

## Why 25-dehydroxyvitamin D is a negative acute-phase reactant

**To the Editor:** In previous publications, we presented evidence that 25-dehydroxyvitamin D (25[OH]D) in serum behaves as a negative acute-phase reactant, ie, that its concentration decreases in the presence of inflammatory states.<sup>1,2</sup> Low levels may thus reflect low vitamin D stores or inflammation, complicating the clinical interpretation of test results.

We have recently become aware of the mechanism underlying this phenomenon: less than 1% of circulating 25(OH)D exists in unbound form, and the majority is tightly bound to vitamin D binding protein, while 10% to 15% is bound to albumin. Both are negative acute-phase proteins.<sup>3–5</sup> As the serum concentrations of these proteins decrease, so does that of 25(OH)D. Similarly, the positive acute-phase behavior of copper is explained by the fact that it is bound to ceruloplasmin, a positive acute-phase protein.<sup>6</sup>

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