

Dehydration in Young Athletes: Prevention and Response



What is dehydration?

Dehydration occurs when too many fluids are lost from the body through sweating, urination, diarrhea, and/or vomiting. Sweating is the main cause of water loss, leading to dehydration.

Children are often dehydrated before symptoms appear so **prevention – by hydrating before, during and after play – is critical.** Dehydration not only hurts performance but also can put a child at risk for a more serious heat-related illness, such as heat exhaustion, or the most severe and potentially fatal, heat stroke.

PREVENTION: How to prevent *Dehydration in children*

The amount and type (water, sports drink) of fluids that need to be taken in depend on certain factors. For specific recommendations, talk with your child's doctor.

- Drink water 30 minutes before the activity begins.
- Encourage mandatory fluid breaks every 15-20 minutes throughout play—don't wait for the child to tell you he/she is thirsty.
- For fluid intake during physical activity, the American Academy of Pediatrics (AAP) recommends:
 - 5 oz. for an 88-pound child every 20 minutes
 - 9 oz. for a 132-pound adolescent every 20 minutes
- Drink fluids after physical activity to make up for fluid loss
- Use urine color as a guide for hydration status:
 - Light like lemonade then the child is likely **hydrated**
 - Dark like apple juice then he/she is likely **dehydrated**
- Another way to find how much fluid has been lost (and needs to be replaced) is to weigh the child before and after physical activity (either without sports gear or in the same, dry clothes).
 - Replace the amount of weight lost with an equal amount of fluids (for example, a 1 lb. weight loss should be replaced with 16 oz. of fluid)
 - The goal is to weigh the same before and after activity



Possible Signs of Dehydration:

Serious, requires removal from play in order to rehydrate.

- Decreased performance
- Dizziness
- Dry or sticky mouth
- Extreme fatigue
- Headache
- Irritability
- Muscle cramping
- Thirst



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Possible Signs of Heat Exhaustion:

Very serious, requires prompt attention as it can lead to heat stroke.

- Cool, moist, pale skin
- Cramps
- Dark-colored urine
- Fatigue
- Feeling faint or dizzy
- Headache
- Heavy sweating
- Nausea
- Rapid, weak heartbeat

Possible Signs of Exertional Heat Stroke:

Most severe, life-threatening, a medical emergency — call 911 immediately.

- Collapse
- Confusion
- Dizziness
- Headache
- Hot skin, likely still moist if recently exercising
- Nausea
- Emotional instability: irrational behavior, disoriented or combative*
- Very high body temperature*

** Presence of these symptoms is the main reason to suspect heat stroke.*

RESPONSE: When Dehydration or Heat Exhaustion is suspected

Hydration should take place immediately. Depending on the severity of the situation, immediate medical attention may be needed. Or, if a child's condition does not quickly improve or worsens, call 911 immediately while making every effort to cool the child:

1. Move the child to a cool place and cool the body with cold water
2. Have the child drink cool water or a sports drink (Note: if unable to drink fluids, seek medical attention immediately)
3. Remove any equipment and excess clothing
4. Raise the child's legs 8-12 inches
5. Obtain medical clearance prior to returning to play

RESPONSE: What to do when Heat Stroke is suspected

Call 911 immediately while making every effort to cool the child:

1. Immediately immerse the child in cold water while adding plenty of ice to the water and vigorously stirring
2. If immersion is not an option, soak the child with cold water from a shower or hose
3. Inform emergency responders (EMS) of the situation when they arrive
4. Keep the child from physical activity until medical clearance is obtained

****With proper and quick medical response (through cold water immersion), heat stroke victims can and should be treated onsite prior to transportation to the hospital.**