a face mask significantly impacts exercise per-

formance, particularly with respect to physiologic parameters including heart rate, respiratory rate, oxygen saturation, and perceived exertion. A new study presented at the 2022 Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS) found that despite commonly cited concerns regarding safety and performance decrements when wearing masks, healthy individuals can perform heavy exercise wearing masks with minimal physiologic changes.

"As mask mandates took effect during the COVID-19 pandemic, our patients and the general population wanted to know how masks impacted performance outcomes since, theoretically, anything that covers the mouth and/or nose could increase the resistive work of breathing," said Cordelia W. Carter, MD, FAAOS,

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pediatric orthopaedic sports surgeon and director of the Center for Young Athletes at NYU Langone's Hassenfeld Children's Hospital in New York.

With limited scientific-based information to provide guidance, Dr. Carter approached Ariana Lott, MD, an orthopaedic surgery resident at NYU Langone Health, to help her uncover evidence that could provide data-driven guidance on the impact of mask wearing on athletic performance.

Drs. Carter and Lott followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to search for available studies on mask use during exercise in their study, "Mask Use for Athletes, A Systematic Review of Safety and Performance Outcomes." They sought to identify studies that described the effects of oronasal mask use (covers the nose and mouth), if any, on sports/exercise/physical activity for any age, gender, or level of sport. Articles that described mask use to improve athletic performance were also included. Articles describing mask effects without exercise, those that measured effects of full-face masks, review articles, and those published prior to 1980 were excluded. Additionally, non-English studies were excluded during full-text review.

Of the all the records that were identified for possible inclusion, 22 articles met the inclusion criteria. These articles studied a variety of populations, including healthy adult volunteers, high-level athletes, children, pregnant women, and patients with pulmonary comorbidities including asthma and chronic obstructive pulmonary disease (COPD). The team analyzed these articles and extracted data focused on physiologic parameters measured during physical activity performed while wearing an oronasal face mask.

Analysis revealed that healthy individuals can perform moderate-to-vigorous exercise while wearing a face mask without experiencing changes in heart rate, respiratory rate, and oxygen saturation that would compromise individual safety or athletic performance. Of the studies that investigated N95 respirators in the healthy adult population, two reported modest changes in respiratory rate (up 10 breathes per minute at maximum exercise) and maximum power output indicative of decreased athletic performance when subjects were exercising at maximum effort. Similar findings related to N95 respirator use were seen in studies of subpopulations including children and pregnant women.

Interestingly, it was noted that female children had higher maximal output during exercise when they were wearing a mask, and there was no difference in fetal heart rate for pregnant subjects exercising while wearing a mask.

"As current mask mandates are eased, there are still vulnerable populations who prefer to wear a mask during exercise to protect themselves or others from illness," said Dr. Lott. "Given the myriad benefits of exercise and participation in sports, it was important for us to create a comprehensive review of the existing literature to ensure athletes could still exercise safely with a mask. While most studies we analyzed were not conducted during the COVID-19 pandemic, we anticipate more literature to be published in the coming years that could evolve our research."

### SML Digest

### Sachs to Speak at American Medical Society for Sports Medicine's 2022 Annual Meeting

Montgomery McCracken attorney Kimberly Sachs, a co-editor of Sports Medicine and the Law, will be a speaker at the American Medical Society for Sports Medicine's 2022 Annual Meeting on April 9, 2022. Sachs, along with other esteemed panelists, will explore the legal implications of return-to-play decisions during the session titled "Is the Team Physician an Endangered Species? An Exploration of the Issues." Be sure to check out the next issue for a summary of the lessons learned about the forecast of this issue in the medicolegal space.

### Red Bank Regional High School Athletic Trainer Receives Award

Red Bank Regional High School athletic trainer, Christina Emrich, has received the 2022 Eastern Athletic Trainers' Association (EATA) Excellence in Secondary School Athletic Training Award. The award honors a person who has made an outstanding contribution to the athletic training profession on the secondary or prep school level.

