

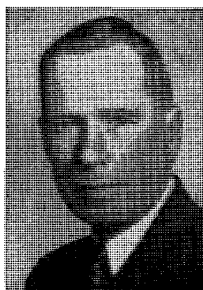
The Significance Of Sea Salt

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The sodium chloride commonly used as table salt is a refined chemical. Natural food products are seldom found in a natural refined state. Salt is an exception to this general rule.



When a sea salt dries up, as at Salt Lake City, Utah, the sodium chloride is the first to separate by crystalization. Rainfall aids in washing and draining away the residual salts and impurities, leaving a relatively refined sodium chloride. Man-made salt from sea water is similarly "purified" by the same natural process, so it is erroneous to consider the resulting product as "whole sea salt."

Sea water components

The major components of sea water salts, according to the order of magnitude of these elements rather than their relative nutritional value, are as follows:

Chlorine	55.2%
Sodium	30.4%
Sulfur (as SO ₄)	7.7%
Magnesium	3.7%
Calcium	1.16%
Potassium	1.1%
Carbon (as carbonic acid and CO ₂)35%
Bromine19%
Boron (as H ₂ BO ₃)07%
Strontium04%

The so-called "minor elements" in sea water include 40 more elements which, no doubt, contain every known or unknown trace element of nutritional significance. In the major listing above, the outstanding nutritional mineral elements are calcium, potassium, magnesium and sulfur compounds. We will discuss these

in terms of their deficiency in the American diet.

Calcium deficiency (complicated by other deficiencies, of course) results in our three billion dollar bill for dental repairs each year, loss of teeth from pyorrhea, premature broken hips, poor coagulation of blood and chronic fevers in children. The host of nervous conditions aggravated by this deficiency of calcium has created a market for the many new tranquilizers which are constantly being invented.

Potassium is also commonly deficient in our refined foods. This also results in a predisposition to hyperirritability or "nervousness," the timing mechanism of the heart and nervous system in general being under the influence of potassium. Also and as well, this element is important in muscular contraction and in utilization of carbohydrates. Disturbances in fluid balance, i.e., weight loss through dehydration, are common manifestations of potassium deficiency.

Magnesium and sulfur

Magnesium deficiency is not recognized as fully as it should be. Dr. Wm. A. Albrecht, in his book *Soil Fertility and Animal Health*, relates how calves, dying of convulsion, were found to be trying to eat the finish coat of plaster from the barn walls (the first plaster coat was not mutilated or eaten). Chemical analysis of the plaster used as finish showed that it contained 54% calcium carbonate and over 45% magnesium carbonate. When the feeding practices were changed to include these nutritional elements, not only were the walls free from mutilation, but there was increased thirst and alertness, scours cleared from the older calves, mastitis (inflammation of the cow's udder), which had been present as high as 50%, disappeared, and the

disagreeable odor of the barns became less. Correction of the deficiency in the soils resulted in improved corn plants; the grain yields were increased; and the alfalfa went through the winter better.

Sulfur is an element required in the detoxication of certain waste products of metabolism in the body. It is not overly available in common foods — at least, not in the form of calcium sulfate as found in sea water. At the Colorado Agriculture Experiment Station in 1947, it was determined that by feeding lambs supplementary elementary sulfur, the losses from enterotoxemia (toxins arising from the intestinal tract) were reduced from 8.2% to less than 1%. . . . Grandmother was sound, no doubt, with her spring fever remedy of sulfur and molasses — or as minerals go, sulfur and potassium.

Batteries and telephones

Apparently, to be healthy, we need sea water or its minerals. In the Pacific Northwest where rainfall is high, almost all soluble minerals have been washed out to the sea. Water from the Columbia River has for many years been used by Portland, Oregon's filling stations as distilled water in car batteries. We have been told that telephone companies in that area have many customers who insist on light signals on phones instead of bells. The reason for this is that people are jumpy and nervous, like test animals lacking magnesium, that go into convulsions if frightened by sudden noises. Diseases like multiple sclerosis seem to be more common there, possibly due to the greater deficiency of sulfur.

Careful tests in feeding pigs, at Rutgers University, showed that unrefined sea salt caused a growth one-sixth greater in the test lot, over that in the control group where the feed was identical except for use of refined salt. What farmer could afford to lose one-sixth of his gross income by using the wrong salt? Taken the country over, this loss would be an astronomical sum. ◆

