

Drugging of Football Players Curbed by Central Monitoring Plan, NFL Claims

But a doctor caught giving "speed" calls the program ineffective

A singular distortion of medicine occurred in professional sports in the late 1960's and early 1970's. Physicians, whose normal work is healing the sick, for a time aided the cause of commercialized violence in football. With the sanction of team physicians, some football clubs bought bulk orders of amphetamines, which the players used to make themselves more belligerent.

The story suggests that team values tend to overrule other judgments. And it suggests that team physicians may not resolve some of the present medical controversies in sports (see box) until outside pressures force a decision.

The practice of drugging players with amphetamines was officially banned in 1971 by the business side, not the physicians, of the National Football League (NFL). But there is reason to believe that the problem persists.

The immediate incentive to the 1971 amphetamine ban was monetary. The NFL acted when players sued and won large settlements for drug-related injuries in San Diego, St. Louis, Chicago, and Toronto (the last not being an NFL city, but having a team with many former NFL players).

This special form of drug abuse flourished for a time because drugs were handled casually in the NFL. There have been a few changes in recent years. Amphetamines are no longer among the drugs supplied by the team owners. All official medical purchases must now be reported to NFL headquarters, and physicians have become more alert to possible charges of malpractice. But there remains an important flaw in the system: the trainer. He is a paramedic of sorts who gives the players the routine health care they require. It is he who dispenses the medicine. Although he has no training in pharmacology, he is responsible for controlling the bulk medical supplies purchased in the name of the team physician. He is not well equipped to inform players about the risks of taking the drugs he gives them.

Although there are no reliable records

of football's amphetamine business, there are some clues to how it worked. These were publicized by a number of retired players and by a psychiatrist named Arnold J. Mandell, who himself was caught giving these drugs to members of the San Diego Chargers team. Mandell was dismissed from the team in 1974. In 1976 he published a sensational account of his experiences, titled *The Nightmare Season*. Last fall he was reprimanded by the California Board of Medical Quality Assurance for writing "clearly excessive" amphetamine prescriptions for 11 players. Mandell insists that he has become a scapegoat and that he is being punished now, 5 years after the crime, for speaking openly about a subject the NFL would like to bury. He is appealing the medical board decision to the state superior court.

In September 1978, Mandell put together a quantitative profile of amphetamine use in professional football (see table). The data were presented in a paper called "The Sunday syndrome" at a national amphetamine abuse conference in San Francisco. He concedes that the information is weak because it comes from subjective sources, but claims it is the best available.

Mandell has been a thorn in the NFL's side since 1974, not only because of what

he says and writes, but also because he has a reputable claim to scientific and clinical expertise in drug abuse. A licensed physician, he was the founding chairman of the Department of Psychiatry at the University of California, San Diego. He is a recognized expert on neurochemistry, recipient of more than \$3 million in research grants, author of five books, and collaborator on 224 scientific articles.

Mandell reported that players generally used "speed" only once a week, during the game on Sunday, because they learned that it is more efficacious if not taken daily. Incidence of abuse, he found, was highest among linemen and lowest among quarterbacks. Older players used it more than young ones, defensive players more than offensive players. Mandell tabulated the quantities of drugs used by the Chargers in 1968 and 1969, when the team was still supplying them in bulk. The dosages, calculated for a 40-man squad, came to about 60 mg per player per game in 1968 and 70 mg in 1969—clearly unsafe levels. The highest dose, he estimated, was 150 mg per game. The data probably do not exaggerate the problem, he argued, because surveys tend to underestimate drug abuse.

Amphetamines are used to allay fatigue and disguise pain. Most important for professional football, though, in large doses they have the remarkable capacity to bring on the symptoms of paranoid schizophrenia. They create a fearful rage that makes it easier for the reluctant or tired player to perform. Soldiers who fought in World War II and Vietnam used the drug, Mandell believes, for the same reasons.

