KEY TIPS ON HYDRATION

HYDRATION IN THE WORK PLACE

european hydration institute

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Water needs depend on gender and age but are also influenced by a variety of lifestyle factors; these include the level of physical activity and environmental factors such as temperature, relative humidity and air movement[1]. Such variables can differ greatly from one working environment to another and as many people spend a considerable percentage of their week at work, ensuring adequate hydration in the workplace is an important consideration.

Working in a warm environment can result in substantial water losses from the body, mainly in the form of sweat. The magnitude of such losses is dependent primarily on work intensity and duration, although sweat rates can differ between various work activities and between individuals[2]. Dehydration may occur if water lost exceeds water consumption.

Hydration in the work place is a specific concern because dehydration can affect productivity, safety, cost, and morale[3].

CONSEQUENCES OF DEHYDRATION

- Dehydration results in an **increase in core temperature** of about 0.1–0.2°C with each 1% of dehydration[4].
- Dehydration can also **increase the heart rate**, which is typically accompanied by an increase in an individual's subjective rating of perceived exertion to perform an exercise task[3].
- When dehydration exceeds about 2% of body weight, **physical work capacity** is diminished[5].
- Dehydration has also been shown to **adversely influence decision-making and cognitive performance**, which may contribute to a decline in productivity and could be associated with an increased risk of work-related accidents[3].

PRACTICAL ADVICE TO STAY HYDRATED IN THE WORK PLACE

Preventing dehydration in the work place could involve a combination of strategies that might include the following[3]:

- **Assessing hydration status*:** urine colour provides a quick and useful estimate of hydration state during everyday activities[6].
- **Inclusion of practices that encourage fluid intake:** Provision of water fountains and vending machines may encourage workers to drink more often. Improving access to bathroom facilities may also enhance liquid consumption, especially among women.
- **Education:** Informing individuals (especially those who work in hot environments) about hydration assessment, signs and risks of dehydration, and strategies to maintain hydration while working, can reduce dehydration in the workplace[3].

  As well as encouraging fluid intake an education and hydration program at work should **stress the importance of consuming meals** which include food rich in water, because:

  - Meals play an important role in helping to stimulate the thirst response causing the intake of additional fluids and restoration of fluid balance[7].
  - It is calculated that of the total water consumed:

20% **typically comes from food and about**

80%

from beverages (all types, not just plain water)[1,8].

However, this may vary greatly depending of the diet that an individual choices[1,8]

* See our educational material about how to measure hydration status at:
www.europeanhydrationinstitute.org/educational_materials.html

1. EFSA Panel on Dietetic Products, Nutrition, and Allergies (NDA); Scientific Opinion on Dietary reference values for water. EFSA Journal 2010; 8(3):1459. Available online: www.efsa.europa.eu/en/efsajournal/pub/1459.htm **2.** Sawka MN, Wenger CB, Pandolf KB. In Fregly MJ and Blatteis CM (eds): Handbook of Physiology, New York: Oxford University Press, pp. 157–185, 1996. **3.** Kenefick RW, Sawka M. J Am Coll Nutr 2007;26:597S-603S. **4.** Sawka MN, Francesconi RP, Young AJ, Pandolf KB. JAMA 1984;252:1165-9. **5.** Institute of Medicine: Dietary reference intakes for water, potassium, sodium, chloride, and sulfate. Washington, DC: The National Academies Press, 2005. **6.** Kolasa KM, Lackey CJ, Grandjean AC. Nutrition Today 2009;44:190-201. **7.** Maughan RJ, Leiper JB, Shirreffs SM. Eur J Appl Physiol Occup Physiol 1996;73(3–4):317-25. **8.** Manz F, Johner SA, Wentz A, Boeing H, Remer T. Br J Nutr 2012; 107(11):1673-81.