

Clin Chem. 1995 Apr;41(4):515-8.

## Significance of low serum alkaline phosphatase activity in a predominantly adult male population.

Lum G<sup>1</sup>.

### Author information

<sup>1</sup>Pathology and Laboratory Medicine Service, Brockton/West Roxbury Veterans Affairs Medical Center, Boston, MA, USA.

### Abstract

The causes for low serum alkaline phosphatase (ALP) activity (reference range 30-115 U/L) in a large Veterans Medical Center were reviewed. Of 69,864 ALP determinations made over a 4-year period, 130 were low (< 30 U/L, 0.19%), representing 88 individual patients. Of these, 83 (primarily men, 96%) patients' charts were reviewed and classified into two groups, those with and those without conditions previously reported to be associated with decreased serum ALP activity: 47% had conditions associated with low ALP activity, the most frequent being cardiac surgery and cardiopulmonary bypass (26.5%), malnutrition (12.0%), magnesium deficiency (4.8%), hypothyroidism (2.4%), and severe anemia (1.2%); 53% of patients did not have clinical conditions previously associated with low ALP activity. No case of clinically apparent hypophosphatasia, for which low ALP activity is the defining characteristic, was found in this population of veterans. A low serum ALP may be of significance in other patient populations such as children, where it is associated with achondroplasia and cretinism, or in postmenopausal women with osteoporosis taking estrogen replacement therapy. In the predominantly adult male population in this study, low ALP activity was rare; it was seen most frequently in cardiac surgery patients postoperatively, a clinical condition heretofore not commonly associated with low serum ALP activity.

PMID: 7720239 [PubMed - indexed for MEDLINE] [Free full text](#)

