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Introduction; X-Ray Fluorescence Analysis; Preservation of In Vitro Samples; Choice of Analyzed Volume; Positioning; Calibration; Radiation Dose; Summary Points; References; Chapter 4. Plasma Analytes for Determination of Thyroid Status; Abstract; List of Abbreviations

IntroductionThyroid Hormone Secretion; Measurement of Thyroid Hormones; Thyroid-Stimulating Hormone; Investigation of Cause and Monitoring of Treatment; Tests Reflecting the Actions of Thyroid Hormones on Body Tissues; Tests not Used as Part of Routine Clinical Practice; Summary; References; Chapter 5. Interpretation of Thyroid Function Tests and Their Relationship to Iodine Nutrition: Changes in TSH, Free T4 and Free T3 Resulting from Iodine Deficiency and Iodine Excess; Abstract; Abbreviations; Introduction; General Interpretation of Thyroid Function Tests

Thyroid Function Tests in Iodine DeficiencyThyroid Function Tests in Iodine Excess; Effect of Iron Deficiency on Iodine and Thyroid Function; Summary Points; References; Chapter 6. Thyroglobulin as an Indicator of Iodine Intake; Abstract; Abbreviations; Introduction; Thyroglobulin: The Major Iodoglycoprotein of the Thyroid Gland; Determination of Circulating Thyroglobulin; Thyroglobulin and Iodine Intake; Our Population Studies Concerning Iodine Intake and Serum Tg Concentrations; Summary Points; Acknowledgment; References Chapter 7. Computer Systems for Monitoring Effects of Iodine/Thyroid Status in PopulationsAbstract; Abbreviations; Introduction; TSH Screening in Neonates; Hospital Records; Example of Record Linkage; Example of a Specific Register Database; Summary Points; References; Section 2: General Aspects of Iodine Sources and Intakes in the Diet, Main Routes of Iodine Metabolism and Metabolic Roles; Section (2.1) Iodine Cycle and Chemistry; Chapter 8. Iodine in the Air: Origin, Transformation and Exchange to Mammals; Abstract; Abbreviations; Introduction; Sources and Measurements of Atmospheric Iodine Photolysis and Gas-Phase Iodine Chemistry

Sommario/riassunto

Over two billion people worldwide are at risk for the spectrum of disorders known as "The Iodine Deficiency Disorders." 1-10% will suffer cretinism; 5-30% will have some sort of brain damage or neurological impairment and 30-70% will be hypothyroid. The causes of iodine deficiencies can be considered from both simplistic and more complex perspectives: From the leaching of iodine from soil resulting in crops with low iodine content to malnutrition resulting in impaired iodine absorption. Poor dietary diversification and impoverished socio-economic development can also lead to iodine
