

Protecting Players

The NFL is making changes on and off the field in an effort to protect the health and safety of every player in the NFL.



AP | Damian Strohmeyer

OVERVIEW

The NFL continues its work with the NFL Players Association, NFL Physicians Society and Professional Football Athletic Trainers Society, as well as the numerous experts on the NFL's medical committees, to identify and implement changes on and off the field to help protect the health and safety of every player.



AP | Tom Hauck

"I used to be a part of a great game day medical team for the Tennessee Titans as an Unaffiliated Neurotrauma Consultant. Now I'm working with great medical teams in place for all 32 clubs. Players are our patients and the medical professionals in the NFL are committed to giving them the best care possible."

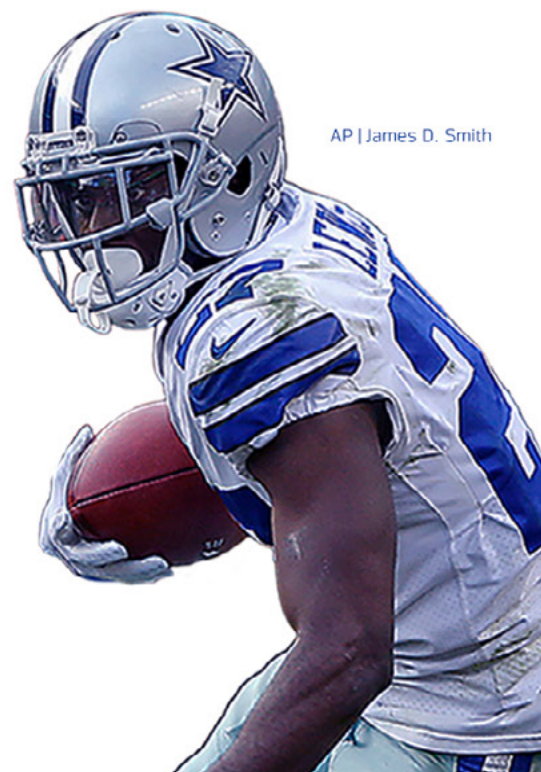
Dr. Allen Sills, NFL Chief Medical Officer

COLLECTING AND ANALYZING A SEASON'S WORTH OF INJURY DATA

Leveraging data to better understand trends in injuries and guide ongoing health and safety efforts

Throughout the year, comprehensive NFL player injury data is compiled and analyzed by QuintilesIMS, an independent, third-party company. Results are then shared with the NFL, the NFL Players Association and the NFL medical and football committees.

Guided by the experts at QuintilesIMS, NFL medical committee members examine the data for trends in how, where and when injuries happen. Their analysis covers all injuries impacting players, including concussions and ACL/MCL tears, and considers how protocols and rules changes are making an impact on player safety.



AP | James D. Smith

Incidence of Reported Concussion 2012–2016

Year	Pre-season			Regular Season			Pre-Season + Regular Season		
	Practice	Game	Total	Practice	Game	Total	Practice	Game	Total
2012	42	43	85	3	173	176	45	216	261
2013	39	38	77	4	148	152	43	186	229
2014	42	41	83	8	115	123	50	156	206
2015	29	54	83	9	183	192	38	237	275
2016	26	45	71	6	167	173	32	212	244

Incidence of ACL Tears 2012–2016

Year	Pre-season			Regular Season			Pre-Season + Regular Season		
	Practice	Game	Total	Practice	Game	Total	Practice	Game	Total
2012	13	16	29	5	28	33	18	44	62
2013	15	10	25	3	33	36	18	43	61
2014	12	10	22	0	27	27	12	37	49
2015	13	16	29	5	25	30	18	41	59
2016	9	11	20	6	30	36	15	41	56

