Study and Characteristics of Drinking Water Constituents and Disease in Baghpat Region

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Several epidemiological investigations over the last 50 y have demonstrated a relation between risk for cardiovascular disease and drinking water hardness or its content of magnesium and calcium. An additional parameter, first suggested in a study from Japan 50 y ago, is the acidity of the water. It is known that acid load influences the reabsorption of calcium and magnesium in the renal tubuli. Intervention studies have shown that acid-base conditions influence the homeostasis of minerals. Data from intervention studies using magnesium, calcium, and hydrogen carbonate are reviewed. It is suggested that the health effects related to drinking water found in some studies may be caused by an increased urinary excretion of minerals induced by acid conditions in the body and that drinking water should contain sufficient amounts of hydrogen carbonate to prevent this effect.

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