# Vitamin D deficiency rampant in patients undergoing orthopedic surgery, damaging patient recovery

October 6 2010

Almost 50 percent of patients undergoing orthopedic surgery have vitamin D deficiency that should be corrected before surgery to improve patient outcomes, based on a study by researchers at Hospital for Special Surgery (HSS) in New York City. Vitamin D is essential for bone healing and muscle function and is critical for a patient's recovery. The study appears in the October issue of *The Journal of Bone and Joint Surgery*.

"In the perfect world, test levels, fix and then operate," said Joseph Lane, M.D., professor of Orthopedic Surgery and chief of the Metabolic Bone Disease Service at HSS, who led the study. "If you put people on 2,000-4,000 [micrograms] of vitamin D based on what their deficient value was, you can usually get them corrected in four to six weeks, which is when you are really going to need the vitamin D. If you are really aggressive right before surgery, you can correct deficient levels quickly, but you have to correct it, measure it, and then act on it."

According to Dr. Lane, bone remodeling or bone tissue formation, a part of the healing process, occurs about two to four weeks after surgery. This is the critical stage when your body needs vitamin D.

For their study, investigators conducted a retrospective chart review of 723 patients who were scheduled for orthopedic surgery between January 2007 and March 2008 at HSS. They examined the vitamin D

levels, which had been measured in all patients before their surgery, and found that 43 percent had insufficient vitamin D and 40 percent had deficient levels.

Vitamin D inadequacy was defined as