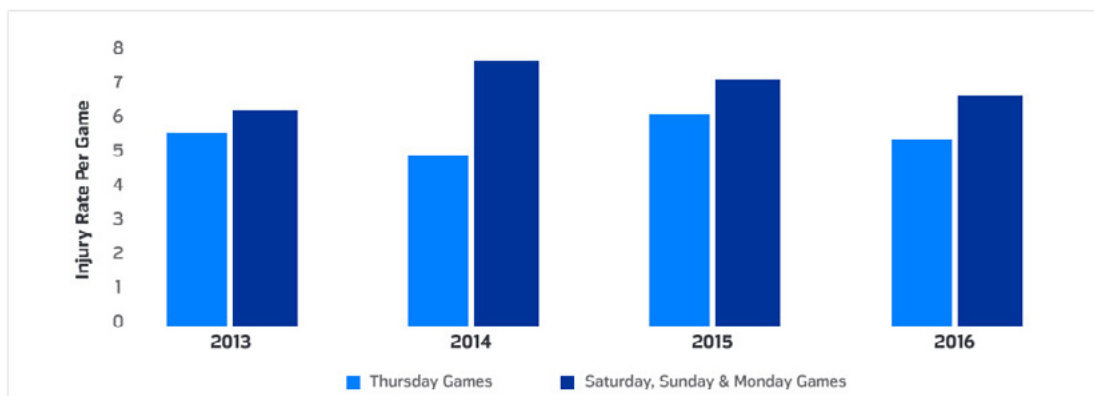
Incidence of MCL Tears 2012–2016

Year	Pre-season			Regular Season			Pre-Season + Regular Season		
	Practice	Game	Total	Practice	Game	Total	Practice	Game	Total
2012	19	26	45	9	77	86	28	103	131
2013	20	25	45	4	85	89	24	110	134
2014	16	22	38	3	98	101	19	120	139
2015	12	41	53	6	111	117	18	152	170
2016	16	21	37	3	103	106	19	124	143

Injuries on Kickoff Returns 2013–2016

Injury Category	Kickoff Returns			
	2013	2014	2015	2016
Concussion	19	10	20	17
Hamstring Strain	27	37	11	13
ACL Tear	1	3	1	4
MCL Tear	3	4	3	5

Injury Rate by Day of Game 2013–2016



"I was encouraged that the numbers are down, but I'm still far from satisfied. As a healthcare provider, I think one of our absolute highest priorities is to get these numbers further down."

Dr. Mitch Berger, Professor and Chairman of the Department of Neurological Surgery at University of California, San Francisco
Member of the NFL's Head, Neck and Spine Committee

INTENSIVE MEDICAL COMMITTEE MEETINGS DURING THE NFL SCOUTING COMBINE

As college prospects are evaluated, leading experts examine the latest research to prevent and detect injuries



Specialists in a wide variety of disciplines relevant to player health and safety volunteer their time to explore groundbreaking research and make recommendations for how the League can continually improve the prevention, diagnosis and treatment of injuries as well as invest in scientific research to promote player health and safety.

The NFL medical committees meet throughout the year to review player health and injury data and determine what policies, programs and protocols should be adopted by the League and encourage areas of scientific research.

Each year during the NFL Scouting Combine in Indianapolis, the NFL medical committees meet to review the previous season and begin their work to prepare for the next year. These experts analyze injury data, discuss statistical trends and identify issues that need further examination or research. Representatives from the NFL Players Association participate on each medical committee and collaborate on these initiatives.

Based on their analysis, these committees offer recommendations to try to advance player safety by continually seeking to improve the prevention, diagnosis and treatment of injuries.

"I've been a team physician for 22 years, and during the past three years I think I've seen a cultural change concerning concussions. Players are more likely to speak up if they believe they have a concussion."

Dr. Robert Heyer, President of the NFL Physicians Society
Team Internist for the Carolina Panthers

NFL Medical Committee Structure

NFL Chief Medical Officer

Dr. Allen Sills

Health and Safety Committee

Dr. Elliott Hershman
(Chairman)

Dr. Andrew Tucker
(General Medical
Committee)

Dr. Robert Anderson
(Musculoskeletal
Committee)

Dr. Ed Wojtys
(Musculoskeletal
Committee)

Dr. Allen Sills
(NFL CMO; Head, Neck
and Spine Committee)

Dr. John York
(Owners' Health and
Safety Advisory
Committee)