Emrich has served as the athletic train-

er at Red Bank Regional High School since 1995 and as a member of Tinton Falls Emergency Medical Services and Little Silver Emergency Medical Services since 1995 and 2005 respectively. Christina has worked toward legislation for mandating Heat Participation Policies, monitoring Concussion Return To Play, and the implementation of Emergency Action Plans that are now mandatory in all New Jersey high schools. Emrich was inducted into the Athletic Trainers' Society of New Jersey Hall of Fame in 2020 and has served as President and other leadership positions within the organization as well.



# Study Explores Methods to Help Reduce Injury Following Successful Post-Concussion Return-To-Play

Children's Hospital Colorado (Children's Colorado) has released a study that examines the efficacy of a neuromuscular training (NMT) intervention that may lead to new treatment approaches and better outcomes for athletes when they return to playing sports after a sports-related concussion.

While preliminary, the findings indicate the risk of sports-related injuries for the year after a concussion among the control group (athletes who did not participate in the NMT intervention) was 3.6 times higher than the risk of injury in the group of athletes who completed the NMT training. The full study, funded by the Children's Colorado Research Institute Pilot Award Program, is featured in the *American Journal of Sports Medicine*.

David R. Howell, Ph.D., ATC, lead researcher at the Sports Medicine Center, Children's Colorado, and assistant professor in the Department of Orthopedics, University of Colorado School of Medicine, conducted the single-site prospective randomized clinical trial along with a team of other investigators from Children's Colorado's Sports Medicine Center.

"It is important to understand that a <u>concussion</u> is a <u>brain injury</u>, but it is one that athletes can recover from. However, prior research indicates athletes who are cleared after a concussion have a greater risk of subsequent sports-related injuries such as ACL tears or sprained ankles than those without a concussion," said Dr. Howell. "We want to understand the risks and potential ways to mitigate risks so kids can get back to safely doing the things they love."

Persistent neuromuscular control deficits (trouble with balance, posture, reaction time, or other functions necessary for sports performance) have been documented after athletes are cleared to

return to sports. In prior studies, this research team found that athletes demonstrated post-concussion deficits that were detected when combining motor and cognitive measures. They also found that those deficits may take longer to resolve than symptoms and may contribute to a higher injury risk after a concussion. In the study, 27 youth athletes were put through a progressive intervention including core strength training, multi-tasking performance and motor factors (balance, posture, attention, orienting, awareness or functional adaptability) over an eightweek period after clearance to return to playing sports.



For a year after returning from an injury, athletes kept a monthly log of sports-related injuries and organized sport competitions. Preliminary data found that during the year after returning to sports following a concussion, time-loss sports-related injuries were more common among <u>control group</u> participants relative to NMT intervention group participants, despite similar levels of sports competition between the two groups over the year (75% of the control athletes sustained an injury vs. 36% of the NMT group).

"An injury to the brain impacts many different parts of the body and the sever-

ity is hard to judge. The brain is the core of who you are—it touches all facets of your life and has many different effects on individuals. Each <u>athlete</u> is on a recovery spectrum post-concussion, so we need to understand what interventions or treatments might work best for each individual,» said Dr. Howell. "The clinical takeaway from this study was that a relatively simple and progressive intervention performed twice per week under guidance of an athletic trainer can help keep athletes safe during a time after concussion where they may be potentially vulnerable to further injuries."

After athletes were cleared to return to sports following a concussion, the NMT intervention demonstrated a significant protective effect in reducing time-loss, sports-related <u>injury</u> over the subsequent year. Despite the study limitations, these findings provide initial promising evidence for clinicians to consider when developing return-to-play and rehabilitation programs for athletes who sustain a concussion. This is part one of a two-part study. The next steps involve understanding if the same effects can be observed using a more accessible approach where the researchers ask athletes to perform a guided intervention using telehealth or smartphone technology.

"The hope is that under proper guidance of a sports medicine clinician or concussion specialist, this approach can be accessed by athletes who do not have everyday access to in-person rehabilitation," said Dr. Howell.

