Appendix I. A brief history of the beginnings of the Mg Hypothesis of Cardiovascular Disease:

In 1936, Greenberg and colleagues showed that Mg deficiency in animals caused myocardial degeneration with fibrosis. In 1938, L. A. Moore and colleagues reported that Mg deficient calves displayed atherosclerotic lesions with **calcification** in aortas and some hearts. In 1957, researchers at Harvard reported that male rats fed an atherogenic diet for only 24 – 26 days (Vitale et al., 1957; Hellerstein et al., 1957; Vitale et al., 1959) developed a low serum Mg (Mg deficiency) along with **calcium deposition** in kidney tubular lesions that could be wholly prevented by feeding the animals 8 to 16 times their normal requirement of Mg. These animals also developed early atherosclerotic lesions in the heart valves and aortas which could be diminished but not totally abolished with exceedingly high dietary levels of Mg. This atherosclerotic diet was high in cholesterol and fat. Such atherosclerotic lesions had previously been seen in animals fed a severely Mg deficient diet (see review of Bajusz, 1965).

In addition to the above findings, early studies from 1957 through the 1990s also showed low water/soil Mg correlating with high rates of sudden cardiac death rates and ischemic heart disease in several countries. (Kobayashi, J. 1957; Seelig & Rosanoff, 2003 pp 303-307). In confirmation, recent epidemiological studies have inversely related both serum magnesium levels (Leone et al., 2006) and magnesium levels in drinking water to cardiovascular death rates (Catling et al., 2008; Monarca et al., 2003, 2006).

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See PDF file for the Vitale et al abstract from the 1957 Fed Proc.