Dr. Rob Heyer
(NFL Physicians
Society President)

James Collins
(Professional Football
Athletic Trainers
Society President)

Dr. Thom Mayer
(NFL Players Association)

CONSULTANTS TO THE HEALTH AND SAFETY COMMITTEE

Dr. Jeff Crandall
(Engineering
Consultant)

Dr. Richard Kent
(Engineering
Consultant)

Dr. Nancy Dreyer
(Epidemiologist,
QuintilesIMS)

Dr. Christina Mack
(Epidemiologist,
QuintilesIMS)

Dr. Lawrence Brown
(Drug Policy
Advisor)

Dr. John Lombardo
(Drug Policy
Advisor)

General Medical Committee

Dr. Andrew Tucker
(Chairman)

Dr. Deverick Anderson
(Infectious Disease)

Dr. Doug Casa
(Environmental Medicine)

Dr. Rob Heyer
(NFL Physicians Society President)

Dwight Hollier
(Mental Health)

Dr. Patrick Strollo
(Sleep Medicine)

Dr. Robert Vogel
(Cardiovascular)

Jim Whalen
(Athletic Trainer)

Dr. Thom Mayer
(NFL Players Association)

Head, Neck and Spine Committee

Dr. Allen Sills
(NFL CMO, Interim Chairman)

Dr. Julian Bailes

Ronnie Barnes

Dr. Mitch Berger

Dr. Javier Cardenas

James Collins
(Professional Football Athletic
Trainers Society President)

Dr. Rob Heyer
(NFL Physicians Society President)

Dr. Wellington Hsu

Dr. Russell Lonser

Dr. Elizabeth Pieroth

Dr. Margot Putukian

Dr. Nicholas Theodore

Dr. Thom Mayer
(NFL Players Association)

CONSULTANTS TO THE HEAD, NECK AND SPINE COMMITTEE:

Dr. Robert Cantu
(Consultant)

Dr. Joseph Maroon
(Consultant)

Musculoskeletal Committee

Dr. Robert Anderson
(Co-Chairman)

Dr. Ed Wojtys
(Co-Chairman)

Dr. Asheesh Bedi
(Hip)

Dr. Robert Brophy
(Knee)

James Collins
(Professional Football Athletic
Trainers Society President)

Dr. Mike Coughlin
(Foot and Ankle)

Dr. Rob Heyer
(NFL Physicians Society President)

Dr. Thomas Hunt
(Hand and Wrist)

Dr. William Levine
(Shoulder)

Joe Skiba
(Equipment Manager)

Dr. Kurt Spindler
(Research Methodology)

Dr. Thom Mayer
(NFL Players Association)

GAME DAY RULES

The latest rules changes intended to reduce the risk of injuries

At the 2017 Annual League Meeting in March, NFL clubs voted to make additional rules changes intended to protect the health and safety of players. These recommendations were proposed by NFL clubs and players, and analyzed in detail by the NFL Competition Committee, a group that met intensively after the Super Bowl to analyze film, review injury statistics and discuss player safety with physicians, safety experts and advocates, including the NFL medical committees and the NFL Players Association.

The League has made 47 health and safety-related rules changes since 2002.
Rules changes for the 2017 season include:



Prohibiting the "leaper" block attempt on field goal and extra point plays.



Extending the rule moving the touchback to the 25-yard line for another year.



Giving a receiver running a pass route defenseless player protection.

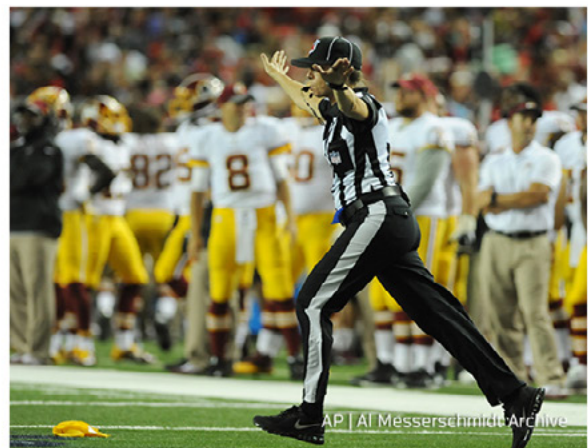


Prohibiting crackback blocks by a backfield player who is in motion, even if he is not more than two yards outside the tackle when the ball is snapped.