**More information:** David R. Howell et al, An 8-Week Neuromuscular Training Program After Concussion Reduces 1-Year Subsequent Injury Risk: A Randomized Clinical Trial, *The American Journal of Sports Medicine* (2022). DOI: 10.1177/03635465211069372



# Study Examines Length of Time It Take to Recover from Concussion

A new study suggests that people with mild traumatic brain injuries may be more likely to have cognitive impairment, cognitive decline or both one year later, compared to people who were not injured. The research is published in the February 16, 2022, online issue of Neurology<sup>®</sup>, the medical journal of the American Academy of Neurology. People with poor cognitive outcomes were also more likely to have other symptoms like anxiety and lower satisfaction with life.

"Our results suggest that clinically meaningful poor cognitive outcomes, which we defined as cognitive impairment, cognitive decline or both, one year after a concussion may be more common than previously thought," said study author Raquel Gardner, MD, of the University of California San Francisco. "They also highlight the need to better understand the mechanisms underlying poor cognitive outcome, even after relatively mild brain injuries, to improve therapy for recovery."

The study looked at 656 people who had been admitted to trauma center emergency rooms with concussions and 156 healthy people without head injuries. Their average age was 40. Participants were given up to three neurological evaluations after their injury, at two weeks, six months and one year. Each of those evaluations provided five scores from three tests of recall, language skills and other cognitive domains.

Poor cognitive outcome was defined as satisfying the criteria for cognitive impairment, cognitive decline or both. Cognitive impairment was defined as lower-than-expected performance on at least two cognitive tests such as one memory test and one processing speed test. Cognitive decline was defined as clinically meaningful decline on at least two cognitive tests.

Researchers found that 86 out of 656 people with mild brain injuries, or 14%, had poor cognitive outcomes one year later. Of those, 10% had cognitive impairment only, 2% had cognitive decline only and 2% had both. That's compared to eight out of 156 people without concussions, or 5%, who had poor cognitive outcomes one year later. Of those healthy people, 3% had cognitive impairment, none had cognitive decline only, and 1%



had both.

Researchers also found that people who had depression before their injury, had no health insurance, or had a high school education or less were more likely to have a poor cognitive outcome than those who were not depressed before the injury, or had insurance or had more than a high school education.

Researchers found that people who had good cognitive outcomes were more likely to have higher life satisfaction one year after their concussion. The life satisfaction test given to participants ranges in score from five to 35, with lower scores indicating lower life satisfaction. The people with good cognitive outcomes scored an average of 26 on the test, compared to people with poor cognitive outcomes, who scored an average of 21.

The study does not prove that people with concussions will have worse cognitive outcomes one year later, but it shows an association.

"Previous studies of people with moderate to severe brain injuries show that early, intensive rehabilitation can improve people's cognitive outcomes over time. More research is needed to find out the role of cognitive rehabilitation on people with more mild brain injuries who are also at risk for poor cognitive outcomes, and how to predict who falls into this risk category," Gardner said.

A limitation of the study is that people were enrolled at the time of their concussion and their cognitive health before injury was not known.

The study was supported by the National Institutes of Health, National Institute of Neurological Disorders and Stroke and the Department of Defense.



# Early Physical Activity Following a Concussion May Improve Recovery

Traditional treatment for concussions has been to rest and let the brain heal. More recent studies have found that exercise programs starting about a week following a concussion have consistently shown improved recovery.

Research published this month in *Medicine & Science in Sports & Exercise*, a peer-reviewed journal, seemed to confirm "the role of postconcussion physical activity (PA)."

The study, led by prolific concussion researcher Thomas A. Buckley of the University of Delaware, examined 78 (40 men, 38 women) collegiate studentathletes from a variety of sports who had suffered concussions. Each day the athletes reported on their physical and mental activity while following the typical concussion recovery program. Athletes who performed mild-to-moderate physical activity in the first three days post-concussion had the quickest recovery time compared to those who had littleto-no activity or those with high levels of activity.

