FLUID AND ELECTROL YTE REPLACEMENT Daily fluid balance

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els Fluid intake consists of liquid ingested in the form of oral fluids - as well as fluid released during oxidation of consumed food. Table 25.1 shows the average daily fluid balance for a healthy adult. It must be noted that insensible losses can increase in con - ditions of pyrexia, exertion or warm environments. Patients with a tracheostomy can lose a larger amount of fluid via insensible losses, emphasising the importance of humidifica - tion of inspired air. In addition, fluid loss via the faecal route will inevitably increase in diarrhoea or more chronic bo wel pathologies, such as high-output stoma, short bowel syndrome and enterocutaneous fistulae. An essay on the shaking palsy in 1817.

TABLE 25.1 Estimated daily /f_l uid balance for a healthy 70-kg adult in a temperate climate. Intake (L) Output (L) Water from 1.2 Urine 1.5 beverages 0.9 Water from 1.0 Insensible food losses (skin and lungs) 0.3 Faeces 0.1 Metabolic processes of oxidation

fluid losses and provide su ffi cient water and electrolytes to maintain the intracellular and extracellular fluid compart ments, and to enable the kidneys to excrete waste products. The normal volume of water required for daily maintenance in a healthy 70-kg adult is approximately 2.2 litres or 30 /uni00A0 mL/kg per day . Accurate assessment of maintenance fluid v olumes requires both intake and output to be taken into account, in addition to the patient’s body weight. Fluid replacement should also encompass replacement of key electrolytes. The approximate daily requirements of the main electrolytes are as follows: /uni25CF sodium: 0.9–1.2 /uni00A0 mmol/kg per day /uni25CF potassium: 1 /uni00A0 mmol/kg per day /uni25CF calcium: 5 /uni00A0 mM per day /uni25CF magnesium: 1 /uni00A0 mM per day Replacement of fluid and electrolytes should be by the sim plest and safest route of administration. Where feasible the oral route should be used via oral rehydration solutions. In patients whose ability to swallow is impaired, fluid may be replaced via feeding nasogastric tubes or nasojejunal tubes, provided intestinal absorptiv e function is maintained. /H11021 /H11022 /H11022 /H11021 /H11021 /H11022 /H11022

The MUST tool 2 (ii) BMI (kg/m) (i) Weight loss in 3–6 months 0 = 5% 0 = 20.0 1 = 5–10% 1 = 18.5–20.0 2 = 10% 2 = 18.5 Add scores Overall risk of undernutrition* 0 1 Low Medium Routine clinical Observe care† Repeat screening Hospital – document dietary Hospital – every week and /f_l uid intake for 3 days implement local policies. Care homes – every month Care homes (as for hospital) Generally food /f_i rst followed Community – every year for Community – repeat screening, by food forti /f_i cation and special gr oups, e.g. those e.g. from 1 month to 6 months

supplements 75 years (with dietary advice if necessary) *If height, weight or weight loss cannot be established , use documented or recalled values (if considered reliable). When measured or recalled height cannot be obtained, use knee height as a surrogate measure. If neither can be calculated , obtain an overall impression of malnutrition risk (low , medium, high) using the following: (i) Clinical impression (very thin, thin, average, overweight); (iia) Clothes and/or jewellery have become loose /f_i tting; (iib) History of decreased food intake, loss of appetite or dysphagia up to 3–6 months; (iic) Disease (underlying cause) and psychosocial/physical disabilities likely to cause weight loss. † Involves treatment of underlying condition, and help with food choice and eating when necessary (also applies to other categories).

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