

station. His mother works for an optometrist. The Wishards are a typical hard-working, middle class Midwestern family who are well-liked and very active in the community.

When Wishard was injured 11 years ago, the family was not prepared for the hospital bills, the special care required, the anxiety that followed or the weeks, months, and years of learning to adjust to a new kind of life.

Tragedy strikes

On Oct. 15, 1975, the Dakota High School freshman/sophomore football team was going through a normal

Some people are beginning to question whether the satisfaction of making a desperation tackle or scoring a touchdown is really worth the risk of becoming a paraplegic or quadriplegic.

practice session.

Wishard recalls the day vividly.

"We had just finished our calisthenics on the Dakota practice field and our coach, Jeff Clark, was conducting what was called the 'hamburger' drill," he recalls. "As the defensive player, I was supposed to jump up (from the ground), turn around and tackle the offensive player. On my first attempt, I slipped on the hard, bare soil surface and by the time I recovered the offensive player had gotten passed me."

The coach told Wishard to try again.

"All I can remember from my second attempt is falling to the ground in pain and calling for the coach. I laid on my back while my helmet, socks and shoes were being removed. I knew something serious was wrong and I think the coach and team manager knew I had a broken neck. When they ran a pencil along the bottom of my feet to see if I had any sensations and I didn't, they called an ambulance."

In the next few hours, he went from hospital to hospital. Wishard re-

members seeing his mother at Freeport Hospital.

"When I awoke again, I was being transported to Rockford Memorial Hospital. During the ride, the shock subsided and I hurt real bad. My father was waiting at the Rockford hospital, and I'll never forget the shocked expression on his face. He was as white as a ghost," recalls Wishard.

Wishard soon learned that he had a broken neck, several fractured cervical vertebrae and would probably be a quadriplegic the rest of his life.

Wishard's injury seemed to bring more parents out to Dakota football games during the fall of 1975—perhaps because parents became more concerned or aware of their youth's welfare. They might have wanted to make sure their sons were receiving adequate instruction on the basic football fundamentals.

No better today

The maintenance of football fields in the Northwest Illinois Conference has not been upgraded or improved significantly since the Wishard injury.

Eleven years later, inspection of the Dakota High School football practice and game fields reveals hard, compacted surfaces, several grassy and broadleaf weeds and a maintenance program geared to a weekly mowing. Watering, fertilizing, aerifying, weeding, and the introduction of new turf-type grasses is apparently non-existent.

Minor injuries, and some serious such as broken legs or arms, twisted ankles, broken knuckles and knee injuries continue at Dakota and other conference schools because of rough terrain and poor quality turf.

Two prominent researchers feel that catastrophic football injuries may never be completely eliminated. But a united effort involving coaches, players, administrators, researchers, physicians, trainers and equipment manufacturers is required to identify the problems and then take the necessary preventative measures.

Hope for tomorrow

The purpose of the Sports Turf Manager's Association (STMA) is to provide knowledge and education to improve athletic field conditions throughout the United States, Canada and other countries. STMA is making a concerted effort to get grounds supervisors and personnel to become

members and to join forces to combat unsafe athletic facilities everywhere by providing quality fields for the youth and athletes.

STMA would like every athletic field manager to come together to solve problems, learn about new ideas and techniques, and find ways to further reduce severe athletic injuries.

STMA has long advocated that the easiest way to reduce injuries is to provide a well-turfed practice facility and game field. Selecting and using the adapted turfgrass species, fertilizing often enough and correctly, providing adequate water for the turfgrass plant, mowing at the correct height, and aerifying and topdressing to encourage deeper roots, a more resilient surface and a non-compacted soil medium can go a long way toward reducing sports-related injuries.

WT&T

Preventing, not promoting, the injury

by Ken Kuhajda, managing editor

A high school football player suffers a serious injury; not an abrasion or a bump. He tears up his knee.

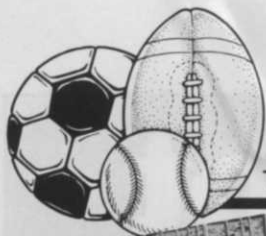
His parents in the stands don't give a second thought to the condition of the natural grass field. After all, their son is hurt.

But would that player have been injured so seriously if the field were in better condition?

Data on whether a field's condition contributes to an injury is hard to find. At the playground, grade school, and high school levels, there haven't been many studies conducted.

"It's one of those things people just don't want to talk about," says Dr. Eliot Roberts, director of The Lawn Institute. "If there is a tie-in between field conditions and a young person's injury, it's not discussed much. The school systems just have too many other problems."

Adds Dr. Bill Knoop, Texas Agricultural Extension Service turfgrass specialist: "Some people don't want to document the relationship between field conditions and injuries because of the liability question."