"The results suggest that in the first few days following a concussion, mildto-moderate physical activity can help improve recovery," according to a summary of the study. "This finding agrees with recent studies suggesting complete rest is not beneficial to recovery and some symptom tolerated activity can be added to concussion recovery programs. Future studies should look at high school students, middle-aged or older adults, and non-athletes, as well as using more detailed measures of activity.

On the last point, the researchers noted that "mental activity, or letting the brain rest, has not been studied as much," but probably should be.

The researchers summarize the "primary finding of this study" as "mild to moderate PA acutely postconcussion was associated with reduced time to symptom free and return to participation as opposed to either lower or higher levels of PA."

# From Michigan to Beijing: An athletic trainer's journey to Olympic hockey

From his spot on the bench, Jason Hodges can see it all.

He notices if someone is skating differently in a practice, possibly an injury. He can see who needs to improve their conditioning. He knows what workouts and therapies each player needs to improve performance.

The veteran athletic trainer has managed all those tasks and more working with USA Hockey's National Team Development Program, which grows the sport's top young talent at its facility in Plymouth, Michigan.

For 24 years with a rink-side view, Jason Hodges has seen the future of American hockey.

"I'm fortunate enough to be here long enough where I can turn on any National Hockey League game and see at least one or more of the athletes on the ice that I've worked with and had a hand in getting them to the next level," said Hodges, who is affiliated with MedSport, University of Michigan Health's multidisciplinary sports medicine team led by orthopaedic surgeons. "Our under-18 team could have five or more first round draft picks this year. We have a bit of a hidden gem here in Plymouth."

Hodges works with a team of six coaches, two trainers and two team doctors, both of whom are also faculty at University of Michigan Health.

### The ultimate stage

Over 1,500 games, Hodges has provided services for several international competitions, including the International Ice Hockey Federation World Junior Championship. But last February, he received an invitation to join USA Hockey for the 2022 Winter Olympics in Beijing as one of their athletic trainers – his first time getting the call.

"It's the ultimate stage," Hodges said. "I had some athletes that competed at the Olympics that came through the program, so I had some familiarity. And originally, the NHL players were supposed to play in this event, but they backed out at the last minute. So, these athletes were kind of thrown in there, and they were really honored to be there. It made it even better to support them and help them with their dream of becoming an Olympian."

The environment was not only new to Hodges but the entire team and staff. Due to high COVID-19 transmission, spectators were limited, and athletes were kept in distinct bubbles. Despite added challenges, Hodges and the two other invited trainers helped athletes navigate the safety protocols and managed day-today injuries throughout the competition.

"Jason is an incredibly humble individual who often shies away from the spotlight while working with some of the most compelling elite hockey players," said Rebecca Northway, M.D., a primary care sports medicine physician at University of Michigan Health and team physician at the USA Hockey



National Team Development Program. "His dedication to player development and safety has been even more evident during the COVID pandemic, where he has been an integral part of development of COVID protocols, player wellness and safety, and continuing the game as safely as possible. I can't think of anyone better than Jason to have represented Team USA, working with many of the players he had previously worked with in USA Hockey in their younger years."

Finland went on to win the gold medal, edging out the Russian Olympic

Committee and Slovakia on the podium. Though Team USA lost to Slovakia in a tight quarterfinal match, the squad of mostly college athletes finished first overall in group play, defeating rival Canada 4-2.

"Our endgame wasn't where we wanted to be, but any chance to beat Canada is a huge win," Hodges said. "This was a great group of players and staff to work with, so seeing them have success, even if it wasn't in a gold medal game, was great."

Hodges returned to the states on Feb. 22, back to his typical schedule with the

U-17 and U-18 squads in Plymouth.

While he's thought about taking a different step in his career – the NHL, other professional teams – Hodges says he's happy working with the young players in Plymouth.

"I really like this age group that I work with now, developing these young players into, ideally, professional athletes," he said. "And this has afforded me the opportunity to travel to event all over the world with these teams. I'm really proud of what we do here."

