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Football Coaches' Guide to Heat Illness and Hydration

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Fluid replacement is an important nutritional concern for football players. Approximately 60% of body weight is water. As a football player trains and competes, fluid is lost through the skin as sweat, through the lungs as he breathes and as urine. If fluid is not replaced at regular intervals during a game or training it can quickly lead to dehydration.

Football Gear Is For Protection, Not Cooling

Football players are at increased risk of dehydration in part because of their equipment needs. Football gear is designed for protection, but the necessary padding does not allow for quick evaporation or cooling. It's not uncommon for players to lose anywhere between 5-15 pounds during a game or workout, especially during two-a-day practices.

In addition, a player's helmet substantially reduces the body's ability to release heat, thus increasing body temperature and the risk of heat illness. Players that are dehydrated will fatigue earlier, lose coordination skills and have a higher risk of heat exhaustion, heat illness or even heat stroke. If a football player wants to maximize his athletic potential he should make sure that he is well-hydrated throughout the game or practice.

What Fluids Should Players Consume?

Research shows that a sports drink containing 6% carbohydrate (14g/8 oz serving) can be absorbed in the body as rapidly as water. But unlike water, a sports drink can provide energy to the working muscles, delay fatigue and improve performance. Players that consume a sports drink can maintain higher energy levels at a time when energy stores are becoming depleted. Players who dilute sports drinks don't get enough carbohydrate to maintain energy levels. Also, drinking beverages that have a high carbohydrate level, like soft drinks and some fruit juices, can slow fluid absorption.

Don't Wait Until You're Thirsty

- Thirst mechanisms don't kick in until a player has lost about 2% of his body weight as sweat. In other words, a defensive player who weighs 250 pounds may lose 5 pounds before he even becomes thirsty. Unfortunately, this small amount of fluid loss can hurt performance skills and the player may be fatigued before he starts to drink!
- Players often drink to quench their mouth thirst. If a player only drinks to quench his thirst he may be replacing only 1/2 to 2/3 of the fluids lost. As a result, he will start the next practice or workout in a state of dehydration. Football players need to drink throughout the day whether they are thirsty or not.

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Fluid Intake Recommendations

- Players should have unlimited access to fluids (sports drinks and water) throughout the game or workout.
- Weigh players before and after practice. For each pound lost during the workout, an athlete should consume at least 20 oz of fluid. If this recommended amount of fluid isn't consumed, the player must replace 80% of lost weight by next practice to avoid dehydration.
- Check the color of the urine. If it is a dark, gold color (like apple juice) the player is already slightly dehydrated. If it is very pale yellow (like lemonade) then he is on the way to being hydrated.
- Players should consume 17-20 oz of fluid two hours prior to the start of the game or workout.
- Players should drink during exerxise to minimize losses in body weight but should not over drink.
- Avoid carbonated drinks. They can cause bloating and may decrease the amount of fluid consumed.
- Avoid caffeinated beverages and alcohol as they cause the body to lose body fluids.