

Injuries Uncommon in Youth Football, Mayo Clinic Study Reports

ROCHESTER, MINN. -- A Mayo Clinic study of youth football showed that most injuries that occurred were mild, older players appeared to be at a higher risk and that no significant correlation exists between body weight and injury.

The study, which appears in the April issue of Mayo Clinic Proceedings, found that the data for athletes grades four through eight indicated that the risk of injury in youth football does not appear greater than the risk associated with other recreational or competitive sports.

"Our analysis showed that youth football injuries are uncommon," said Michael J. Stuart, M.D., a Mayo Clinic orthopedic surgeon and the principal author of the study.

Dr. Stuart and his colleagues studied 915 players aged 9 to 13 years, who participated on 42 football teams in the fall of 1997. Injury incidence, prevalence and severity were calculated for each grade level and player position. Additional analyses examined the number of injuries according to body weight.

A game injury was defined as any football-related ailment that occurred on the field during a game that kept a player out of competition for the remainder of the game, required the attention of a physician, and included all concussion, lacerations, as well as dental, eye and nerve injuries. The researchers found a total of 55 injuries occurred in games during the season — a prevalence of six percent. Incidence of injury expressed as injury per 1,000 player-plays was lowest in the fourth grade (.09 percent), increased for the fifth, sixth and seventh grades (.16 percent, .16 percent, .15 percent respectively) and was highest in the eighth grade (.33 percent).

Most of the injuries were mild and the most common type was a contusion, which occurred in 33 players. Four injuries (fractures involving the ankle growth plate) were such that they prevented players from participating for the rest of the season. No player required hospitalization or surgery.

The study's authors said risk increases with level of play (grade in school) and player age. Older players in the higher grades are more susceptible to football injuries. The risk of injury for an eighth-grade player was four times greater than the risk of injury for a fourth-grade player. Potential contributing factors include increased size, strength, speed and aggressiveness. Analysis of body weight indicated that lighter players were not at increased risk for injury, and in fact heavier players had a slightly higher prevalence of injury. This trend was not statistically significant. Running backs are at greater risk when compared with other football positions, the researchers reported.

Other authors who contributed to the study include: Michael A. Morrey, Ph.D., Aynsley M. Smith, RN, Ph.D., John K. Meis, M.S., all from the Mayo Clinic Sports Medicine

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