

## TURF RELATED ATHLETIC INJURIES

Jeff Monroe  
Head Trainer, Intercolligiate Athletics  
Michigan State University

A review of the literature indicates that in December of 1984, Harper et al., reported in the Pennsylvania State University of Agricultural Bulletin an article entitled "Turf Management Athletic Field Conditions and Injuries in High School Football"<sup>1</sup>. Ten high school's football programs reported turf related injuries, any possible turf related injuries, and non-turf related injuries. This was done with the help of certified athletic trainers who did injury evaluation and recording for all ten schools. In addition to the injury recording, the playing and the practice fields were examined for different characteristics in August and then again in November. The results of the study have indicated that of 210 reportable injuries, 5.7 percent were directly field related, 15% were possibly field related, for a total of 20% of possibly field related injuries.

A major difference was noted in the quality of game and practice fields. Maintenance practices were found to be much higher for game fields than for practice fields and the wear the fields received was significantly higher for the practice fields than for the game fields.

O'Donoghue, in The Treatment of Injuries to Athletes<sup>2</sup> talks about field conditions which are optimal. He indicates level, firmly sodded fields, that are carefully screened for debris, such as glass, stones and other foreign materials are the best for practice and play. He specifically talks of the removal of small imperfections, which often take the form of small holes, or grooves and may provide potential injury to the lower extremities. Ample sideline room is also imperative for all sports. The style of equipment should be safe, with extra padding on removable objects, and on goalposts and fences that are too close to the fields.

The condition of the playing surfaces may also lead to chronic overuse injuries. Shin splints, a condition of the lower leg, are often blamed from hard fields that have not been properly aerated or watered. This may also lead to stress fractures of the foot and leg bones because of an inability for the body to absorb all of the shock.

Garrick and Requa, in the 1981, "Physician and Sports Medicine,"<sup>3</sup> reported that 60% of athletic injuries occurred to the lower extremities. This astounding figure should lead us to manage our playing surfaces with great care since it has been shown that there is a direct relationship between the playing surface and injuries.

Michigan State University uses several approaches to maintain athletic fields and to prevent athletic injuries. Foremost among these is careful attention to the contour of the playing surfaces. Each field is inspected weekly to ensure that no ruts or holes or foreign debris is present before practice or games. Particularly this is important, after home football games where large crowds of 70 thousand plus attend. Parking for these people is usually done on practice fields and some game fields. If the weather is inclement, the playing surface may be damaged. Consequently, the

careful attention that is given by the maintenance workers is appreciated by the coaches. Another technique used to insure good practice facilities and game fields is the rotation of the practice area during practice sessions. Coaches are instructed to use alternating hash marks, end zones, goal areas and face off areas, during their practice routines. This promotes even wear to all areas of the practice field and game fields. Practices are also held on artificial surfaces during severe inclement weather to protect the turf areas.

Remember, that injuries and playing surfaces do have a relationship. Good awareness to playing surface, maintenance and practice techniques may help to prevent significant turf related injuries.

#### Bibliography

1. Harper, et al., December 1984. "Turf Management, Athletic Field Conditions and Injuries in High School Football" progress report. The Pennsylvania State University College of Agriculture, Agricultural Experiment Station, University Park, Pennsylvania.
2. O'Donoghue, M. D. 1984. Treatment of Injuries to Athletes, 4th edition, W. B. Saunders Company.
3. Garrick, Requa, February 1981. "Medical Care and Injury Surveillance in the High School Setting", The Physician and Sports Medicine. Vol. 9, No. 2, 1981.