

Turf wars: The courtroom battle over artificial turf safety may be closer than we think

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Many may remember a dramatic moment from the 2022 Super Bowl, when star wide receiver Odell Beckham Jr. suffered a serious non-contact knee injury while catching a pass. Beckham Jr. took the following season off to recover, and his injuries reignited a longstanding debate about the safety of artificial turf fields. Many National Football League (NFL) players and their supporters took to social media, speaking out against turf and supporting a campaign, #FlipTheTurf, to pressure NFL teams to switch from turf fields to grass.

Artificial turf has long been used in sports as a replacement to natural grass. This alternative has both practical and cost-saving benefits as it does not need sunlight or water, so it can be used year-round in enclosed stadiums.

Turf consists of three components: (1) plastic grass blades bundled into individual “tufts;” (2) a backing material to which the tufts are attached; and (3) an adhesive used to secure the tufts to the backing. The turf is stabilized by the presence of “infill” — typically ground rubber or sand — placed between the artificial blades to provide added support.

As early as the 1970s, players’ observations and concerns about turf sparked research into its safety. A study by K. Douglas Bowers Jr. and R. Bruce Martin at the University of West Virginia in 1974 responded to players’ observations that their turf had gotten “harder” over the years and showed that the school’s turf field’s ability to absorb impact decreased over time. A 1992 study specifically focused on the relationship between turf fields and football injuries, finding a statistically significant increase in injuries in some, but not all, lower extremity injuries during games played on turf. John W. Powell and Mario Schootman, “A Multivariate Risk Analysis of Selected Playing Surfaces in the National Football League: 1980 to 1989,” 20 Am. J. Sports Med. 686 (1992).

Synthetic turf surfaces can be problematic because they do not create the same divot as natural grass and therefore lack the ability to release a cleat in a potentially injurious overload situation. Christina D. Mack, et al., “Higher Rates of Lower Extremity Injury on Synthetic Turf Compared With Natural Turf Among National Football League Athletes,” 47 Am. J. of Sports Med. 189, 192 (2019). This generates greater sheer force and torque on the foot and throughout the lower extremity, potentially contributing to increased injuries. Id.

As turf products have evolved over time, new research findings have followed. Some continue to find that turf is less safe for athletes than natural grass, while others find little to no difference, or even that turf has safety advantages over natural grass. What remains the same is that players and researchers alike continue questioning which surface is safer.

The NFL Players Association (NFLPA) has taken a strong public stance against turf fields, advocating that “NFL clubs should proactively change all field surfaces to natural grass.” J.C. Tretter, “Only Natural Grass Can Level the NFL’s Playing Field,” NFLPA, <https://bit.ly/46osWrY> (last visited Jun. 28, 2023). In an April 2023 statement, the NFLPA accused the NFL of twisting historical injury data to support the NFL’s contention that turf fields are safe. J.C. Tretter, “Why the NFL’s Approach to Field Surfaces is Uneven,” NFLPA, Apr. 19, 2023, <https://bit.ly/3COLiEK>.

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In pushing back on the NFL’s reporting of synthetic turf safety data, the NFLPA cited to a recent study finding that “[p]lay on synthetic turf resulted in a 16% increase in injuries as compared with play on natural turf...across all lower extremity injuries resulting in any missed football participation.” Mack, et al., *supra*.

While some turf-safety studies appear to be independent, the Mack study was funded in part by the NFL. Some studies coming to opposite conclusions — that turf is as safe or safer than grass — have been funded in part by turf manufacturers or other professional organizations. Should the various studies ever be used

for authority in litigation, their authors' potential conflicts of interest may become a point of contention.

So when will the turf debate enter the courtroom? At least one turf manufacturer is already facing a number of lawsuits alleging that its product did not live up to durability or lifespan promises represented in advertising and marketing materials. See generally Consolidated Amended Class Action Compl., *In re Fieldturf Artificial Turf Marketing and Sales Practices Litig.*, No. 3:17-md-2779 (D.N.J. Oct. 20, 2017). Counts against the manufacturer include fraud, breach of warranty and violation of consumer protection laws.

