

# SPORTS

# INSURANCE BLOG

SPORTS INSURANCE RISK MANAGEMENT ADVICE  
AND COMMENTARY ON CURRENT TOPICS OF  
INTEREST

## Should Weight Limits Be Required in Youth Football?

Let me rephrase the issue in its most basic terms: : Is it fair to deny or limit participation for larger than normal kids in the name of safety?

The answer is “no”, there is no existing evidence that “unlimited” classes are riskier than “weighted” classes.

Everyone has heard anecdotal stories and personal observations from administrators, coaches, and parents about the occasional urban legend who is significantly heavier, stronger, and faster and who is the source of multiple injuries to much smaller players. I’m not saying that these stories are not credible, but instead, it is best to look to scientific studies on this topic to determine if these instances are isolated vs. common and to determine if the injuries are more severe than normal.

There is a compelling scientific study by the Mayo Clinic that is dead on point for answering these questions. As you are probably aware, the Mayo clinic has a stellar reputation in the medical community. In other words, this was no “Mickey mouse” study, it was based on pure science.

I’m in the business of designing injury surveys and analyzing their results and I was blown away by their methodology, statistics, data collection techniques, and attention to detail. The 1997 Mayo Clinic study of a large youth football league was based on 915 players ages 9 to 13 in grades 4 through 8. All of the teams were grouped by grade. Weight categories were not used. The critical findings were as follows:

\* A total of 55 injuries occurred during games for the entire season for an incident rate of 5.97%

\* Most injuries were minor with most being bruise/contusions which accounted for 60% of total injuries. 7% of total injuries were bad enough to prevent the player from participating for the rest of the season. These were all ankle fractures.

\* The risk of injury for an 8th grader was four times the risk of injury for a 4th grader. Therefore, the number one risk factor for injury is age. The higher the age, the higher the chance of injury and as a result, correct age groupings are critical to limiting injuries.

\* To the surprise of many, heavier players sustained more injuries than light players. Therefore, specific weight groupings would not appear to protect lighter players.

The next question is how do other experts interpret data from this study? Dr. Jeff Webb who is an affiliate of the prestigious American Sports Medicine Institute had the following comments on the Mayo Clinic study:

\* As to why lighter players are not injured more frequently than heavier players, he cited the old formula that force = mass x velocity.

\* He stated that older players get hurt much more often because they run faster and hit harder.

\* Youth players who are larger don't necessarily impact with more force if they aren't fast and strong.

\* The number one determining factor of speed and strength is age maturity and not weight.

\* He concluded that lighter players would likely be safe within their own age group.

It is important to note that neither 6th/7th grade middle school, JV, high school, college, nor pros find it necessary to divide by weight classes. Could you imagine the outrage if these groups were told that they needed to move towards weight classes?

If 6th/7th grade middle school and 8th/9th grade JV teams are not required to have weight categories for safety purposes, why should they be forced on the same age groups in non scholastic youth football?

Also, why should the age groups under 6th grade have weight categories forced on them since very few injuries actually occur in these age groups anyway according to the Mayo Clinic study?

There are other reasons why unlimited classes are superior to weighted classes:

- \* Many communities are too small to draw enough participants to field teams if restrictive weight categories are used.
- \* We are in the middle of an obesity epidemic as referenced by our keynote speaker and too many kids who are overweight may have to sit out and not get much needed exercise resulting in health problems down the road.
- \* Specific weight categories may force youth to drop weight in order to make the weight category and the result can be very unhealthy and even dangerous resulting in increased liability potential. On popular technique for dropping weight involves limiting the intake of fluids. This can lead to dehydration which is the number one cause of heat illness.
- \* Weight categories that allow younger / heavier players to move up to an older age group can place the younger heavier athlete at increased risk of injury since the primary injury factors are age related based on speed and strength.
- \* Weight categories that allow older / lighter to move down to a younger age group can place the younger age group participants at a greater risk due to the greater age related speed and strength of the older player.
- \* Both American Youth Football and Pop Warner Football, the two largest youth football organizations in the US, offer unlimited weight classes. Therefore, a standard has been set for their acceptability.

Summary: I strongly believe that each community should choose based on its own needs whether to use unlimited, weighted, or modified classes. Should they choose to use unlimited classes, they can do so with confidence that there is no scientific basis to suggest that they are riskier than weighted classes.

Age groupings and not weight groupings are the best predictor of injuries and safety in youth football.



## **Injuries Uncommon in Youth Football, Mayo Clinic Study Reports**

Mayo Clinic in Rochester

Thursday, April 11, 2002

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 Center and Cedric J. Ortiguera, M.D., a Mayo Clinic orthopedic surgeon in Jacksonville, Fla.

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# American Youth Football & Cheer

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## **American Youth Football Urges Youth Against Unhealthy Weight Reduction**

As a former Captain of my High School and University Wrestling Teams and as a former Wrestling Coach I know the weight reduction issue first hand. While the media and infomercial's proclaim any weight loss as healthy. The only sane approach to weight loss is to eat and drink less calories than you burn daily.

Your child may be asked to lose weight fast (during their growth years) for the single purpose of "making the weight to play". All sorts of dangerous methods are used to "**sweat off the pounds**". It is the opinion of most physicians that dehydration techniques are harmful to the health of athletes. Evidence of this can be found with the sport drink companies that make millions by offering to balance a body's electrolytes with their products.

While obesity is a national epidemic - **the loss of fat occurs over an extended period of time by eating healthy meals and staying physically active.** Fast weight loss through dehydration techniques drains the body, mind and spirit of growing youngsters.

**American Youth Football encourages young athletes to avoid sudden weight loss so they may develop to their full potential physically, mentally, and socially.**