

Introduction to Medical Geology

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Preface

The emerging scientific discipline of Medical Geology has fascinated both scientists and laymen alike in view of its highly interdisciplinary nature. Medicine and Geology indeed form a truly awe inspiring scientific combination. The geosphere-biosphere interactions form an integral part of Medical Geology and some of its impacts cover millions of people the world over. From among these, those living in the tropical environments are particularly vulnerable to the effects of “geo-bio” relationships.

Tropical environments are unique from the point of view of their climate, soil characteristics, trace element deficiencies and enrichment, mineral imbalances, extreme cases of rock weathering and leaching out of nutrients, agricultural calamities among others. Millions of people living in these geologically and geochemically unique environments serve as classic examples of human beings who live in intimate contact with the geo-environment and whose general health characteristics are markedly influenced by the geochemistry of the rocks, soils, water and plants found in their habitats. The influence of geochemistry on human and animal health is therefore best seen in the tropical environment. Medical Geology, as a scientific discipline has derived immensely from the earlier studies of the lands of the tropical belt of the world.

The extreme scarcity of text books covering the subject of Medical Geology is understandable in view of its very recent origin as a scientific discipline. It is the aim of this book to introduce the subject to students and researchers both in the fields of Medicine and Geology interested in geosphere-human interactions. It is clear that the geosphere does influence human health to a marked degree and it is up to the scientists to track the pathways of the disease - causing substances and elements originating from the geosphere and how they cross the biological barriers and enter the human body.

This book illustrates some interesting case studies of such geo-bio interactions affecting a very large population of the world. Throughout the book, the focus is on tropical environments and the impact of Medical Geology

on millions of people, the vast majority of them living in developing countries of the tropical belt.

It should be emphasized that this book deals only with the relationship between natural geological factors and health in man and animals. As an introductory text it is not intended to deal with the medical aspects of the diseases mentioned in any great detail.

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