



“The assessment of hydration status in a large sample appears to be of interest for conducting epidemiological and large clinical studies aimed at improving preventive and curative care.” Baron et al (2014).

Reference:

Baron, S., Courbebaisse, M., Lopicard, E.M. and Friedlander, G. (2014) Assessment of hydration status in a large population. The British Journal of Nutrition. November 24th. .

Article describes the assessment of hydration status [@ivteam #ivteam](http://ctt.ec/cdclm+)

Click To Tweet

Abstract:

Both acute and chronic dehydration can have important implications for human behaviour and health. Young children, non-autonomous individuals and the elderly are at a greater risk of dehydration. Mild hypertonic dehydration could be related to less efficient cognitive and physical performance and has been reported to be associated with frequently occurring pathological conditions, especially nephrolithiasis. The assessment of hydration status in a large sample appears to be of interest for conducting epidemiological and large clinical studies aimed at improving preventive and curative care. Especially in large-population studies, methods that are used have to be accurate, cheap, quick and require no technical expertise. Body weight change is widely used to determine acute hydration changes, but

seems to be insufficiently accurate in longitudinal studies. Bioimpedance analysis methods enable the assessment of total body water content, but their use is still under debate. Because plasma osmolality directly reflects intracellular osmolality, it constitutes a good marker to assess acute hydration changes, but not chronic hydration status because it changes constantly. Moreover, venepuncture is considered to be invasive and is not suitable for a large-sample study, especially in children. Urinary markers appear to be good alternatives for assessing hydration status in large populations. Collection of urine samples is non-invasive and cheap. High technical expertise is not required to perform urinary marker measurements and these measurements can be carried out quickly. Thus, methods based on urinary markers are very well suited for field studies. Urine colour is probably the least sensitive marker despite its high specificity. Urine osmolality and especially urine specific gravity could be easily used for determining hydration status in large-sample studies.

Thank you to our partners for supporting IVTEAM

