

## DEHYDRATION



Water makes up the largest component of the human body representing 45% to 70% of our body weight. For example, a 75 kg person would contain 45 litres of water, representing 60% of body weight. Any excessive change in the normal body water balance, such as fluid loss causing dehydration can be a serious outcome for the motorcyclist.

We lose body water daily through normal tasks such as breathing, sweating, urinating and some medications for example. A reduction of only 1% can start to impair our body's normal temperature regulation system and dehydration will kick in.

During heat exposure, body water is primarily lost as sweat. Individuals can sweat anywhere between 800 mL to 1.4 litres per hour. People normally do not perceive thirst until a deficit of approximately 2% body weight loss has resulted from sweating. Thus, thirst provides a poor indicator of body water needs during rest or physical activity.

When individuals are encouraged to drink fluids frequently during heat exposure, the rate at which we can replace the fluids by mouth is limited by the rate at which fluids can be absorbed from the stomach to the intestines (where the absorption process starts to take place).

Fluids can only empty from the stomach at a maximum rate of approximately 1 to 1.2 litres per hour.

The important message is that once dehydration occurs, it becomes more challenging to rehydrate adequately by drinking water.

The key to preventing dehydration for the motorcyclist is to begin consuming water before going on a ride and to maintain hydration by taking frequent drinks of water during the ride.

Just remember that you can sweat more per hour on a hot day than what your body is capable of absorbing. That is why it is critical to maintain your water intake before, during and after the ride.

### FIRST AID

Keep an eye out for common signs (*something you see*) and symptoms (*something you hear or the patient tells you.*) of dehydration. Also keep in mind that each person may experience symptoms differently, they include;

- ✦ Less frequent urination & dark in colour
- ✦ Thirst
- ✦ Fatigue & light-headedness
- ✦ Confusion
- ✦ Dry mouth
- ✦ Frontal headache

### DRINK, DON'T SIP

Cool the individual down and get them to drink as much water as possible (may include electrolytes). Be aware that large amounts of oral fluids may increase bloating, nausea, and vomiting due to the delays in stomach → intestine absorption rate. In this case, the individual needs urgent medical attention and intravenous (I.V) fluid replacement. Please remember that the volume of oral fluids ingested typically must at least equal the volume of fluid lost.

*References include ILCOR CoSTR document and NAEMT, PHTLS.*