



Fluid & hydration level maintenance in athletes - New perspectives

Prakash. B. Physical Education Director BES College, 16th main, 4th block , Jayanagar, Bangalore district, Karnataka state

Abstract: This paper examines the conceptual management of fluid & hydration level maintenance in athletes. Athletes need water, specially good drinking water , because it is the vital nutrient for athletes of all sporting activities. All are aware that human body contains 60% of the water & all our body functions are dependent on water. We have to replace the water which we lose during sweating or during urination. Sports persons need more water because they workout or exercise during & after the game & lose their fluid level through excessive sweating & Urination. Our body cannot store water hence we need to replace it. Sports persons need more & more water during excises. To stay hydrated and avoid overheating, they need to drink plenty of fluids before, during, and after sports or exercise.

Keywords: fluid level , causes of dehydration, effects of dehydration, maintenance of optimum fluid level

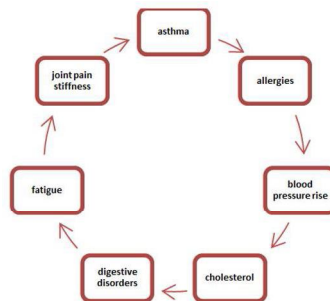
Introduction:

Dehydration, which occurs when the body has insufficient water and other fluids to function properly, can lead to blood clots, seizures, and other potentially fatal complications recent researches have shown that even mild dehydration can have adverse effects on mood and energy. That's why it's so important to catch dehydration early on, but the signs aren't always obvious ones like thirst and fatigue.

symptoms\

1. bad breath

2. dry skin
3. muscle cramps
4. fever
5. chills
6. cravings for sweets
7. headaches
8. skin disorders
9. premature aging
10. Weight gain

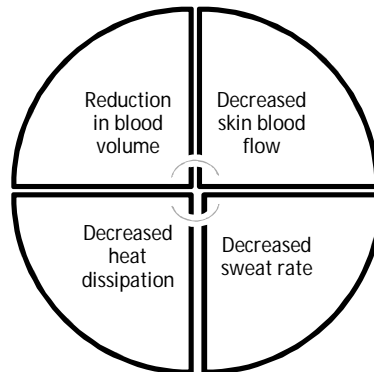




Sports persons need more & more water during excises. To stay hydrated and avoid overheating, they need to drink plenty of fluids before, during, and after sports or exercise. When they work out or compete, especially in hot weather, they have to replace the amount of water they lose in sweat by drinking the same amount of fluid. Drinking pure & cool water is the best way to keep hydrated during workouts or sports events. Sports drinks made up of 6% to 10% carbohydrates can help athletes stay hydrated during longer events. Most sports drinks should be diluted with approximately 50% water.

1. Reduction in blood volume

2. Decreased skin blood flow
3. Decreased sweat rate
4. Decreased heat dissipation
5. Increased core temperature
6. Increased rate of muscle glycogen use
7. Reduction in blood volume
8. Decreased skin blood flow
9. Decreased sweat rate
10. Decreased heat dissipation
11. Increased core temperature
- 12. Increased rate of muscle glycogen use**



all types of physical activities demand water, specially good drinking water , because it is the vital nutrient for athletes of all sporting activities. All are aware that human body contains 60% of the water & all our body functions are dependent on water.

We have to replace the water which we lose during sweating or during urination. Sports persons need more water because they workout or exercise during & after the game & lose their fluid level through excessive sweating & Urination. Our

body cannot store water hence we need to replace it. Sports persons need more & more water during excises. To stay hydrated and avoid overheating, they need to drink plenty of fluids before, during, and after sports or exercise. When they work out or compete, especially in hot weather, they have to replace the amount of water they lose in sweat by drinking the same amount of fluid. Drinking pure & cool water is the best way to keep hydrated during workouts or sports events. Sports drinks



made up of 6% to 10% carbohydrates can help athletes stay hydrated during longer events. Most sports drinks should be diluted with approximately 50% water. Drinking small amounts of water frequently ensuring that body water lost during urination & sweating is quickly replaced. taking cool beverages to maintain body temperature are some of the easy techniques followed in sports field. Dehydration can cause ample damage to body. The color of the urine itself is an indication that body is correctly hydrated or not. A crystal clear urine indicated that body is correctly hydrated while a colored urine indicated that body is dehydrated.

