Star health

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We value our readers' opinion!

Starhealth wants to encourage its readers to communicate with us.

We value the opinion of our readers and we welcome all feedback of our health page that is dedicated to you. We look forward to your suggestions, comments and ideas about our page.

You can also suggest any burning health issues you would like us to cover in the Starhealth page.

There is also a panel of specialized doctors to ask about your ailments. You can get your total health solution from them.

So don't hesitate to contact Starhealth in the future.

Dehydration and heat stroke

A common health hazard in recent months

PHOTO: STAR

In these hot humid days dehydration and heat stroke are common health hazards for us. They could be life threatening if left untreated.

STARHEALTH DESK

For several days our country has been under the grip of a mild heat wave, which has made life miserable under extreme heat coupled with humidity. In these hot humid days dehydration and heat stroke are common health hazards for us. They could be life threatening if left untreated. In this story we have focused on the management and some tips on dehydration and heat stroke.

Sweat acts like our natural air conditioner. As sweat evaporates from our skin, it cools us off. Our personal cooling system can fail, though, if we overexert ourselves on hot and humid days. When this happens, our body heat can climb to dangerous levels. This can result in heat exhaustion or a heat stroke which is life-threatening.

Heat exhaustion takes time to develop. Fluids and salt are vital for health. They are lost as children and adults sweat a lot during exercise or other vigorous activities. It is very important to drink lots of liquids before, during and after exercise in hot weather. As strange as it seems, people suffering from heat exhaustion have low, normal or only slightly elevated body temperatures.

What is dehydration?

Dehydration can be a serious heat-related disease, as well as being a dangerous side effect of diarrhea, vomiting and fever. Children and persons over the age of 60 are particularly susceptible to dehydration.

What causes dehydration?

Under normal conditions, we all lose body water daily through sweat, tears, urine and stool. In a healthy person, this water is replaced by drinking fluids and eating foods that contain water. When a person becomes so sick with fever, diarrhea, or vomiting or if an individual is overexposed to the sun, dehydration occurs. This is caused when the body loses water content and essential body salts such as sodium, potassium, calcium bicarbonate and phosphate.

Occasionally, drugs, such as diuretics, which deplete body fluids and electrolytes, can cause dehydration. Whatever the cause, dehydration should be treated as soon as possible.

What are the symptoms of dehydration?

The following are the most common symptoms of dehydration, although each individual may experience symptoms differently. Symptoms may include:

- Thirst
- Less-frequent urination
- Dry skin
- Fatigue
- Light-headedness
- Dizziness
- Confusion
- Dry mouth and mucous membranes
- Increased heart rate and breathing

In children, additional symptoms may include:

- Dry mouth and tongue
- No tears when crying
- No wet diapers for more than 3 hours
- Sunken abdomen, eyes or cheeks
- High fever
- Inattention
- Irritability
- Skin that does not flatten when pinched and released

Treatment for dehydration

If caught early, dehydration can often be treated at home under a physician's guidance. In children, directions for giving food and fluids will differ according to the cause of the dehydration, so it is important to consult your pediatrician.

In cases of mild dehydration, simple rehydration is recommended by drinking fluids. Many sports drinks on the market effectively restore body fluids, electrolytes, and salt balance.

For moderate dehydration, intravenous fluids may be required, although if caught early enough, simple rehydration may be effective. Cases of serious dehydration should be treated as a medical emergency, and hospitalization, along with intravenous fluids, is necessary. Immediate action should be taken.

In case of dehydration caused by severe vomiting and diarrhoea ORS (Oral Rehydration Saline) is very effective and the most primary treatment. Even for over sweating caused by over exposure to the sun and work in hot and humid environment oral saline can be used as tonic.

How can dehydration be prevented?

Take precautionary measures to avoid the harmful effects of dehydration, including:

- Drink plenty of fluids, especially when working or playing in the sun.
- Make sure you are taking in more fluid than you are losing.
- Try to schedule physical outdoor activities for the cooler parts of the day.
- Drink appropriate sports drinks to help maintain electrolyte balance.
- For infants and young children, solutions will help maintain electrolyte balance during illness or heat exposure. Do not try to make fluid and salt solutions at home for children.