Other Changes Seeking to Better Protect Players:



For the 2017 season, the clubs also agreed on certain officiating changes. This includes a point of emphasis on forcible hits to the quarterback—a defensive player cannot "wrap" a quarterback at the knee area or below to bring him down.



On flagrant hits, a player not only may be ejected immediately for a flagrant hit, but now may be suspended by the League office, even in the case of a first-time offender.

GAME DAY CONCUSSION PROTOCOL

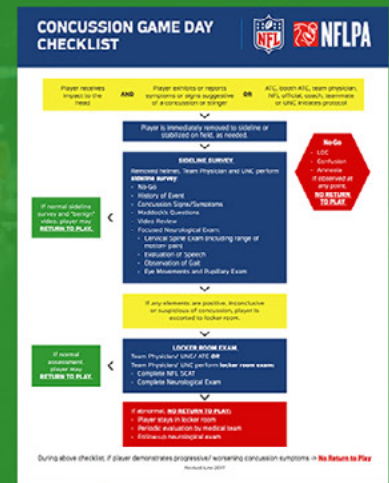
The NFL's concussion protocol is a step-by-step guide for all medical professionals when they are identifying, diagnosing and managing player concussions.

The first version was developed in 2011 by the NFL Head, Neck and Spine Committee, a board of independent and NFL-affiliated physicians and scientists, including advisors for the NFL Players Association (NFLPA). The concussion protocol is reviewed each year to ensure players are receiving care that reflects the most up-to-date medical consensus on the identification, diagnosis and treatment of concussions.

The 2017 NFL Concussion Diagnosis and Management Protocol and the corresponding "Concussion Game Day Checklist" have been adapted from the 2017 Berlin Conference on Concussion in Sport.

To ensure consistent implementation of the protocol, the NFL and NFLPA have developed an enforcement policy. The NFL and NFLPA follow a strict and fair process to investigate incidents and determine appropriate discipline, including club fines and possible forfeiture of draft picks, for clubs that fail to follow the NFL Game Day Concussion Protocol.

A Guide to the: NFL's Concussion Protocol



View the Game Day Concussion Protocol Checklist & Video:

<https://www.playsmartplaysafe.com/newsroom/videos/nfl-head-neck-spine-committees-concussion-protocol-overview/>

GAME DAY HEALTHCARE: PROVIDER TRAINING SESSIONS

Strengthening coordination and care on NFL sidelines

Sideline medical professionals—including members of club medical staffs responsible for the diagnosis and treatment of concussion and the UNCs and Booth ATC Spotters—along with NFL Players Association representatives and League officials met together in New York prior to the season for training sessions.



James Collins, Head Athletic Trainer for the Los Angeles Chargers and President of the Professional Football Athletic Trainers Society (PFATS).

The program included remarks from Commissioner Goodell, team physicians, ATCs, game officials, the NFL Players Association and League executives, and covered a variety of topics including changes to the concussion protocol, the new medical sideline tent, and communications systems and reporting tools.

Dr. Allen Sills, the NFL's Chief Medical Officer, led the sessions to review the latest protocols and train for the upcoming season.

"It's all about being on the same page. That's how we provide the best care for our players."

James Collins, Head Athletic Trainer for the Los Angeles Chargers
President of the Professional Football Athletic Trainers Society

The Team Behind the Team

An accomplished group of healthcare professionals are on hand at every NFL game

There is a specialized squad of medical professionals, including team physicians and athletic trainers, and unaffiliated medical personnel that watches the field for potential injuries and is available to provide immediate care to players at every NFL game. In conjunction with the NFL Players Association, the League has updated the sideline medical technology, which now includes tablets with specially designed applications for injury diagnosis. Every club's medical staff has instant access to their players' complete medical records via the Electronic Medical Record (EMR) system.

