



## THE BENEFITS OF MICRONUTRIENTS IN HEALING BONE FRACTURES

Bone fractures are one of the most painful injuries and require a lengthy recovery time. Everyone is at an equal risk of breaking a bone either from a fall, sports activities, or a car accident. However, bone fractures are more common and take longer to heal in people suffering from osteoporosis.

The most common bone fracture, especially in active adults and children, is a broken leg and often involves a tibial (or shinbone) fracture. In the US, approximately 492,000 tibial fractures are reported every year resulting in close to 400,000 hospital days. The usual time for healing a tibial fracture could be as long as 12 to 16 weeks. This is due to a high incidence of complications requiring strong painkillers for the patient.

A common perception is that vitamin D and calcium are the only nutrients needed for healthy bones or that they aid in the fracture healing process. However, this overlooks the fact that calcium and other minerals which contribute to building bones, are deposited on a basic framework made of collagen protein. It is essential to have strong and healthy collagen for bones to be formed and function properly. Healthy bone formation depends not only on sufficient amounts of calcium and vitamin D, but more importantly on a proper supply of collagen-supporting micronutrients such as vitamin C, the amino acids lysine and proline, and others. Since the human body cannot produce vitamin C and lysine internally, the deficiency of these critical nutrients is very likely. If there is any pre-existing deficiency of these nutrients, then it is further deepened by the stress associated with a fractured bone.



The Dr. Rath Research Institute conducted a randomized double blind placebo-controlled clinical trial involving 131 patients with tibial shaft fractures. The ages of the patients ranged from 15-75 years old. They were randomly placed in two groups to evaluate their fracture healing time. One of the groups received a specific combination of micronutrients that support healthy collagen production. Their supplement contained vitamin C, lysine, proline, and vitamin B6. The other group of patients served as the control group and received placebo (sugar) pills.

We observed that the group of patients taking essential micronutrients experienced faster fracture healing. Their fractures healed in 14 weeks, while it took 3 weeks longer for the patients taking the placebo to experience similar healing. In addition, in about 25% of the patients in the supplemented group the bone fractures healed in as early as 10 weeks, while this was noted in only 14% of the patients in the control group. Additionally, the patients in the supplemented group also reported improved well-being.

Our study shows that a frequently missing factor in bone health – healthy collagen – plays an important role in optimum healing of bone fractures. A simple supplementation with specific micronutrients could greatly reduce healing time and patient suffering as well as lessen the economic burden on patient families and the healthcare system.

*\*J. Jamdar, et al., Journal of Alternative and Complementary Medicine 2004, 10 (6): 915-916.*

This information is provided to you by the Dr. Rath Research Institute a leader in the breakthrough of natural health research in the field of cancer, cardiovascular disease and other common diseases. The Institute is a 100% subsidiary of the non-profit Dr. Rath Foundation.

The ground-breaking nature of this research poses a threat to the multi-billion dollar pharmaceutical “business with disease”. It is no surprise that over the years the drug lobby has attacked Dr. Rath and his research team in an attempt to silence this message. To no avail. During this battle, Dr. Rath has become an internationally renowned advocate for natural health. Says he: “Never in the history of medicine have researchers been so ferociously attacked for their discoveries. It reminds us that health is not given to us voluntarily, but we need to fight for it.”

This information is based on scientific research results. It is not intended to substitute for medical advice to treat, cure, or prevent any disease.  
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