What is heat stroke?

Heat stroke is the most severe form of heat illness and is a life-threatening emergency. It is the result of long, extreme exposure to the sun, in which a person does not sweat enough to lower body temperature. The elderly, infants, persons who work outdoors and those on certain types of medications are most susceptible to heat stroke. It is a condition that develops rapidly and requires immediate medical treatment.

What causes heat stroke

Our bodies produce a tremendous amount of internal heat and we normally cool ourselves by sweating and radiating heat through the skin. However, in certain circumstances, such as extreme heat, high humidity or vigorous activity in the hot sun, this cooling system may begin to fail, allowing heat to build up to dangerous levels.

If a person becomes dehydrated and can not sweat enough to cool their body, their internal temperature may rise to dangerously high levels, causing heat stroke.

What are the symptoms of heat stroke

The following are the most common symptoms of heat stroke, although each individual may experience symptoms differently. Symptoms may include:

- Headache
- Dizziness
- Disorientation, agitation or confusion
- Sluggishness or fatigue
- Seizure
- Hot, dry skin that is flushed but not sweaty
- A high body temperature
- Loss of consciousness
- Rapid heart beat
- Hallucinations

How is heat stroke treated?

It is important for the person to be treated immediately as heat stroke can cause permanent damage or death. There are some immediate first aid measures you can take while waiting for help to arrive.

- Get the person indoors.
- Remove clothing and gently apply cool water to the skin followed by fanning to stimulate sweating.
- Apply ice packs to the groin and armpits.
- Have the person lie down in a cool area with their feet slightly elevated

Intravenous fluids are often necessary to compensate for fluid or electrolyte loss. Bed rest is generally advised and body temperature may fluctuate abnormally for weeks after heat stroke.

How can heat stroke be prevented?

There are precautions that can help protect you against the adverse effects of heat stroke. These include:

- Drink plenty of fluids during outdoor activities, especially on hot days. Water and sports drinks are the drinks of choice; avoid tea, coffee, soda and alcohol as these can lead to dehydration.
- Wear lightweight, tightly woven, loose fitting clothing in light colors.
- Schedule vigorous activity and sports for cooler times of the day.
- Protect yourself from the sun by wearing a hat, sunglasses and using an umbrella.
- Increase time spent outdoors gradually to get your body used to the heat.
- During outdoor activities, take frequent drink breaks and mist yourself with a spray bottle to avoid becoming overheated.
- Try to spend as much time indoors as possible on very hot and humid days.
- Move to a cool place indoors or in the shade.
- Loosen clothing.
- Take fluids like ORS..
- Have salty foods such as saltine crackers, if tolerated.
- Lie down in a cool, breezy place.
- If you live in a hot climate and have a chronic condition, talk to your physician about extra precautions you can take to protect yourself against heat stroke.

