

Prevention: Sports-related Deaths and Injuries

Deaths while participating in sports: While many of the deaths are attributed to cardiac problems, just being ill can cause undue stress on the heart and cause a person to die. If you have a significant illness, do **not** participate. Also fevers over 100.8 have been found to cause death while participating in exercise. Do **not** participate; it is not worth dying. (Minneapolis Heart Institute Foundation.)

Dehydration: Causes of dehydration may vary from diarrhea to not drinking enough of the correct fluids. If you have diarrhea you should **not** participate, you can become dehydrated very rapidly. You should only rehydrate with water. Sports drinks such as Gatorade® or Propel® will make diarrhea worse. Symptoms of dehydration include decreased performance level, in-coordination, unusual tiredness, inability to sweat, to mental confusion. Thirst is not an indicator of dehydration. (National Federation of State High School Associations, NFHS)

Fluid replacement and amount needed depend upon the outdoor and indoor conditions, the athlete, and the type of fluid used for replacement. People who may need more hydration than others are: people who are out of condition, not acclimated to the weather conditions, and those who have a higher body fat.

Water is the most important fluid replacement. Sports drinks should be taken in moderation because it may contribute to kidney problems and high blood pressure due to the high amounts of sodium (salt) in them. If you do drink a sports drink you should drink at least 10 ounces of water for every ounce of sports drink that you drink (NFHS).

You should **never** use caffeinated drinks nor energy drinks for hydration. This now includes Green Tea Extract. They will actually cause more dehydration. Energy drinks can be very dangerous to the athlete especially if mixed with nonprescription and prescription medications. Examples of energy drinks include Red Bull®, 5 hour energy®, Monster®, etc., they have herbal supplements that are actually concentrated caffeine with high enough levels that can be very harmful. Green Tea Extract in large doses has been found to be toxic to the liver and may prevent certain medications from being absorbed. (NFHS, IHSAA, Minneapolis Heart Institute Foundation & Prescriber's letter).

You may also need to put water on the outside of your body to help it cool down by evaporation. This is especially important while playing in hot gyms during the summer time even with fans on. The fans blow the hot air around creating a convection oven that can cook you from the inside out.

Under Armor® makes under clothing for the athlete to help either cool them down or keep them warm. The ones with red labels inside are the ones to keep you warm. If you are wearing these and exercising while it is hot, you can develop heat stroke in as little as 20 minutes. IHSAA rules are that everyone on the team that is wearing *Under Armor*® must have on the same color, if the color is different they will make you remove it.

The National Collegiate Athletic Association (NCAA) has recommended a healthy diet as a way for all athletes to meet their nutritional needs of protein, carbohydrates and vitamins. The NCAA has **banned** the use of *all supplements* for their athletes such as: protein supplements, whey supplements and any other performance enhancing supplements. A new study in 2014 found that most supplements *did contain steroids that were not listed on the label*. The NCAA does not endorse the use of vitamins unless the athlete has a proven deficiency. (an example is low iron or calcium especially in female athletes). Otherwise the NCAA states that vitamins should be obtained through proper nutrition. (NO skipping meals and just taking a vitamin!!). Taking too many vitamins also causes diseases and vitamin water is very hard on your kidneys.

The recovery drink of choice for the NCAA is an eight ounce glass of chocolate milk. The athlete needs to drink the chocolate milk within an hour at the end of participation of a vigorous workout. This replaces carbohydrates and protein to restore the muscles so that the athlete will be ready for the next competition. Creatine is another substance that weight lifters and trainers are using to increase their weight. This DOES NOT help you gain muscle. It actually makes you retain water and can lead to kidney problems and eventually damage your heart. Creatine is VERY DANGEROUS and should NEVER BE USED.

New Information on Muscle Cramps. If you are having muscle cramps it is neither due to low Potassium or Magnesium. New studies have found that it is due to improper use of the muscle or LOW SODIUM (low salt). Experts tell us to have the athlete eat a handful of salted pretzels or salted nuts. This will replace the salt with the added benefit of a little carbohydrate (pretzel) or protein (nut). They do not want the athlete to drink Gatorade®. Gatorade® has much more sugar than the athlete needs when they are having a muscle cramp. Long distance runners (marathon runners) are advised to either chew beef jerky during the entire race or eat salt through out the race to replace the sodium levels.

Dynamic Stretching: The exercises that you do for Dynamic Stretching may look funny but it is very important to prevent tendons and ligaments from tearing, especially in female athletes. Yoga in the off season or at the end of practice can be very beneficial to all athletes. Most pro and college teams are now doing some form of Yoga on a regular basis.

Concussions: New information has come out in the past several years about the long term effects of concussions. Some symptoms can be as little as just a headache to nausea, dizziness, blurred or double vision, confusion, etc. The new rules and a complete list of symptoms can be found on the IHSAA's website. If you develop any or all of these symptoms you need to tell your coach or athletic trainer right away. Also please note that the IHSAA now only allows **MD's, DO's or athletic trainers** to clear a patient with the diagnosis of concussion. That means that the Open Door Adolescent Health center **CAN NOT** clear an athlete to return to play or practice once a person has been diagnosed with a concussion.

Testicular Torsion: All Males (regardless of age) can get testicular torsion while participating in sports. Testicular torsion is where the testicle twists internally and cuts off the entire blood supply to the testicle. It must be surgically repaired within 6 hours or the testicle will die. If you develop lower abdominal pain or testicular pain you need to tell the coach or athletic trainer right away. This can be prevented by wearing compression shorts (Under Armour®), boxer briefs or brief underwear (whitey tighties). An athlete should never wear plain boxers while participating.

Testicular Cancer: is most prominent in male's ages 15-45 and one of the most curable types of cancer. Please see your other handout on symptoms and how to check for testicular cancer.

Skin Lesions in Wrestlers: IHSAA has new guidelines regarding release of wrestlers to return to participation after having a skin lesion. This is a form that **MUST** be completed by a **MD, OR DO** - NO EXCEPTIONS. Therefore if any wrestlers develop a skin lesion during the season they will have to see their family physician or pediatrician. The wrestler must get the *skin lesion release form* from the athletic department or coach before seeing their doctor.

Websites for more information on the above topics:

National Federation of State High School Associations - www.nfhs.org

Sudden death in Athletes Minneapolis Heart Institute Foundation at

<https://www.suddendeathathletes.org/aboutsdia.asp>

Indiana High School Athletic Association athletic Eligibility (a basic guide for schools, students and parents) gives good information about concussions, heat index and the sports physical www.ihsaa.org

Mayo Clinic - www.mayoclinic.com/healthinformation

American Academy of Pediatrics - www.aap.org

Any additional questions should be directed to your Family Physician or Specialist.

This information is only provided as a courtesy.

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