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Supplementation with alkaline minerals reduces symptoms in patients with chronic low back pain.

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The cause of low back pain is heterogeneous, it has been hypothesised that a latent chronic acidosis might contribute to these symptoms. It was tested whether a supplementation with alkaline minerals would influence symptoms in patients with low back pain symptoms. In an open prospective study 82 patients with chronic low back pain received daily 30 g of a lactose based alkaline multimineral supplement (Basica) over a period of 4 weeks in addition to their usual medication. Pain symptoms were quantified with the "Arhus low back pain rating scale" (ARS). Mean ARS dropped highly significant by 49% from 41 to 21 points after 4 weeks supplementation. In 76 out of 82 patients a reduction in ARS was achieved by the supplementation. Total blood buffering capacity was significantly increased from 77.69 +/- 6.79 to 80.16 +/- 5.24 mmol/L (mean +/- SEM, n = 82, p < 0.001) and also blood pH rose from 7.456 +/- 0.007 to 7.470 +/- 0.007 (mean +/- SEM, n = 75, p < 0.05). Only intracellular magnesium increased by 11% while other intracellular minerals were not significantly changed in sublingual tissue as measured with the EXA-test. Plasma concentrations of potassium, calcium, iron, copper, and zinc were within the normal range and not significantly influenced by the supplementation. Plasma magnesium was slightly reduced after the supplementation (-3%, p < 0.05). The results show that a disturbed acid-base balance may contribute to the symptoms of low back pain. The simple and safe addition of an alkaline multimineral prepartate was able to reduce the pain symptoms in these patients with chronic low back pain.