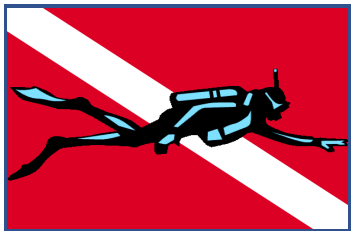


Dehydration

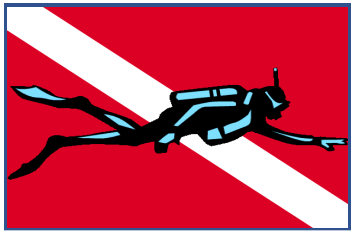


Dehydration



Dehydration is the lack of total body water, with an accompanying disruption of metabolic processes.

e.g., metabolic processes: the life sustaining chemical reactions in organisms – conversion of food into energy; the conversion of food to the building blocks of proteins, lipids, nucleic acids, and carbohydrates; and the elimination of metabolic wastes.



Dehydration

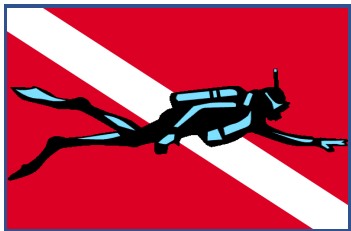


It begins when you use or lose more fluid than you take in...

e.g., breathing the “dry air” of a scuba tank, sweating (in a wet suit during the surface interval), and vomiting (seasick anyone?)

Dehydration is especially dangerous for children and older adults (i.e., those with more life experiences).

Older adults naturally have a lower volume of water and have conditions or take medications that increase the risk of dehydration (ask you medical professional).



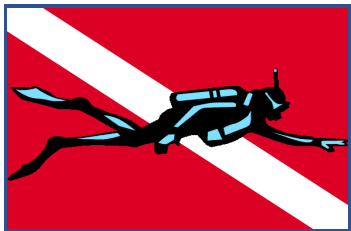
Dehydration



Dehydration can occur in any age group if you don't drink enough water during hot weather – especially if you are exercising vigorously.

Mild to moderate dehydration can usually be reversed by drinking more fluids, but severe dehydration needs immediate medical treatment (which may include IV fluids with salts).

Dehydration is a contributing risk factor for decompression sickness (DCS); it reduces the volume of blood plasma and perfusion (i.e., passage of fluid through the circulatory system) of tissues, so it thickens the blood and reduces blood flow.



Dehydration

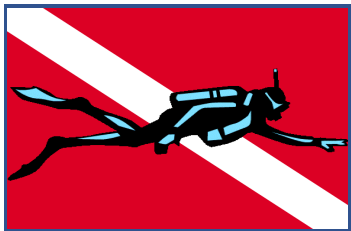


Older adults have less fluid reserves in the body, and the ability to conserve water is reduced.

These problems are compounded by chronic illnesses, such as diabetes and kidney disease, and the use of certain medications (e.g., diuretics).

Drinking and diving is never recommended; additionally, alcohol dehydrates you faster because it is a diuretic.

Flying: the air in a plane cabin is much dryer, causing loss of body fluids faster. It is recommended that you drink 240 ml (~ 8 oz.) of water each hour of your flight.

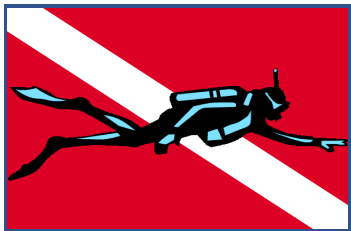


Dehydration



SYMPTOMS:

- Extreme thirst
- Dry mouth
- Less frequent urination
- Dark-colored urine
- Headache
- Muscle cramps
- Fatigue
- Dizziness
- Confusion
- Lack of sweating
- Flushed skin

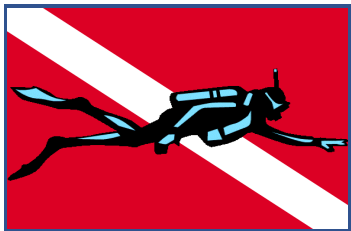


Dehydration



COMPLICATIONS:

- **Heat injury – mild heat cramps to heat exhaustion or potentially life threatening heatstroke.**
- **Urinary and kidney problems – UTIs, kidney stones and even kidney failure.**
- **Seizures – as a result of electrolyte imbalances.**
- **Low blood volume shock (hypovolemic shock) – when low blood volume causes a drop in blood pressure and a drop in the amount of oxygen in you body.**



Dehydration



Some Web Sources:

<https://www.dansa.org/blog/2019/07/15/nine-factors-that-play-a-major-role-in-a-scuba-diver-s-dehydration>

<https://www.webmd.com/a-to-z-guides/dehydration-adults>

<https://www.mayoclinic.org/diseases-conditions/dehydration/symptoms-causes/syc-20354086>

<https://en.m.wikipedia.org/wiki/Dehydration>