Given recent publicity and the NFLPA's involvement in the issue, lawsuits claiming *personal injury* resulting from *play on turf* may be just around the corner. This could generate a mass of prospective plaintiff athletes just as we saw with the concussion litigation of years past. An August 2019 settlement required the NCAA to pay \$70 million to fund concussion screens and testing for former college athletes, with an additional \$5 million toward medical research. In October 2021, the NFL reached a \$765 million settlement over concussion-related brain injuries among its 18,000 retired players.

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Plaintiffs alleging injuries from artificial surfaces can look to several potential target defendants including: (1) turf manufacturers; (2) companies that manufacture the various component parts of turf; and (3) turf purchasers, particularly high schools, universities and major sports franchises. Expected allegations would follow a traditional products liability model, involving counts for both design defect and failure to warn.

Certain elements of a turf field's design may have an impact on safety, as noted in the Mack study above, in that they do not release a cleat in the same way as natural grass. Players may claim that turf manufacturers failed to design their fields to protect players from foreseeable lower extremity injuries, given the speed and force that high caliber athletes reach while practicing and competing. The availability of a feasible alternative design — natural grass — may also carry weight in some jurisdictions.

Failure to warn claims are also likely, particularly given that turf manufacturers tout safety — some including that their artificial turf is a safer alternative to grass — as a focus of their product development and as a key selling point.

Plaintiffs (and their counsel) will face a considerable challenge, however, identifying sound authority linking turf to non-contact lower extremity injuries. It may be that additional studies are necessary before waging litigation. Plaintiffs may also need to spend resources testing their theories and/or working up credible expert witnesses to back their allegations. Other contributing causes to the claimed injuries, such as a player's weight or choice of footwear, may create additional obstacles for these plaintiffs.

The debate over the safety of artificial turf does not end with lower extremity injuries. A March 2023 report from the Philadelphia Inquirer recently publicized a possible link between glioblastoma, a rare brain cancer, and turf fields. David Gambacorta and Barbara Laker, "Field of Dread," *Phila. Inquirer*, Mar. 12, 2023.

The connection follows the deaths of six former Philadelphia Phillies baseball players, all of whom died from glioblastoma after spending the majority of their careers playing for the Phillies. The Phillies played on a turf field from 1971 to 2003.

The Inquirer article points to per- and polyfluoroalkyl substances (PFAS) contained in artificial turf as a possible cause of cancer, noting that testing of samples from the old Phillies' turf field found 16 different types of PFAS present in the turf. See Laker and Gambacorta, *supra*.

PFAS, referred to as "forever chemicals" because they are highly resistant to breakdown in the human body and environment, have been linked to a variety of serious health conditions including low birth weight, reduced immune response, liver damage and cancer. While evidence of PFAS in turf fields causing glioblastoma is only anecdotal at this point, plaintiffs' lawyers have latched on to the Phillies story and are using it to solicit clients for "artificial turf cancer" litigation via firm websites and/or social media.

The effects of PFAS are already widely debated and litigated, including through the Aqueous Film-Forming Foams (AFFF) Products Liability Litigation (MDL No. 2873, District of South Carolina). In June 2023, four defendants in that litigation reached settlements of over \$11 billion related to claims that PFAS chemicals contaminated drinking water around the country. This type of result (and publicity) may pave the way for PFAS claims related to artificial turf, and it seems as though plaintiffs' lawyers already have an eye on it.

One thing is clear — the dispute over the safety of artificial turf is not going away. Further studies are needed to better understand the potential health effects surrounding turf fields and, until we have more clarity, plaintiffs are going to face an uphill battle. On the other hand, as many know, the courtroom sometimes becomes a place where the seeds of science are tested. And with the public voice of the NFLPA speaking out and inspiring other injured athletes to do the same, litigation may be closer than we think.

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