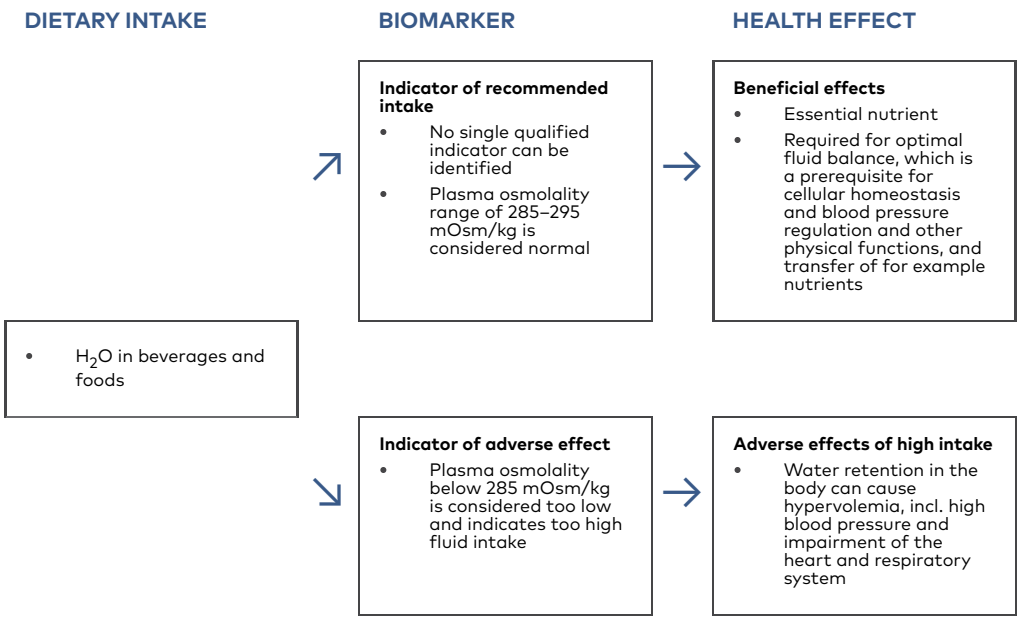
Fluid and water balance



	Females	Males
AI (L/d)	2.0	2.5

For more information about the health effects of dietary intake of fluids and water balance, please refer to the background paper by Per Ole Iversen and Mikael Fogelholm (2023).

Dietary intake. The main dietary sources are drinking water, beverages, and solid foods. Drinking water and beverages often provide between 700 to 1400 mL/day of water. Estimated intake from solid foods is on average 600—800 mL per day, with water content in food items varying from about 5% in nuts to 90% or more in many fruits and vegetables (Guelinckx et al., 2016).

Main functions. Water is an essential nutrient needed to maintain normal physiological functions (e.g., blood pressure, pH, internal body temperature) and health (Iversen & Fogelholm, 2023). It is needed to transport essential substances (e.g., oxygen, carbon dioxide, water, and glucose) to and from cells, regulate body temperature, provide structure to cells and tissues, and to help preserve cardiovascular function.

Indicator for recommended intake. Plasma osmolality in the range of 285 to 295 mOsm/kg (Iversen & Fogelholm, 2023).

Main data gaps. Limited data on drinking water intake in the Nordic or Baltic countries.

Deficiency and risk groups: Sick and frail older adults as well as those performing physical work/exercise, particularly at high ambient temperatures, may be at risk of becoming dehydrated. Overhydration, i.e., too much water for optimal body functions, may be seen as oedema or hyponatremia in certain conditions.

Recommendations. An AI is set to 2.0 L/day for females and 2.5 L/day for males 14 years or older, based on EFSA recommendations (EFSA, 2010b). The AI is set on the basis of total water intake including water from beverages and from food moisture under moderate ambient temperatures and physical activity levels (PAL 1.6). The AI is set to 0.8–1.0, 1.1–1.2, and 1.3, and 1.6 L per day for children aged 0.5–1, 1–2, 2–3, and 4–8 years, respectively. AI for 9–13-year-olds is set to 2.1 L for boys and 1.9 L for girls.