In a written self defense filed with the California health authorities, Mandell speculated about the chemistry of the drug: "The fact that the incidence of amphetamine abuse seems to increase with the age of the player seems related to the fact that certain brain chemicals, particularly norepinephrine—an amphetamine-like chemical—naturally decrease with age." He concluded that there is greater

Incidence of amphetamine use by professional football players interviewed. [From Arnold Mandell, "The Sunday syndrome," Proceedings, National Amphetamine Conference, San Francisco, September 1978, in press]

Position	Yes	No	Occasionally	Dose range (mg per Sunday)
Quarterback	1	8	0	10 to 15
Wide receiver	6	5	2	5 to 15
Offensive line	10	4	0	15 to 105
Running back	8	3	2	5 to 25
Tight end	2	2	1	10 to 30
Defensive line	9	0	1	30 to 150
Linebacker	5	4	1	10 to 60
Defensive back	7	4	2	5 to 20
Totals	48	30	9	5 to 150

pressure on the older player "to use amphetamine in order to generate the state of rage required to play his position."

Given the violence of the game, it is not surprising that players might find the drug useful. Even players who understand the risks may decide the benefits outweigh them. Perceptions play an important role in this. For example, if players believe that members of an opposing team are amphetamine users, there may be an irresistible temptation to match the opponents drug for drug.

The NFL enforced its new rule for the first time in 1974 against the Chargers, fining the coach, the team manager, and the owner, and ousting Mandell. The year before this, the league had begun a major drug education program and asked the clubs to begin sending copies of all their medical supply order forms to NFL headquarters. This drug control and monitoring system, according to the man who supervises it, did not win full compliance until the 1975 season.

The San Diego team was the only one ever disciplined, and if the NFL is to be believed, it was the only one with a serious drug problem. The source of the problem, in the NFL's view, was Mandell. According to Jack Danahy, who investigated the case as chief of security for the NFL, some San Diego players referred to their psychiatrist as "the benny boy," meaning the one who brought the bennies, or amphetamines. Mandell was dismissed after the NFL accused him of giving out 1750 pills (5 to 15 mg each) in a 3-month period. Two players received 400 pills each.

Mandell concedes that he wrote large prescriptions, but argues that he did it in the belief that it was the correct way to begin treating people with a long-term addiction. All of his "patients" had been using amphetamines as a professional crutch for at least 9 years. The problem existed before he arrived, he claims, and he insists that it continues today. In his written brief for the California authorities, Mandell claimed that the "Sunday syndrome" was "nurtured and grown by the club managements which had always in the past dispensed amphetamines at games to whoever wanted them. The players saw the drug as a work drug; they did not think they were abusing it." When the NFL banned the use of amphetamines, players turned to "street drugs" containing strychnine and heavy metals. The players also became secretive. Mandell says he wrote the big prescriptions to protect the players from the impure street drugs and win their cooperation in a program of self-reform.

NFL officials, including Danahy and

chief counsel Jay Moyer, scoff at this explanation. "It's ridiculous," Danahy said. "He was writing prescriptions that were out of this world. He should have his license to practice medicine removed." Moyer said Mandell did not tell any of the other team physicians that he was starting a drug maintenance program for the Chargers, and that therefore he was "deeply enmeshed in a violation of our program after the program had been established."

Many people like Mandell, who have worked with drug-dependent patients, believe that prohibitions merely drive the problem underground, where it festers, and that the best way to treat an abuse problem is to bring it into the open. The NFL did not care for this idea; it certainly did not care for Mandell. In rejecting the maintenance and therapy technique, the NFL avoided a public relations problem. The officials may now say that amphetamines have been banished, and no one is likely to produce evidence to the contrary. Yet at the same time the league forfeited some credibility, for it is impossible to confirm or refute Mandell's charges without good data, and the data cannot be found.

