

# KEY TIPS ON HYDRATION



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## HYDRATION FOR SUMMER AND TRAVELLING

In a temperate climate about 2-3 L of water is lost from our bodies each day, mainly as urine but also as sweat, expired breath, and faeces.

The total amount of water lost will depend on several factors, such as sex, body size, the level of physical activity and the amount and type of clothing worn. Environmental conditions of temperature and humidity will also have an impact on water loss.

Sweating is a body-cooling mechanism that uses a great deal of water: the water from sweat evaporates off the skin and removes heat from the body with it. Water loss through the skin accounts for about 0.45 L per day. However, environmental temperature and humidity, the presence of air currents, the amount of clothing worn and the level of physical activity are all factors that will influence the actual amount of water lost<sup>1</sup>.

Sweat losses will be higher when exposed to high temperatures, such as during the summer, and these must be replaced.

Hydration requirements need to be considered both whilst travelling and at the holiday destination.

### When travelling by car

Driving in a hot car can lead to sweating with large losses of water and electrolytes. Even in an air conditioned car, water losses can be high on a long drive or deficits can develop if journey progress is preferred over stops for drinking.

Maintaining adequate hydration while driving is of great importance, because mild hypohydration has been shown in recent research<sup>2</sup> to cause an increase in driver errors. And the increase in risk of errors over the duration of a long drive was shown to be at a greater rate when the driver had restricted their fluid intake than when drinking had taken place to maintain hydration status.

These dehydrated drivers also reported higher subjective feelings of thirst, and impaired concentration and alertness. The magnitude of decrement was similar to that observed following the ingestion of an alcoholic beverage resulting in a blood alcohol content of approximately 0.08%, or driving whilst sleep deprived.

Frequent drinks of non-alcoholic beverages may help to reduce driving errors on a long monotonous road trip.



## Have you checked the weather forecast at your destination?

Even if it is no warmer or drier than your home location, consider if your activity levels will be the same; perhaps you will be spending more time outside and / or being active rather than being relatively sedentary in a cooler office building or house.

## When taking a plane

The body tends to dehydrate while travelling on aeroplanes because air in the cabin is dryer (10-20% humidity) than a typical, comfortable indoor environment (30-60% humidity).

Under these conditions, skin dehydration symptoms can be observed (parched lips, dry eyes, etc.) and increased amounts of water are lost through the breath. Mild dehydration occurring during long flights is one of the causes of an increased blood viscosity, which in turn may increase the risk of deep vein thrombosis when sitting relatively still for a prolonged period of time<sup>3</sup>.



When travelling by plane, hydration levels can be maintained by drinking an additional 250 mL of water per hour over your regular hydration needs when sitting resting.

### PRACTICAL ADVICE:

- Get to know your usual hydration needs and adjust them to where you are visiting and the level of activity you are planning.
- The hotter and more humid the weather is, and the higher the level of activity, the more water will likely be needed. You can meet your hydration needs with a whole range of beverages and with food rich in water.

It is calculated that of the total water needed...

20-30%

typically comes from food and

70-80%

from beverages (all types, not just plain water)<sup>1,4</sup>



However, this may vary greatly depending on the diet that an individual chooses. If, for example, you find yourself choosing more fruit and salads, this may help provide some extra water into your diet.<sup>1,4</sup>

#### References

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2. Watson P, Whale A, Mears SA, Reyner LA, Maughan RJ. Mild hypohydration increases the frequency of driver errors during a prolonged, monotonous driving task. *Physiology & Behavior* 2015; 147: 313-318.
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