

## Vitamin D deficiency in people with musculoskeletal pain of unknown origin

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### Abstract

**Introduction:** vitamin D deficiency is cause of in bone diseases such as rickets in children and osteomalasia in adults. It can result in bone pain and myalgia. Since vitamin D deficiency is prevalent in Iran population, it will be useful to determine the relation between vitamin D deficiency and musculoskeletal of pain.

**Materials and Methods:** Subjects were 20 to 69 years-old men and women of Tehran. Persons who had diseases such as rheumatoid arthritis, hyper or hypothyroidism, Parathyroidism and adrenal, diabetes mellitus, renal failure, aggressive hepatic failure and every kind of cancers, were excluded. Study participants were selected with gathering the data of all first- labors in Tehran. Blood sample was taken from all participants to measure serum vitamin D, PTH, Ca, P and Alk- ph. Candidates were invited for evaluation of bone density in BMD ward of Endocrinology and Metabolism Research Center. Data was analyzed with SPSS (11.5). T- Test was used to measure the difference between mean values, whenever possible; data was analyzed with nonparametric statistics.  $\chi^2$ - test was used to compare the frequency of variables. P-values less than 0.05 were considered as significant.

**Results:** 1229 persons were invited to undergo bone densitometry. 124 persons were excluded because of having one of the excluding criteria.

After 3 times calling and face to face following, 830 out of 1105 persons (75.1%) took part in this study. 50% of women with continuous bone pain had some degrees of vitamin D deficiency ( $p=0.015$ ). severe vitamin D deficiency was more prevalent in women over 50 complaining of pain, than the others ( $p=0.034$ ).

**Conclusion:** several degrees of vitamin D deficiency are shown in people with complains of unknown origin skeletal pain. Vitamin D supplements and food fortification with vitamin D will be helpful in reliving these kinds of pains.

**Key Words:** vitamin D, calcium, muscular pain, skeletal pain

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