ON AVERAGE, EACH TEAM HAS



4 ATHLETIC TRAINERS
Assess and treat player injuries in conjunction with team doctors



2 PRIMARY CARE PHYSICIANS
Evaluate players for general medical conditions and concussions



2 ORTHOPEDISTS
Evaluate and treat players for injuries to the bones and joints



1 UNAFFILIATED NEUROTRAUMA CONSULTANT
Evaluates players for possible head injuries and concussions



1 CHIROPRACTOR
Provides back/spinal adjustments for players and treats muscular injuries

STADIUM MEDICAL TEAM



1 OPHTHALMOLOGIST
Treats eye injuries



1 RADIOLOGY TECHNICIAN
Takes x-rays of injured players at the stadium



1 DENTIST
Treats dental issues



2 EMTS/PARAMEDIC CREW
Transport players to hospital in the event of serious injuries



2 INDEPENDENT ATHLETIC TRAINERS
Notify on-field medical staff of possible injuries from press box. The independent AT spotters can call a medical timeout to stop the game to have a player receive medical attention



1 AIRWAY MANAGEMENT PHYSICIAN
Provides emergency intubation to severely injured, non-breathing players



1 VISITING TEAM MEDICAL LIAISON
Local emergency physician certified to practice medicine in the state where the game is being played. The VTML works with the team to provide access to care, medication and first-rate medical facilities

GAME DAY EQUIPMENT: SIDELINE EXAMINATION TENTS

The debut of an important tool for doctors and trainers to evaluate players after an injury



The NFL continues to transform its sidelines to help better protect players. New this season, NFL sidelines now feature medical examination tents. The mobile tents can help doctors and trainers immediately evaluate players in private following an injury.

Each unit takes just a few minutes to assemble and requires no special tools. NFL teams are required to position tents either inside a team's bench area or adjacent to the bench area.

These SidelineER tents have been added in collaboration with the NFL Players Association and approved by both the NFL Physicians Society and the Professional Football Athletic Trainers Society.

The University of Alabama first used medical examination tents in 2015. Today, SidelineER tents are used by more than 70 college, high school, and professional football teams. They have also been used for other sports, including gymnastics, basketball, golf, lacrosse, rugby, soccer and track.

"The medical tent is not meant to replace the locker room evaluation, but rather to provide a more private and structured place to do examinations of a variety of injuries that are currently done on the sideline."

Dr. Allen Sills, NFL Chief Medical Officer

EXPERT-DRIVEN REVIEWS HELP NFL PLAYERS MAKE INFORMED DECISIONS

Player Equipment: Helmets

The NFL and NFL Players Association, through their respective biomechanical experts, coordinated laboratory testing on helmets available to be worn by NFL players in advance of the 2017 season. The results are displayed on the NFL/NFLPA 2017 Helmet Laboratory Testing Performance Results Poster and are shared with players, club equipment managers, medical and coaching staffs. This is just one component of an NFL player's comprehensive assessment when selecting a helmet; other factors include discussions with the team equipment manager and medical staff, as well as helmet fit, player position and the player's medical history.

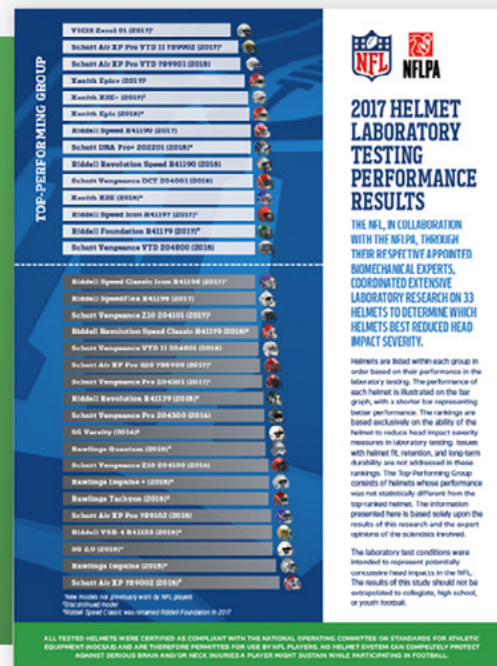
The goal of the testing is to determine which helmets best reduced head impact severity under conditions simulating certain potential concussion-causing impacts sustained by NFL players during games, so the conclusions on helmet performance cannot be extrapolated to collegiate, high school or youth football.