The problem persists, although its magnitude is unknown. Mandell points out that reported injuries are increasing and suggests that drugs may be the cause. But there are alternative explanations for the injuries. Mandell also believes that the pattern of abuse he described is "normative" and "systematic" in professional football. The competitive advantage that amphetamines give the player by inducing analgesic rage is "so enormous," according to Mandell, that "there is no such thing" as ending the problem with education and prohibition.

Charles Tipton, a physiologist at the University of Iowa and a member of the American College of Sports Medicine (ACSM), said that it was "common knowledge in sports medicine circles" that amphetamines were "rather extensively" prescribed for players until recently. But he did not know whether it is still being done. If so, he said, "you're going to have a hard time proving it." If team physicians are asked to discuss the practice, he said, "you're going to find them to be very quiet."

Edward Percy of the University of Arizona, another member of the ACSM and an expert on drug abuse in sports, said, "It is my impression that they [amphetamines] are used quite a bit in professional football." As the former team physician for the Montreal Alouettes, he observed players who seemed hostile,



clumsy, and bleary-eyed because they used amphetamines during games. There was "no question" about this, he said: "I think they've controlled it a good deal in professional baseball, but unfortunately in football it's still being used."

Kenneth Clarke, dean of the University of Illinois College of Applied Life Studies and another specialist in drug abuse among athletes, said that his research suggests the problem is "pocketed." By that he means that some teams are persistent amphetamine abusers and some are not. Trouble begins, he said, when there is a gung ho salesman on the team who believes in the efficacy of the drug and peddles it to others. There is no epidemic of abuse, he thought. He said he would not accept Mandell's generalizations about the NFL based on his experience with the Chargers, but if Mandell's description of the problem is correct, he agreed that it is not the sort that can be banished by fiat.

Several players who spoke to *Science* claimed, as the NFL does, that amphetamine abuse is passé. One Redskins line-man gave a typical response: he said he had heard of players on other teams who used amphetamines, but he did not and he had no friends who did. Stanford Lavine, team physician for the Redskins, said simply, "I don't talk to reporters; that's my policy—OK?"

Yet one observer of unchallengeable authority told a story suggesting that the drug is still regarded as useful. The events took place in late 1978. One of the important teams in the league, which for a time did quite well last fall, went on an extended losing streak. It was in danger of losing the top rank in its division and finding itself excluded from the end-of-season playoffs. Four players were so upset that they obtained some ampheta-

Medicine That Athletes Overuse

Drugs and medical procedures that do not pose a risk in normal circumstances may become hazardous when used casually in sports. They may also give the user an unsporting advantage. A few controversial items are as follows:

- Butazolidin or "bute" is forbidden for use in racehorses in some states, but it is the number one drug, in terms of quantity consumed, in the NFL. It is used as an anti-inflammatory agent to reduce pain and swelling in joints and ligaments. Racing commissions forbid it because its effects are not entirely predictable. Horses with sore knees run better on it, but their knees sometimes give way unexpectedly. Although bute is the 41st drug by per capita consumption in the United States, it is at the top of the official list for the NFL—at an average of 24 to 40 unit doses per player per season. A unit is a pill of 50 or 100 mg. Edward Percy, a member of the American College of Sports Medicine (ACSM), said it is used as commonly as aspirin among football players, not so much because it is needed but because it is available. Chronic use of bute can cause gastric problems, ulcers, nervous disorders, hepatitis, nephritis, aplastic anemia, leukopenia (loss of white blood cells), and, according to some reports, leukemia. It is doubtful that a football player would become a chronic user (arthritis sufferers are more likely victims), but the fact remains that bute is casually controlled, given its potency.

- Cortisone is another anti-inflammatory agent used frequently in football and basketball, although not as commonly as Butazolidin. The NFL's medical consultant estimated that cortisone is used one-tenth as often as bute. Like bute, it can cause gastric disorders; it may also increase susceptibility to infections, and cause osteoporosis (making for fragile bones). Recent studies have suggested that it may retard the healing process in certain ligament injuries.

