

CHAPTER 9

WATER AND MINERALS

OVERVIEW

This chapter discusses water, major minerals, and trace minerals. The nature and general properties of water, specific functions, needs, and thirst are addressed. Mineral bioavailability and nutrient interactions are explored. Major minerals such as sodium, potassium, chloride, calcium, phosphorus, magnesium, and sulfur are discussed in context of absorption, functions, food sources, requirements, and health implications (i.e., deficiency and toxicity). A Looking Further section examines minerals and their relationship to hypertension including causes of hypertension, effect of salt and other minerals on blood pressure, prevention of hypertension, and medications to treat hypertension. Trace minerals including iron, zinc, selenium, iodide, copper, fluoride, chromium, manganese, and molybdenum are covered. A variety of other vital trace minerals are briefly discussed. Specific functions, food sources, deficiency and toxicity symptoms, and requirements or recommendations for intake are given for each of the eight trace minerals. The effect of calcium, other nutrients and other factors on bone health is highlighted in the Looking Further section.