

MILAN

INTERNATIONAL SOCCER

ACADEMY

Is It Too Hot To Play?

by Marc Rizzardo

Coaches and parents want players to be safe when playing and decisions on whether it is safe or not to play must include consideration of the weather. **Heat** is a factor that if not taken seriously can lead to life and death consequences; remember, all heat related injuries are preventable, a basic knowledge of heat induced injuries must be part of every coaching program.

STAGES of HEAT INJURIES

Heat Cramps

The athlete usually feels a tightening of the muscles. The muscles involved predominantly are the hamstrings (the large muscles in the back of the thigh) and the gastrocnemius/soleus complex (the calf muscles). This is usually caused by dehydration and a loss of minerals in the body. This stage is not life threatening but can be very painful.

WHAT TO DO

- Get off Massage the muscle and stretch it
- Go or stay in the shade
- Put ice/cool towels at the nape of neck and arm pits
- Drink plenty of fluids, preferably with mineral replacement on the field.

Heat Exhaustion

This can potentially be a very serious condition. The following can be signs of heat exhaustion, but they do NOT all have to be present:

- Nausea
- Dizziness

- Goose bumps

- Weakness

- Weak and rapid pulse

- Heavy sweating

- Vomiting

- Uncoordinated stride

- Extreme fatigue

WHAT TO DO

All the precautions and treatment listed under heat cramps are still very important. Add elevating the athletes' feet to get some blood flow back to the heart.

Heat Stroke

This phase is extremely serious and possibly fatal. This stage ends with the breakdown of the internal system that regulates the body temperature. The aforementioned signs and symptoms are present plus:

- Disorientation
- Loss of consciousness

- Coma

- High body temperature

- Bizarre or erratic behavior

- Heavy or lack of sweating (depending on how far the stage has progressed).

WHAT TO DO

MEDICAL EMERGENCY: Your emergency preparation action plan should take place call 911, athlete needs to be taken to a hospital immediately. If there is no loss of consciousness increase fluid replacement.

Hyponatremia

- The athlete has low level of sodium.

What to Do?

- Give the athlete water replacement with electrolytes in it.
- Avoid Non-Steroidal Anti-inflammatory Drugs (NSAIDs) like aspirin, ibuprofen and other prescription medications.
- Increase salt intake before training or the game.

PREVENTION

At a higher level of activity, the only way for heat to be lost from the body is evaporation of water from the skin surface in the form of sweat. This allows the body temperature to be maintained. BUT the result can lead to dehydration and electrolyte loss. It is important for the athletes to drink 150-350 ml of water every twenty minutes during the session.

Thus, the player should drink roughly 600 ml during the course of a ninety-minute training session. If the session is of high intensity, the replacement fluid could total two liters.

Other things a coach/parent needs to monitor:

Sunscreen

The athlete should have sunscreen on during the session/game.

Clothing

Players should use loose fitting clothes.

Light colored clothing is ideal because they reflect heat. Dark clothes absorb heat.

High technology fabrics are preferable since they allow moisture to be whisked away from the body.

Training

Warm-up, rest and cool-down in the shade.

Do NOT train if temperature is greater than 36 degrees Celsius (104 degrees F).

Allow for more rest in the session and space more time between training sessions.

Decrease the length of the session.

Train during the non-peak hours of sunshine. Early morning or late evening is best. If attending a tournament, ask for the games to be scheduled during the same time. Mid-day games or sessions can lead to complications that can be avoided.

Urine

Have the athletes check their urine color regularly. The darker the urine the MORE dehydrated the athlete. Also, the frequency of urination is decreased with dehydration.

Avoid

Drinking coffee, soft drinks, tea and alcohol can also contribute to dehydration.

Of special note, it must be remembered that thirst is NOT an indicator of hydration levels. If one waits until they are thirsty to drink it may be too late.

Replace the water immediately after the activity.

Use weight as a means of monitoring water loss as well. A guide is to replenish 20-24 oz of water/Gatorade for every pound lost during the activity.

Fine (Lawrence) states that "a loss of 2% in body mass affects match performance levels. A 5% loss will decrease the ability to exercise by as much as 30%."

For those that travel to international competitions, Chris Davies presents his theory that the body can handle a temperature difference of approximately 8 degrees C WITHOUT going through a gradual acclimatization program. The ideal training weather is 23-30 degrees C. Training in weather 31-34 degrees C should not take place for longer than six weeks because of the danger of accumulated fatigue arising from continuous training in such conditions. It is also suggested that training at 31-34 degrees C should not be used in the months immediately preceding a major event unless the athlete has had previous experiences at this level.

Warm weather and humidity is readily adapted to through a gradual introduction of the body to the unaccustomed heat, through day-to-day living in the warmer conditions as well as training.

In summary, use common sense and do not ignore the early signs of dehydration. Ignoring the simple signs of cramps, dizziness, confusion, headache, nausea, and possibly confusion can lead to the more serious conditions of heat exhaustion and heat stroke!

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