



## MICRONUTRIENTS YOU RARELY CONSIDER IN **HEALING** BONE FRACTURES

Everyone is at risk of fracturing a bone from a fall, sport activities, or a car accident and it is all the more likely to happen to people suffering from osteoporosis. Bone fractures are one of the most painful injuries and require a lengthy recovery time.

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 is 12 to 16 weeks. However, this is often delayed due to a high incidence of complications requiring strong painkillers for the patient. In European countries, osteoporosis related hip fractures were reported to be 620,000 according to a 2010 report.

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 the framework of the bone on which calcium and other minerals are deposited is made of protein – collagen. Without healthy collagen, bone cannot form 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 vitamin C, the amino acids lysine and proline, and other collagen supporting micronutrients. Since the human body cannot produce vitamin C and lysine internally, the deficiency of these critical nutrients is very likely and can be further depleted by stress associated with a bone fracture.

In a randomized double blind placebo-controlled clinical trial\* involving 131 patients with tibial shaft fracture, we evaluated the effect of supplementation with collagen building micronutrients on



Broken bone



Significant healing seen at 10 weeks with micronutrients

the fracture healing time. The ages of study participants ranged from 15 to 75. We observed that the group of patients taking essential micronutrients containing vitamin C, lysine, proline, and vitamin B6 experienced faster fracture healing. Their fractures healed in 14 weeks, while it took 3 weeks longer for the patients taking the placebo (sugar pill) 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. The patients in the supplemented group also reported improvements in a general feeling of well-being.

This 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.*

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A free copy of the **full study text** is available at: [www.drrathresearch.org/pub/pdf/hsns1415.pdf](http://www.drrathresearch.org/pub/pdf/hsns1415.pdf) and a **short summary** is available at: [www.drrathresearch.org/pub/pdf/hnsa1415.pdf](http://www.drrathresearch.org/pub/pdf/hnsa1415.pdf)

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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.”

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