Later studies conducted in humans showed a correlation between low magnesium levels and cardiovascular diseases and deaths, based on data from the National Health and Nutrition Examination Survey Epidemiologic Follow-up Study (NHANES) in the USA Likewise, another study conducted on northern German population showed that hypomagnesemia is a significant independent risk factor of all-cause and cardiovascular mortality after adjustment of other well-known cardiovascular risk factors including hypertension and diabetes (An *et al.*, 2014).

Therefore, Mg^{+2} supplementation can bring about a significant decrease in blood pressure and a stabilization of cardiac arrhythmias and acute myocardial infarction (Chakraborti *et al.*, 2002).

A more recent stratified study that investigated a pool of other studies and included a total of 313,041 individuals in whom 4106 CVD,3215 IHD, and 1528 fatal IHD events were documented for circulating magnesium and 7889 CVD, 4319 IHD, and 1158 fatal IHD events for dietary magnesium, provides the most robust evidence to date of the associations between circulating and dietary magnesium across their usual physiologic ranges and CVD risk. The study showed a significant association between both circulating and dietary magnesium levels and risk of CVD. Specifically, circulating magnesium (per 0.2-mmol/L increment) was associated with a 30% decrement in the risk of CVD, with trends toward a lower risk of IHD and fatal IHD. Additionally, dietary magnesium was shown to be associated with a 22% lower risk of IHD and showed a non-linear association with fatal IHD, with a 27% lower risk up to a threshold of w250 mg/d, compared with lower intakes (Del Gobbo *et al*., 2013).