### NFL Fights With Its Insurers Over \$1 Billion in Coverage

#### Continued from page 1

of the class and their lawyers. Since that settlement, the NFL continued to litigate against various insurers in an effort to obtain coverage. Twenty-nine such insurers have resolved the claims against them, including Westport Insurance Corp., but the NFL continues to litigate against four insurers.

In September 2021, insurer American Guarantee and Liability Insurance Company ("AGLIC")1 moved for summary judgment on the NFL's coverage claims against it, arguing that the very nature of concussion-related football injuries means that the NFL is not eligible to recover under AGLIC's policy.<sup>2</sup> AGLIC argued that the excess policy it issued the NFL only applies when the NFL "at minimum, exhaust[s] the \$51 million in coverage provided by the primary, umbrella and lower-level excess insurance policies beneath AGLIC's coverage." Because those underlying policies do not have aggregate limits, AGLIC argued, its re-insurance policy can never be triggered, and there is \$51 million available for each "occurrence." AGLIC claimed that "each

player's alleged injuries from head impacts are at least one 'occurrence,'" and because the class-wide settlement limits any payments to players at \$5 million each, AGLIC's re-insurance policy can never be reached.

The other three insurers in the case strenuously opposed AGLIC's motion.<sup>3</sup> In a November 2021 filing, TIG Insurance Company, the North River Insurance Company, and the U.S. Fire Insurance Company<sup>4</sup> disputed whether each former player's impacts to the head during football games constituted an "occurrence," calling this a "flawed assumption." Instead, these insurers suggested that "the NFL Parties' allegedly fraudulent and knowing conduct" weighs on whether there even was an occurrence and, if so, the number of those occurrences. These insurers also argued that summary judgment is premature given that fact discovery, including depositions, is yet to conclude. Notably, the insurers claimed that "the determination of the number of occurrences is a highly fact-intensive inquiry and an issue of first impression in the context of sports-related head trauma claims, not just in New York but throughout the country."

In its own response,5 the NFL sided with AGLIC and agreed that with respect to the other three insurers' policies, that there "is at least one separate 'occurrence' and thus at least one separate 'per occurrence' limit for each underlying tort claimant." The NFL also agreed that these policies have no aggregate limits. However, the NFL asked the court to "discontinue" its claims against AGLIC without prejudice, arguing that it was too early to determine "definitively" whether any former NFL players who opted out of the class-wide settlement might have claims that exceed \$51 million at some point in the future. Importantly, the NFL noted that AGLIC's excess policy only covered a single season-the 2001-02 policy period-while the Fairfax insurers "together issued 24 consecutive years of primary coverage from 1978 through 2002 as well as a number of umbrella and excess policies."

In other words, the dispute pits AGLIC and the NFL on the one hand, with the Fairfax insurers on the other. It will turn on what the Fairfax insurers dubbed "an issue of first impression ... throughout the country"—namely, whether the repeated

<sup>1</sup> AGLIC is a member of the Zurich Insurance Group.

<sup>2</sup> See AGLIC's Memorandum of Law in Support of Motion for Summary Judgment, Alterra America Ins. Co. v. NFL, Case Index No. 652813/2012, at Doc. No. 648 (N.Y. Sup. Ct. Sept. 30, 2021).

<sup>3</sup> See Alterra, at Doc. No. 674.

<sup>4</sup> These three insurers are each subsidiaries of conglomerate insurer Fairfax Financial Hold-ings Limited.

<sup>5</sup> Alterra, at Doc. No. 688.

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Oral argument on AGLIC's motion is scheduled for April 19, 2022. At that argument, AGLIC and the NFL will rely on New York law that holds "the operative occurrence" to mean "the last link in the causal chain leading to [the insured's] liability. Appalachian Ins. Co. v. Gen. Elec. Co., 8 N.Y. 3d 162, 170-173 (2007) (citing Arthur A. Johnson Corp. v. Indem. Ins. Co., 7 N.Y. 2d 222 (1959). According to AGLIC and the NFL, this is also referred to as the "unfortunate event" test, differing from a test that other jurisdictions apply that instead looks to the originating cause.6 Applying this test in light of the temporal and spatial differences between each claimant, AGLIC and the NFL argue, the court must conclude that each claimant's repeated exposure to head impacts during NFL football constitute the "last link in the causal chain."