This year's testing involved 33 helmet models available as of March 2017. A survey of helmets used by NFL teams was also conducted to ensure that the helmet models most commonly used by players were included in the testing, including models that have been discontinued but can be reconditioned and worn up to 10 years after the manufacture date. Seven of the 14 helmets in the top-performing group are new this year, including the VICIS Zero1, which was one of three winners in Head Health Challenge II—part of the Head Health Initiative, a four-year, \$60 million collaboration between the NFL, GE and Under Armour. Since these helmets have not previously been worn by NFL players, there is no field experience with these designs.

2017 HELMET LABORATORY TESTING PERFORMANCE RESULTS

View 2017 Helmet Poster

<https://www.playsmartplaysafe.com/resource/helmet-laboratory-testing-performance-results/>



Player Equipment: Cleats



“A lot of people don’t realize that the shoe is an important piece of protective equipment. It’s not just about style or performance. A shoe actually takes loads off of the foot so it can protect it.”

Dr. Richard Kent, Professor of Mechanical and Aerospace Engineering, Biomedical Engineering and Emergency Medicine at the University of Virginia

The NFL’s Musculoskeletal Committee is driving expert reviews of cleats for NFL players. Dr. Richard Kent, a Professor of Mechanical and Aerospace Engineering, Biomedical Engineering and Emergency Medicine at The University of Virginia and Principal Scientist and Consultant for Biocore LLC, leads an annual evaluation of cleats to evaluate the flexion of the cleat, to try to protect from injuries like turf toe, as well as cleat-to-turf evaluations to see how much traction there is under linear and rotational motion.

There are also efforts underway to assist NFL players in choosing not just the best-performing shoe, but also the shoe that’s the right size and the right shape. New laser scanners will soon be found in all NFL locker rooms to scan feet. This kind of fitting procedure can optimize performance in terms of safety.

A COMMITMENT TO FORMER PLAYERS

The League is committed to supporting its players—whether rookies, veterans or retired greats—through a lifetime of health and opportunity beyond football.

Healthcare, education and career benefits are offered to players and their loved ones by both the NFL and the NFL Players Association. Eligible former players receive support throughout their lives from a range of resources tailored to promote their long-term well-being. These include:



Neurological Care Benefit

The NFL has contracted with top medical centers around the country that have special expertise to provide access, evaluation and possible treatment for all eligible retired players.



Long-Term Care Insurance

Players 50 or older are eligible to receive long-term care coverage at no cost to them if they meet the underwriting requirements of the insurance provider and are approved. This coverage provides financial support for eligible players if they require long-term medical assistance at home, in the community, in assisted living or in nursing homes.



Joint Replacement Benefit

The NFL provides as much as \$5,250 per player to cover healthcare items or services directly related to knee, hip or shoulder replacement surgery. In addition, the NFL Player Care Foundation provides grants to assist eligible players in need, up to and including the cost of the replacement surgery.



NFL Life Line

This 24/7 service is a free, independent and confidential phone consultation hotline available to former players, their wives and other family members who may need assistance with matters such as spousal and child safety, mental and physical health, lifestyle and transition in post-NFL life.

Information on additional resources can be found here: <https://www.playsmartplaysafe.com/resource/nfl-benefits>



The NFL Player Care Foundation

Established in 2007, the NFL Player Care Foundation (PCF) is an independent organization dedicated to helping retired players improve their quality of life. PCF addresses all aspects of life by providing programs and assistance with medical, emotional, financial, social and community issues. <http://www.nflplayercare.com>



"We are eager to continue our ongoing commitment to support former players through a variety of programs, from pension and other post-retirement financial benefits to life insurance and savings plans to health benefits and counseling services."

NFL Commissioner Roger Goodell

AP | Aaron M. Sprecher