Health tips

A dozen of tips for better sleep in bad times

1. Caffeine is a stimulant and should be stopped four to six hours before bedtime. Caffeine is in coffee, soda, iced tea, chocolate, and various over-the-counter medications. Remember, caffeine builds up throughout the day, so two cups of coffee at dinner and some chocolate ice cream can be close to 500 milligrams of caffeine, a large dose. It is also a little-known fact that caffeine can stay in the system for up to 12 hours. So try not to have any past lunchtime and have decaffeinated coffee after dinner. One note of caution: Be careful if you are a big caffeine person and you cut yourself off too quickly, because you will get headaches, which of course will keep you awake.
2. Nicotine is also a stimulant and should be avoided near bedtime and if you wake up during the night. Thus, having a smoke before bed, although it feels relaxing, is actually putting a stimulant into your bloodstream. Recent research has shown that if you must smoke, take long, slow drags and pause between puffs, as this method produces the least stimulating effects, as opposed to short, quick puffs. (We are not condoning smoking, but if you must, at least follow these suggestions for more restful sleep). Also, cut back before bed -- have fewer cigarettes during the four hours before bed, and don't have any 30-45 minutes before bed.
3. Alcohol is a depressant; although it may make it easier to fall asleep, it causes you to wake up during the night. As alcohol is digested your body goes into withdrawal from the alcohol, causing nighttime awakenings and often nightmares. Excessive alcohol use can lead to dependence, and the withdrawal from alcohol dependence can also affect your sleep.
4. A light snack may be sleep inducing, but a heavy meal too close to bedtime interferes with sleep. Stay away from protein and stick to carbohydrates. Research has shown that small snacks rich in carbohydrates may help improve sleep. In addition, milk or dairy products have been shown to be sleep inducing. Milk has L-tryptophan, which has been shown to help people go to sleep. So skim milk and a low-fat snack may be a good nighttime treat.
5. You may not want to exercise vigorously just before bed. It may be best to exercise late in the afternoon. Still, some studies have shown that exercise right before bed is not as bad as was once thought, unless you are the type of person who becomes more alert with exercise.
6. Minimize noise, light, and excessive cold or hot temperature during sleep by using ear plugs, window blinds, or an electric blanket or air conditioner appropriately. If your room is too hot (above 75 degrees) or too cold (below 54 degrees), it can affect your sleep.
7. Try not to drink anything after 8 p.m. Often people wake up to go to the toilet (once or twice a night as you get older is normal).

Some general insomnia guidelines:

8. Restrict the amount of time you spend in bed to the actual amount of time you sleep. You are not sleeping anyway, so do something worthwhile.
9. Go to bed only when you are sleepy. This avoids that time you often spend trying to sleep but failing to do so. Get out of bed if you can't fall asleep or go back to sleep within 10-15 minutes; return to bed only when you feel sleepy. Repeat this step as often as necessary during the night. You can read, listen to soft music, or watch a movie. Don't fall asleep on the couch.
10. Use the bedroom for sleep and sex only; do not watch TV, listen to the radio, eat, or read in bed.
11. Get up at the same time each morning. Keep your biological clock going in the right direction, otherwise you will be fighting against it. Do not nap during the day. The time it takes you to fall asleep is decreased by the longer you have been awake.
12. Allow yourself one hour to unwind before bed. Brush your teeth one hour before getting into bed and wash your face slowly with warm water. Set the mood for relaxation before bed. This is not a time to be rushing about or planning the following days events. Do this earlier in the evening.

Source: Internet

HELP - Hospital-based Essential Life-saving Programme

An example for the motivation of young medical professionals to help the poor patients

STARHEALTH DESK

HELP (*Hospital-based Essential Life-saving Programme*) is an organization that endeavors to provide relief to poor patients by providing low cost essential life saving treatment. It was established in 1998 at Sir Salimullah Medical College and Mitford Hospital by some fresh and bright forward-looking young medical students.

Sir Salimullah Medical Collge and Mitford Hospital is one of the most historic medical colleges in Bangladesh. Most of the patients who get admitted in this hospital everyday are very poor. There are such patients who cannot afford medicine that cost 50-60 taka and abscond from the hospital. Some of them even die being deprived from essential medicare.

In our country, there are tragic stories of thousands of families who are mostly poor trying to get medicare for their ailments, while dealing with all their other distresses in life. Sometimes they are forced to sell their own dwelling places to meet the treatment charges. But the situation could be different if someone helped these patients who just need very low cost medicine. Realising the fact Dr Mozaffor, Dr Bipul, Dr Tarif, Dr Tariq, Dr Munir, Dr Abdullah and Istiak of Sir Salimullah Medical College established a charity organisation HELP - *Hospital-based Essential Life-saving Programme*. They started it during their student life.

Aims and objectives

The basic objective of HELP is to motivate medical students from the early stage of their medical life to help the unfortunate. At present the students are raising funds by contributing small amounts. But when a patient is helped by this fund all of them share the fulfilment of doing something for the cause of humanity. In future it may lead a doctor to prescribe poor patients without taking fees who is now a HELP volunteer.

