## THE GIFT OF THE EARTH TO MEDICINE:

Minerals in Health and Disease

A Source Book for Doctors and Patients Foreword by Dr. Abram Hoffer

> Klaus-Georg Wenzel Raymond J. Pataracchia

## FOREWORD BY ABRAM HOFFER

The vast importance of trace elements in maintaining health in all living tissue was recognized several hundred years ago when the role of iron was understood. Over the past 100 years, the roles of all the trace elements, their properties and side effects, how much must be used, and the dangers of taking too much have been discovered. Adding iodide to ordinary table salts prevents epidemics of goiter caused by soils that are terribly deficient. Agriculturists, botanists and anyone who loves to grow flowers knows about the importance of these trace elements to their plants. Plants are happy if provided with a place in which to grow, with water, sunlight and minerals, which they cannot make. They can make everything else that they need. Animals from the lowest protozoa to humans are equally dependent on minerals, which must be provided. We cannot make minerals nor can we make a small number of organic substances called vitamins. By freeing ourselves of the need to make everything, by learning that we can eat plants that have what we need (food), we have gained mobility and speech but we have become dependent on plant forms for the minerals, vitamins and essential fatty acids. We know how important minerals are, especially calcium related to osteoporosis, iron for our hemoglobin, and iodine for our thyroid glands, but we still have not realized the vast importance of other trace minerals such as selenium in dealing with viral infections, and zinc and copper in dealing with some psychoses. This very good book summarizes the properties of 39 minerals, the good as well as the bad.

Over the past 30 years I have reviewed several hundred books in this new field of nutritional medicine. Of these, two dealing with minerals stand out: the first by Carl Pfeiffer, called Mental and Elemental Nutrients published in 1975, and this one. This book is well organized and reads well. For each mineral the left hand page lists the normal daily requirements, functions, therapeutic applications, negative biological effects and sources. And on the right hand page we find discussions of how each mineral works, why it is needed and so on. As an example, selenium. The review of selenium by the authors is comprehensive. I selected selenium because its importance in dealing with viral epidemics such as HIV has not yet been recognized.

These two authors tell us that selenium was discovered in 1817 and was first used for treating inoperable tumors in the 1930's and 1940's with success. In 1957, it was proven to be essential. Its usefulness is becoming increasingly recognized. In Finland, selenium has been added to grain since

1984. 200 µg is about the daily requirement. I use up to 1000 µg as part of the treatment for cancer. Deficiency arises on water-washed soils, which have benefited the oceans by transferring selenium from the land to the sea. Its deficiency is implicated in a number of conditions, which I think ought simply to be called selenium deficiency diseases. In China, for example, its absence causes Keshan disease. Selenium is needed for the immune system; it has antioxidant properties; and more. It is a component of glutathione peroxidase, an essential enzyme in the body. It is necessary for production of thyroid hormone. Toxicity in small doses has been exaggerated in the past but it is now recognized that there is no toxicity in the recommended dose range.

I do recommend that every person dealing with health have this book in his or her library and by his or her side. Physicians who pay attention to the properties of these minerals and use them in their practices will be surprised and pleased at how much better their patients will be.

Dr. Abram Hoffer, M.D., Ph.D.