carbohydrates come from

1. fruits
2. vegetables
3. rice
4. cereals
5. bread

The muscle tissues called as glycogen if the body runs out of carbohydrate fuel it will burn fat and protein for energy this is the cause of poor / under performances of a sports person. the body converts the sugar % starches in carbohydrates to energy, stores it in liver. if a person starts exercising without glycogen he will become tired, he may underperform or fatigue might cause poor performances. proteins are gained through meat fish poultry items , nuts dairy products proteins gives the power to build new tissues, fluids our body cannot store extra proteins hence it burns for energy or converts it into fats physically active persons need more proteins less active persons less proteins intensity duration

& exercise type also demand proteins our body burns more calories if proteins are not consumed in time insufficient quantity. fats provide more than 20% of the daily calories saturated fats animal based foods are rich in fats. Unsaturated fats are found in vegetables products .

As an alternate sources of energy source

Eating too much fat is also dangerous for a sports person

sport person requirements

How body uses fat for energy depends on the intensity and duration of exercise. For example, when rest or exercise at low to moderate intensity, fat is the primary fuel source. As increase the intensity of your exercise body uses more carbohydrates for fuel. If body uses up its glycogen supply and you continue exercising you will burn fat for energy, decreasing the intensity of your exercise. A sports person needs more of these proteins carbohydrates etc because his performances needs to be the highest watermark.

Eating a meal rich in carbohydrates

Eating a solid food 3 hour before the event / prime performance

Eating easily digestive foods

Avoiding fried / high fat foods

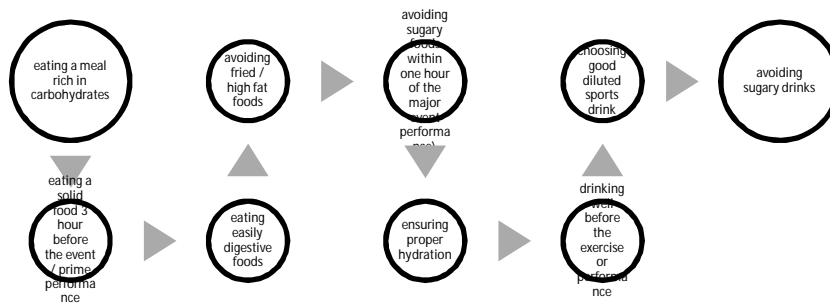
Avoiding sugary foods within one hour of the major event performance\

Ensuring proper hydration

Drinking well before the exercise or performance

Choosing good diluted sports drink

Avoiding sugary drinks



The long distance runners / swimmers / bicyclists take glycogen stuffed foods. Sports persons cannot give good performance soon after food intake. They have to make their daily routine to take good food rich in fats proteins carbohydrates. One not wish to give the best performance before it is (Nancy Clarke – Sports Nutrition guide book 5th edition 2015)

Homemade recipes for sports drinks

ginger water helps to reduce muscle pain

lemon water helps

coconut water helps

watermelon water

During intense exercise lasting longer than one hour fluid level demands keep increasing . Carbohydrate ingestion at a rate of 30-60 grams per hour is recommended to maintain carbohydrate oxidation and delay fatigue. Electrolyte (sodium chloride) addition in the fluid helps maintain the osmotic drive for drinking.

Conclusion: Thus dehydration in sports athletes can cause a negative effect, if not detected in initial stages. Sports activities are always dependent on performance & to expect good perform cases from player it is imperative that they not suffer from any fluid level imbalance.

References :

1. <http://www.webmd.com/a-to-z-guides/dehydration-adults>
2. <http://www.mayoclinic.org/diseases-conditions/dehydration/basics/definition>
3. <http://www.mayoclinic.org/diseases-conditions/dehydration/basics/symptoms/>
4. <https://www.nlm.nih.gov/medlineplus/ency/article/000982.htm>
5. <http://www.nytimes.com/health/guides/disease/dehydration/overview.htm>
6. <http://www.everydayhealth.com/news/unusual-signs-of-dehydration/>