

# Shedding Light on Osteoporosis

*Sunscreens and sun avoidance may be contributing to bone disease*

**By John C. Pittman, M.D.**

Over the past 20 years, clinical studies have indicated a steady rise in the occurrence of osteoporosis. The most significant factor being found to contribute to this statistic is nutritional. Calcium has always been considered the primary nutrient in promoting bone health. Ensuring adequate dietary intake is still a critical step, but has been a challenge as fewer adults consume dairy products due to allergies and lactose intolerance. Food sources, such as dark green vegetables, are generally lacking in the typical American diet. Compound these with the regular intake of carbonated beverages (which contain phosphorous) and the result is calcium loss.

Vitamin D is manufactured naturally from exposure to sunlight, but many factors have contributed to the reduced levels of Vitamin D in the average individual. Most notably are the decreased amount of time spent in the sun, the use of high quality sunscreens, and the lack of intake of dietary sources.

Evidence indicates that both calcium and Vitamin D are beneficial in protecting the skeleton, particularly when these two nutrients are used in combination. Each nutrient is necessary for the full expression of the effect of the other and where their actions are independent, their effects on skeletal health are complementary. Nutrient status for both tends to be deficient in the adult population of the industrialized nations; hence, supplementation or food fortification with both nutrients is appropriate and, given contemporary diets and reduced sun exposure, probably necessary.

*The American Journal of Clinical Nutrition* has published a series of studies over the last two years cementing our understanding of the role of Vitamin D and calcium in their role in bone health. The conclusions include:

- “Weight loss is associated with bone loss, but overweight pre-menopausal women do not lose bone during weight loss when taking adequate calcium and Vitamin D.” – April 2007
- “The prevalence of low Vitamin D in the general population is alarmingly high, especially during the winter and spring months, with fewer individuals achieving optimal levels in the summer and fall months.” – March 2007
- “Supplementation with calcium and Vitamin D enhances weight loss and improvement of plasma lipid levels.” – January 2007
- “Recent evidence suggests that Vitamin D intake above current recommendations (200 IU for younger adults and 600 IU for older adults) may be associated with better health outcomes. The best blood concentration is above 40 ng/ml, a concentration that generally cannot be reached with the current recommended intake. A minimal intake of 1000 IU for all adults is needed to bring half the population to the ideal level.” – July 2006

Many of these studies have been published in response to the enormous pressure put on physicians to prescribe bisphosphonate drugs to treat osteoporosis. This class of medications includes brands such as Fosamax and Boniva, which are used to slow the breakdown of bone, something that is important for normal bone remodeling. While these medications can be very helpful in slowing down degeneration of bone, they are not helpful in rebuilding bone. Nutritional therapies provide the greatest benefit for this purpose, but because nutritional supplements are not as profitable to pharmaceutical companies, there is no effort to educate physicians in their use.

Based on these studies, the recommended process for assessing and treating bone health consists of the following:

1. Initial blood testing for Vitamin D, calcium, and parathyroid hormone.
2. Bone density scan to determine baseline status if not done within three years.
3. Initiation of Vitamin D using cholecalciferol (Vitamin D3).
4. Calcium supplementation along with magnesium
5. Follow-up lab testing in six months to assess response to treatment.
6. Bone density scans performed annually if diagnosed with osteoporosis.

Health care professionals need to be aware of the importance of Vitamin D and calcium and that laboratory monitoring is necessary to determine if intake is adequate. It's not just about our bones anymore. Numerous other benefits have been attributed to optimization of these two important nutrients.

### **About the author:**



**John C. Pittman, M.D.** received his B.S. in biology in 1980 and completed studies for a M.S. in biochemistry and microbiology at the University of Georgia in 1982. He received his M.D. degree from Mercer University in Macon, Georgia in 1986 and attended the Pediatric Residency Program at NC Baptist Hospital in Winston-Salem, North Carolina with an interest in Preventive Medicine.

Dr. Pittman began working as an Emergency Physician and was Emergency Department Director in Rocky Mount and Southport, North Carolina. It was in the Emergency Room setting that he realized how much lifestyle issues—especially diet and nutrition—were playing significant roles in the health of the patients he saw. Prompted by this, Dr. Pittman began exploring avenues of incorporating conventional and holistic medicine with nutrition into a clinical medical practice. In 1994, he established The Carolina Center, a facility where multiple healing modalities were brought together to help patients with chronic degenerative illnesses.

Dr. Pittman is the only local physician fully certified in chelation therapy for the treatment of heavy metal toxicity and only one of six medical practitioners in the state of North Carolina who is a Diplomate through the American Board of Clinical Metal Toxicology.