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available to sports turfgrass organizations by writing: Dr. Fred V. Grass, Chairman STTAGE Committee PO Box AA College Park, MD 20740

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A nonprofit organization dedicated to advancing turfgrass as a sound practice in enhancing the health and safety of the world through turfgrass, and to supporting research, education and research in turfgrass development and management.

Educating turf managers is one of the goals of the Musser Foundation. Ads like this help.

However, one well-known study suggests that yes, the field's condition does make a difference in the number and severity of injuries.

Revealing research

Penn State University performed a study in 1983 that found roughly 20 percent of all football injuries (in four categories) sustained by Pennsylvania high school players could have been "prevented or perhaps rendered less severe by more favorable field conditions."

Penn State extension agronomist Dr. John Harper II notes that most of the injuries judged to be related to field conditions involved the lower extremities (the hip/leg, knee, and ankle/foot).

The study concludes: "The results indicating that one of five injuries may be field-related should be an incentive to construct and maintain high quality playing surfaces."

Another study had similar findings. Carol Ann Comly studied 10 Pennsylvania high schools in 1981 to determine the specific cause of some 35,000 injuries recorded at the schools. (See Chart, p. 26.)

Dr. James Garrick, director of San Francisco's Center for Sports Medicine at St. Francis Hospital, agrees that field condition does make a difference. But he adds an asterisk.

"I suspect it does, but it's awfully difficult to sort out." Garrick suggests there's a give-and-take trade-off on all surfaces.

"People complain about fields being too hard, but a player's cleats don't get down into the hard field so there's less locking and less twisting-type injuries," he says. "But there are problems with bumps and bruises so it's sort of a trade off. By the same token, a good grass field will allow the cleats to escape if you put pressure on the foot," thereby causing fewer injuries, he says.

However, Garrick notes, "I think most people will agree that a well-maintained natural field is the best surface."

Practice fields worse

There's little doubt that improper maintenance is contributing to the problem. Harper and colleagues compared playing conditions on practice and game fields at 12 secondary schools in Pennsylvania and found practice fields were used far more yet maintained far less.

The study reported just 25 percent of the practice fields and 75 percent of the game fields were aerified to relieve compaction.

Little fertilizer was used on either practice or game fields. Not one school reported using herbicides on its practice field.

"We know how to grow the grass to provide the reliable footing needed by athletes," says The Lawn Institute's Roberts. "The bad fields can be corrected without a lot of expense. The fields just need to improve a little each year."

Free information

In Texas, Knoop provides many high schools with football field maintenance information at no charge. He says the injury rate of participating schools has dipped.

"The testimony of the coaches I've worked with indicate that as their fields improve, the number of injuries decrease," says Knoop. "I have several coaches who've not had serious injuries in years because of the good field conditions. Some of the coaches at smaller schools tell me they couldn't put a team on the field because they had so many injuries before they went on our program."

"There's no doubt in my mind" that a field's condition plays a role in injuries, says Comly, now a physical therapist. "As a (athletic) trainer, one of the first things you do is go out onto the field ahead of the team and look

for potential trouble spots," she notes.

Adds Roberts: "It's my strong opinion that field condition is a major factor in injuries. The evidence is there, but the problem is not being able to document."

Slow-moving research

Roberts began researching the relationship of good turf to fewer injuries in 1964 while at Iowa State University. Since that time, there have been few studies on the subject.

There is much research available on the increased injury rate on synthetic surfaces. Never has a study revealed fewer injuries sustained on synthetic surfaces, says Garrick.

(The average career span of an NFL player has dwindled from 4.2 to 3.6 years, according to a survey by the NFL Players' Association. Seventeen of the 28 teams play on synthetic turf.) However, research on the conditions of natural turf fields and injuries has moved at a snail's pace. "It's been going on a long time but not much progress has been made. We need to educate the people taking care of the fields, we have to convince people that we need improved fields," says Roberts.

"Even if you eliminate just one percent of the injuries, it's worth it." WT&T

For more information... National Sports Turf Council Musser Int'l. Turfgrass Found. Fred Grau, Ph.D., chairman P.O. Box AA College Park, MD 20740 Sports Turf Managers Association Kent Kurtz, Ph.D., exec. secretary 1458 North Euclid Ave. Ontario, CA 91764 The Lawn Institute Eliot Roberts, Ph.D., exec. dir. P.O. Box 108 Pleasant Hill, TN 38578 Financial Guardian Insurance Jim Leatzow, senior vice-pres. 700 E. Butterfield Rd., Suite 100 Lombard, IL 60148 1-800-323-3355. The booklet Athletic Fields—Specification Outline, Construction and Maintenance is available from: John C. Harper II, Ph.D. Department of Agronomy Penn State University University Park, PA 16802