

# FLUIDS AND HYDRATION

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# Risks of Dehydration

**1% Fluid loss → increase body temperature during exercise**

**3 to 5% Fluid loss → cardiovascular strain**

**7% Fluid loss → athletes may collapse**

# Signs and Symptoms of Dehydration

## **Mild Dehydration:**

**Thirst, fatigue, decreased appetite, heat intolerance, light headedness, small amount and very concentrated urine**

## **Severe Dehydration:**

**Difficulty swallowing, shriveled and dry skin, stumbling, sunken eyes and poor vision, delirium, muscle spasms**

## **To check the hydration status:**

- ✓ **color (clear, pale yellow)**
- ✓ **frequency**
- ✓ **volume of urine**

**Do Not Rely On Thirst!**

# Two Types of Dehydration

1. **Voluntary dehydration - athletes involved in sports with weight classification.**
2. **Involuntary dehydration – athletes who are unable to access fluids.**

# Guidelines

- **2 to 3 hours = 2 to 3 cups of fluids**
- **1 to 2 cups = 10 to 20 minutes**
- **1/2 to 1 cup = 15 to 20 minutes**
- **2 to 3 cups = every pound of lost weight**

# Estimating Fluid Loss

**Weigh yourself before and after**

- wear minimal clothing**
- empty your bladder before weighing**
- weight change reflects total fluid loss**

# **Electrolytes**

- **Fluid balance**
- **Muscle contraction**

**Major electrolytes lost in sweat: Sodium & Chloride**

**Any disturbance in the balance of electrolytes in body fluid could interfere with performance.**



## **Fluids To Be Avoided**

- 1. Carbonated Drinks: may cause stomach upset**
- 2. Alcoholic Beverages: sedative, diuretic, depressant**

### **3. Caffeinated Drinks:**

**Diuretic – Caffeine's diuretic effect appears insignificant .**

**May cause GI problems.**

**Caffeine is no longer banned by the World Anti Doping Agency.**

# **Negative Effects of Caffeine on the body**

- **Irritate the stomach lining**
- **Disrupt sleeping**
- **Cause diarrhea**
- **Accelerate dehydration**
- **Calcium depletion**
- **Increase nervousness**
- **Increase heart rate**

# Positive Effects of Caffeine on the body

- **Body uses free fatty acids**
- **Increase alertness**
- **Muscle contraction**
- **Caffeine capacity to bind to adenosine receptors.**

# Fluid Replacement Beverage

- **tastes good**
- **does not cause GI distress**
- **promotes fluid absorption**
- **maintains fluid balance**
- **provides energy**

# **SPORTS DRINKS**

- **carbohydrates (6-8%)**
- **minimal amount of sodium**
- **during exercise; event longer than 60 to 90 minutes; high intensity and endurance event**
- **should not be diluted with water**

# **Water and Other Beverages**

- 1. Water: low intensity or short duration exercise.**
- 2. Sports Water: moderate exercise of less than an hour.**

**3. Soft Drink/Fruit Juice : too high in carbohydrate.**

**4. Energy Drinks: not the same with sports drinks. Some side effects: dehydration, rapid heart rate, nervousness, irritability**

**Energy shot: sold in smaller bottles, contains same total amount of caffeine, vitamins & other ingredients with energy drinks.**