The volunteers of HELP are students of Sir Salimullah Medical College of different batches. They are continuing this along with their studies. HELP is working now with students, though in the future qualified doctors may be included. Then the organisation will be stronger in raising funds quickly and more help will be possible.

Seven students established the organisation in 1998, and the initial membership was 31. Now the number of members is 467.

Work strategy of HELP

HELP works mainly in three ways

- Motivating students to help and support poor patients
- Collection of monthly subscription from the students; and
- Helping the poor patients at the hospital.

There is a regular monthly meeting with students of each batch of the college to exchange views. They are motivated to help the poor patients. A report of their contribution of previous month is placed there.

A number of students of every batch contribute every month and HELP volunteers collect it by giving money receipts. On an average 300 to 400 students regularly donate to the fund and build an amount of 7000 8000 taka every month. Up to now wretched patients have received **more than one lac taka** from HELP.

HELP volunteers are always at the service of needy patients. The address, room numbers and contact numbers are given to the different units of all departments of the Mitford Hospital. When an internee doctor things that a patients is really very needy he / she informs a HELP volunteer or make a communication between the patient and a HELP volunteer. HELP volunteers go on inspection and buy medicine for the patient. They never give cash money to the patients. Moreover HELP volunteers collect information from the units of the hospital. As a result HELP is the effective organisation which gives the help to the patients in direct contact very successfully. HELP volunteers hope that it will be more dynamic if doctor society is included with it.

Patients view

Mr Tara Miah, a patient helped by HELP was contacted. He expressed his deep gratitude to HELP. He said that he got admitted to Mitford Hospital with a critical condition and he was going to loose his life for the medicine that would cost only 200 taka. HELP workers gave him the medicine and the patient ultimately got well.

Obstacles

There are many obstacles maintaining the programme. Medicine that cost over one lac taka are distributed among the poor patients since foundation of the organization. But the fund is very limited. It is the main obstacle of the foundation, informed Dr Abdullah. He also informed that usually the fund (which is of 7000 8000 taka per month) ends at 20 of every month and HELP is quite unable to help patients. Patients returns hopelessly and HELP workers are really undone. HELP workers urge the doctors to be included in their programme. It can speed up the activities of HELP.

Future plan of HELP

The initial target was to promote the helping attitude among all students. The founders are successful in their duty. In Sir Salimullah Medical College about 70% students are member of HELP who regularly contribute to the fund. HELP workers plan to expand it among the doctors of the hospital within some days and they got enough feedback.

HELP is now limited only in Sir Salimullah Medical College. HELP workers dream to expand it among the other medical and dental colleges of Bangladesh and establish HELP centers following the footstep of HELP of Sir Salimullah Medical College.

deepintothescience

Cellular aging

Telomere-Telomerase hypothesis

All cells arrested in a terminally non-dividing state (growth arrest) after a fixed number of divisions. This is known as cellular senescence. It is explained by telomere-telomerase hypothesis.

Telomeres are short repeated sequence of DNA that compose the linear ends of chromosomes. Telomeres progressively shorten with increasing cell divisions until senescence occurs.

The hypothesis is that telomere loss is causally associated with loss of replication ability. With each cell division there is some shortening of telomeres due to incomplete replication of chromosome ends.

When a telomere shorten beyond a certain point its function is lost and there is end-to-end chromosome fusion and cell death. Thus telomere shortening is believed to be a clock (**telomeric clock**) that counts cell divisions.

Telomere shortening is prevented by the enzyme telomerase. Germ cells contain telomerase activity. In germ cells, telomere shortening is prevented by the sustained function of the enzyme telomerase and thus these cells self replicate extensively and thus their telomere shortening is prevented. Stem cells contain telomerase activity. Telomerase activity is absent form most somatic cells and thus telomeres progressively shorten with increasing cell divisions until senescence occurs.