



Essentials of Medical Geology

Impacts of the Natural Environment on Public Health

Editor-in-Chief

Olle Selinus, *Geological Survey of Sweden*

Associate Editors

Brian Alloway, *The University of Reading, UK*

José Centeno, *The Armed Forces Institute of Pathology, USA*

Robert Finkelman, *United States Geological Survey, USA*

Ron Fuge, *University of Wales, UK*

Ulf Lindh, *Research in Metal Biology, Uppsala University, Sweden*

Pauline Smedley, *British Geological Survey, UK*

Key Features:

- Addresses key topics at the intersection of environmental science and public health
- Developed by 60 experts from 20 countries and edited by professionals from the International Working Group on Medical Geology
- Includes 200+ color photographs and illustrations, chapter introductions and references for further reading, and an extensive glossary
- Written for a broad audience, ranging from students, researchers, and medical professionals to policymakers and the general public

New!

Medical geology is an emerging discipline, fostered by a collaboration of health professionals and earth scientists who are working to formulate broader environmental insights into the origin, development, and prevention of disease. The International Working Group on Medical Geology has developed this authoritative and comprehensive work to review relationships between geological processes and the health and diseases of humans and animals.

Essentials of Medical Geology can serve as both a reference and course book. Written by authorities from twenty countries, it conveys the essential concepts and practical tools required to recognize and tackle environmental health problems across the globe. The chapters are organized into four main sections, allowing users to read from beginning to end or quickly turn to a particular topic. The sections review the basics of environmental biology, trace the origins and flow of toxic elements in the environment that lead to exposure, review the medical effects of this exposure, and outline tools and techniques for conducting environmental health investigations.

January 2005, ISBN: 0126363412, Hardback, 812 pp., List Price: \$99.95

Contents:

1. Medical Geology: Perspectives and Prospects
- SECTION I: Environmental Biology**
2. Natural Distribution and Abundance of Elements
3. Anthropogenic Sources
4. Uptake of Elements from a Chemical Point of View
5. Uptake of Elements from a Biological Point of View
6. Biological Functions of the Elements
7. Geological Impacts on Nutrition
8. Biological Responses of Elements
- SECTION II: Pathways and Exposures**
9. Volcanic Emissions and Health
10. Radon in Air and Water
11. Arsenic in Groundwater and the Environment
12. Fluoride in Natural Waters
13. Water Hardness and Health Effects
14. Bioavailability of Elements in Soil
15. Selenium Deficiency and Toxicity in the Environment
16. Soils and Iodine Deficiency
17. Geophagy and the Involuntary Ingestion of Soil
18. Natural Aerosolic Mineral Dusts and Human Health
19. The Ecology of Soil-borne Human Pathogens
20. Animals and Medical Geology
- SECTION III: Environmental Toxicology, Pathology, and Medical Geology**
21. Environmental Epidemiology
22. Environmental Medicine
23. Environmental Pathology
24. Toxicology
25. Speciation of Trace Elements
- SECTION IV: Techniques and Tools**
26. GIS in Human Health Studies
27. Investigating Vector-Borne and Zoonotic Diseases with Remote Sensing and GIS
28. Mineralogy of Bone
29. Inorganic and Organic Geochemistry Techniques
30. Histochemical and Microprobe Analysis in Medical Geology
31. Modeling Ground Water Flow and Quality
- APPENDICES**
- A. International Reference Values
- B. Web Links
- C. Glossary
- Index



Order from your favorite bookseller, or directly from Elsevier:

- Call: 1-800-545-2522
- Fax: 1-800-568-5136
- Mail: Elsevier, Order Fulfillment, DM 81809, 11830 Westline Industrial Dr., St. Louis, MO 63146, USA
- Email: usbkinfo@elsevier.com

To request a review copy for a course, visit books.elsevier.com/textbooks or email textbook@elsevier.com

books.elsevier.com/earthscience