HEAT ILLNESS INFORMATION SHEET

WHAT IS HEAT ILLNESS AND HOW WOULD I RECOGNIZE IT?

Intense and prolonged exercise, hot and humid weather and dehydration can seriously compromise athlete performance and increase the risk of exertional heat injury. Exercise produces heat within the body and when performed on a hot or humid day with additional barriers to heat loss, such as padding and equipment, the athlete's core body temperature can become dangerously high. If left untreated, this elevation of core body temperature can cause organ systems to shut down in the body.

Young athletes should be pre-screened at their pre-participation physical evaluation for heat illness risk factors including medication/supplement use, cardiac disease, history of sickle cell trait, febrile or gastrointestinal illness, obesity, and previous heat injury. Athletes with non-modifiable risk factors should be closely supervised during strenuous activities in a hot or humid climate.

Sweating is one way the body tries to reduce an elevated core temperature. Once sweat (salt and water) leaves the body, it must be replaced. Water is the best hydration replacement, but for those athletes exercising for long periods of time where electrolytes may be lost, commercial sports drinks with electrolytes are available. Energy drinks that contain caffeine or other “natural” stimulants are not adequate or appropriate hydration for athletes and can even be dangerous by causing abnormal heart rhythms.

HEAT EXHAUSTION

Inability to continue exercise due to heat-induced symptoms. Occurs with an elevated core body temperature between 97 and 104 degrees Fahrenheit.

• Dizziness, lightheadedness, weakness • Headache • Nausea • Diarrhea, urge to defecate • Pallor, chills	• Profuse sweating • Cool, clammy skin • Hyperventilation • Decreased urine output • Pallor, chills

PREVENTION: There are several ways to try to prevent heat illness:

ADEQUATE HYDRATION

Arrive well-hydrated at practices, games and in between exercise sessions. Urine appears clear or light yellow (like lemonade) in well-hydrated individuals and dark (like apple juice) in dehydrated individuals. Water/sports drinks should be readily available and served chilled in containers that allow adequate volumes of fluid to be ingested. Water breaks should occur at least every 15-20 minutes and should be long enough to allow athletes to ingest adequate fluid volumes (4-8 ounces).

ADDITIONAL PREVENTION MEASURES

Wear light-colored, light-weight synthetic clothing, when possible, to aid heat loss. Allow for adequate rest breaks in the shade if available. Avoid drinks containing stimulants such as ephedrine or high doses of caffeine. Be ready to alter practice or game plans in extreme environmental conditions. Eat a well-balanced diet which aids in replacing lost electrolytes.

GRADUAL ACCLIMATIZATION

Intensity and duration of exercise should be gradually increased over a period of 7-14 days to give athletes time to build fitness levels and become accustomed to practicing in the heat. Protective equipment should be introduced in phases (start with helmet, progress to helmet and shoulder pads, and finally fully equipped).

HEAT ILLNESS INFORMATION SHEET

TREATMENT OF HEAT EXHAUSTION

Stop exercise, move player to a cool place, remove excess clothing, give fluids if conscious, COOL BODY: fans, cold water, ice towels, ice bath or ice packs. Fluid replacement should occur as soon as possible. The Emergency Medical System (EMS) should be activated if recovery is not rapid. When in doubt, CALL 911. Athletes with heat exhaustion should be assessed by a physician as soon as possible in all cases.

HEAT STROKE

Dysfunction or shutdown of body systems due to elevated body temperature which cannot be controlled. This occurs with a core body temperature greater than 107 degrees Fahrenheit. Signs observed by teammates, parents, and coaches include:

- Dizziness
- Drowsiness, loss of consciousness
- Seizures
- Staggering, disorientation
- Behavioral/cognitive changes (confusion, irritability, aggressiveness, hysteria, emotional instability)
- Weakness
- Hot and wet or dry skin
- Rapid heartbeat, low blood pressure
- Hyperventilation
- Vomiting, diarrhea

TREATMENT OF HEAT STROKE

This is a MEDICAL EMERGENCY. Death may result if not treated properly and rapidly. Stop exercise, Call 911, remove from heat, remove clothing, immerse athletes in cold water for aggressive, rapid cooling (if immersion is not possible, cool the athlete as described for heat exhaustion), monitor vital signs until paramedics arrive.

THOUGHTS FOR PARENTS AND GUARDIANS

Heat stress should be considered when planning and preparing for any sports activity. Summer and fall sports are conducted in very hot and humid weather across regions of California. While exertional heat illness can affect any athlete, the incidence is consistently highest among football athletes due to additional protective equipment which hinders heat dissipation. Several heatstroke deaths continue to occur in high school sports each season in the United States. Heatstroke deaths are preventable, if the proper precautions are taken. You should also feel comfortable talking to the coaches or athletic trainer about preventative measures and potential signs and symptoms of heat illness that you may be seeing in your child.

A FREE online course “Heat Illness Prevention” is available through the CIF and NFHS at https://nfhslearn.com/courses/61140/heat-illness-prevention.