- Pain-killing compounds such as Xylocaine and procaine are the lubricants of football. They are used often when pain is localized, but not in a joint. The chief hazard associated with them is that they may mask pain and permit the athlete to put stress on injured limbs when they should be healing. A football player in Washington, D.C.—Mike Thomas—made the news last fall when he was asked to take an injection of Xylocaine or cortisone (no one will discuss it now) in order to continue playing with a fractured ankle. When he refused, he was berated in newspaper columns by his colleagues and employers.

- Anabolic steroids are used by football players, weight lifters, and others to increase weight and muscle bulk. East German women gymnasts allegedly use these drugs to delay adulthood. According to several specialists, including Daniel Hanley, a member of the U.S. Olympic medical commission, abuse of steroids is on the rise. This is one drug controversy on which the ACSM has spoken out, although not loudly enough to suit some of its members. In a restrained warning issued last July, the ACSM advised physicians that anabolic steroids seem to do little to aid athletic performance, but prolonged use may reduce the output of testosterone in men and may cause liver disorders, including a form of liver cancer. In adolescents, one physician pointed out, it may retard or stop the process of bone growth.

- Blood-doping is the latest fad in performance-boosting medical techniques. It seems to have won some popularity in Scandinavia, and reports suggest that its use in North America is rare but that interest is growing. In this procedure, a physician removes 450 to 1200 ml of blood from an athlete about 3 weeks before an important event. The plasma is reinjected, and the red cells are stored in a cooler until the day of the event. In the interim, the athlete presumably replenishes his or her supply of red cells. The physician then reinjects the stored red cells before the sporting event. The theory is that this will give the athlete a greater capacity to consume oxygen, thereby increasing endurance. Blood-doping presents no great hazards other than those always associated with transfusions, yet it raises another question. Should blood banks and other medical technology be used for apparently frivolous experiments in athletics?—E.M.

mines and let on that they would use them in the next game. An official who learned of the plan was at a loss to know what he should do. That was as far as the story went. There was no happy ending.

The only certain way to stop drug abuse and refute charges such as those made by Mandell is to require players to submit to urinalysis. Robert DuPont, the former director of the National Institute on Drug Abuse, agreed that it is foolish to claim that an addiction problem has been cured when no objective data are available.

Moyer, the NFL counsel, said the league is not persuaded: "We do not believe the problems of amphetamine usage are severe enough to warrant the kind of difficulties we would encounter if we tried to institute urinalysis." The NFL's problem is that the players have made it clear they would regard mandatory testing as an invasion of privacy. It would be an unpleasant issue in contract negotiations, and for this reason neither side wishes to bring it up.

However, the league did hire a drug consultant in 1973, Walter Riker, chairman of the pharmacology department at the Cornell University Medical School. He receives copies of every team's medical supply order form, and he is supposed to receive copies of every prescription written for NFL players. He does not see all of the latter, so there is a gap in his monitoring system. Nevertheless, Riker believes that he knows what is being done in the clubs. He knows precisely which teams are using a normal amount of pain-killing procaine or cortisone and which are using three times that amount. (He does not share the information.) The system, he claims, gives him an accurate estimate of where the trouble lies. When he notices an anomaly—for example, an unusually high usage of codeine-laden Empirin-3—he calls the team physician and trainer and chats about it. In this way he lets them know that someone is watching.

Riker said that the use of strong drugs has declined dramatically since he began monitoring them in 1973. In addition, he claimed to have a quiet way of checking on amphetamine abuse, a technique he did not discuss. This, and his faith in the team physicians and trainers, persuades him there is no pattern of amphetamine abuse in the NFL.

With Riker's program, the league established officially that it would not tolerate drug abuse or medical malpractice on its teams. But aside from making this policy clear, it has done relatively little to improve the quality of drug control at the players' level.—ELIOT MARSHALL