The three Fairfax insurers argue that Appalachian Ins. Co. and other related cases are "factually distinguishable" because they involve incidents of sexual abuse or exposure to toxic substances like asbestos. The insur-

6 See supra note 5, at 11-12.

### **Diagnosing CTE in the Living**

### Continued from page 1

many other professional athletes who have been diagnosed with CTE postmortem.

Jackson was a wide receiver for the Buccaneers and the San Diego Chargers for 11 years. Last February, he was found dead in a hotel room at the age of 38. Doctors examined his brain and determined that he had stage 2 CTE.

Jackson had been reported missing by his family at the time of his death. In his

ers claim that the underlying class of former players did not seek to hold the NFL liable for head impacts during football, a risk the insurers called "inherent" and "voluntarily assumed by players who chose professional football as a career." Instead, the Fairfax insurers claim that the underlying "occurrence" is the NFL's "misrepresentation or fraudulent concealment of the risks of such head trauma."

### Is Insurance "Killing Football"? An Update

It remains to be seen how the court will rule after the April 2022 oral argument, but the decision could have a major impact on how insurers view and value the risks of football going forward. In a previous article titled Insurance is Not Killing Football, Other Contact Sports—It's Making Them Safer, we noted how ESPN's Outside the Lines was reporting that the insurance market for football and other high-contact sports was at risk of drying up. That Outside the Lines report specifically identified asbestos litigation as a potential roadmap of how insurance coverage issues might proceed.

Now, in light of AGLIC's motion, the comparison seems particularly poignant. AGLIC and the NFL are seeking to hold the Fairfax insurers liable based on caselaw that developed primarily in the context of asbestos and other toxic torts. See Appalachian Ins. Co., 831 N.Y. 3d at 162. Meanwhile, the Fairfax insurers seek to distinguish those



cases by highlighting differences between the repeated "occurrences" that take place in the toxic tort context and the allegedly single "occurrence" of the NFL's "misrepresentation or fraudulent concealment of the risks of such head trauma."

If AGLIC and the NFL prevail, and repeated instances of head trauma are directly linked to toxic tort cases, the warning from Outside the Lines carries more weight. But if the Fairfax insurers prevail, and the underlying occurrence is viewed merely as the collective action of NFL executives, the comparison to asbestos is no longer as strong. Put simply, insurers might be more willing to offer brain trauma insurance if courts begin to view actions by organizational leaders as the underlying insurable risk, rather than the inherent nature of football and other contact sports. This could have major implications for organizations like Pop Warner, who itself is engaged in concussion litigation and recently won a major victory in the U.S. Court of Appeals for the Ninth Circuit.7

mid-thirties, Jackson began exhibiting behavioral changes, becoming increasingly depressed and paranoid. He struggled with memory loss and difficulty solving problems and he grew extremely isolated towards the premature end of his life.

Phillip Adams was a defensive back for five years. After his NFL career ended, he often complained to his family of frequent memory lapses. Adams had a hard time with impulse control and, like Jackson, seemed to be growing increasingly paranoid. Last April, he went on a violent rampage, shooting and killing six people in Rock Hill, South Carolina before barricading himself in his family home and fatally shooting himself at the age of 32. Doctors who examined his brain after the massacre found that he had stage 2 CTE.

Hernandez was just 27 when he hanged himself with a bedsheet in his prison

See, e.g., Archie v. Pop Warner Little Scholars, Inc., 2019 WL 8230854 (C.D. Cal. Dec. 27, 2019), aff'd, 2021 WL 4130082 (9th Cir. Sept. 10, 2021) (granting summary judgment to Pop Warner because there was "not a sufficient evidentiary basis that Pop Warner's alleged negligence in connection with Pop Warner Football . . . was a substantial factor in" a class action claimant's accident and another's suicide allegedly resulting from chronic traumatic encephalopathy (CTE)).



cell in 2017. The former New England Patriots tight end had previously been convicted of shooting and killing a friend, ending his NFL career. A posthumous examination of his brain revealed that he had stage 3 CTE, with damage akin to what researchers see in the brains of players in their 60s.

While CTE research is still in its infancy, the disease has gotten a lot of buzz over the last decade because of high profile cases like these. Because it has become a household name, some players suffering from cognitive decline after repeated head trauma may be tempted to diagnose themselves as having CTE, which many see as a death sentence. This is unfortunate, as focusing on one possible affliction to the exclusion of others may mean prematurely ruling out causes of symptoms that can be diagnosed and treated while the patient is still alive. For example, modern medicine is better equipped to help patients with Alzheimer's, dementia, and bi-polar disorder.

While our current inability to diagnose CTE in the living prevents us from developing methods to treat, manage, minimize, and ultimately, prevent the disease, this may not always be true—recent studies have indicated that we may soon be able to diagnose CTE in living patients.

### **Diagnostic Criteria**

A panel of expert clinician-scientists in neurology, neuropsychology, psychiatry, neurosurgery, physical medicine, and rehabilitation has developed new consensus diagnostic criteria for traumatic encephalopathy syndrome ("TES"), the clinical disorder associated with CTE. The panel was convened as a part of the First National Institute of Neurological Disorders and Stroke Consensus Workshop to Define the Diagnostic Criteria for TES. The experts determined that diagnosis of TES requires (1) substantial exposure to repetitive head impacts from contact sports, military service, or other causes; (2) core clinical features of cognitive impairment (in episodic memory and/ or executive functioning) and/or neurobiological dysregulation; (3) a progressive course; and (4) that the clinical features are not fully accounted for by any other neurologic, psychiatric, or medical conditions. Patients meeting these criteria will then receive a grade on a scale from one to five, one indicating that the patient is independent and five indicating that the patient has severe dementia.

Developed primarily for the purpose of facilitating future CTE research, the criteria is not yet ready for physicians to use in diagnosing living patients. It will, however, help scientists move closer to achieving that goal. The authors of the paper publishing the criteria note that they represent a critical step towards identifying a biomarker for CTE in the living.

### **Diagnostic Imaging**

Separately, Boston University researchers have published the results of a study indicating that it may be possible to use magnetic resonance imaging ("MRI") technology to locate evidence of CTE in living patients. The researchers compared the brain scans of 55 deceased male brain donors with CTE to 31 healthy living men and found that the men with CTE had experienced shrinkage in certain regions of their brains. The frontal lobe, temporal lobe, and hippocampus, which plays a major role in learning and memory, were all affected.

The medical community has only just begun to understand the prevalence of CTE. A recent study of the brains of deceased Australian athletes, for example, found that more than half showed signs of CTE. All of the athletes whose brains were examined had, while alive, participated in sports with risks of repetitive injury such as rugby and football. Half of the donors with CTE had died by suicide.

### **Diagnosis In The Living**

When we are able to diagnose CTE in living patients, healthcare providers and families will be better equipped to provide the support those suffering from the disease need. For example, a formal diagnosis could have helped Evan Hansen, the 21-year-old Wabash College football player who killed himself shortly after researching CTE on his laptop, possibly as part of an effort to self-diagnose. Had Hansen, whose selfdiagnosis turned out to be accurate, received the terrible news that he had the disease from a doctor, he could have simultaneously received guidance for managing symptoms like depression.

The ability to diagnose CTE in living patients will also likely lead to increased damages in lawsuits, as patients and families use this knowledge as a basis for incorporating costs of treatment and life care plans into relief requests.

There is currently no treatment for CTE, in part because it cannot be diagnosed in the living. Those close to someone who may be suffering from the disease can only look on helplessly, hoping tragedy does not strike, as it has for so many former NFL players and other athletes. Identifying a way to reliably diagnose CTE in living patients will bring us closer to making timely intervention, treatment, management, and, ultimately, prevention, possible.

