

## The effect of estrogen and or calcium-vitamin D3 on the mandibular height of post ovariectomized wistar rats

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### Abstrak

One of the major health problems in elderly women is osteoporosis post menopause. Dentists must be aware of the disease since its involvement on the jaw. Nowadays, there are a lot of researches on correlation of osteoporosis and mandible but only few concentrate on hormonal substitution therapy and/or Calcium-vitamin D3 (Ca-vit D3). This research is to evaluate the effect of hormonal substitution therapy and/or Ca-vit D3 on mandibular height. Forty five rats are used in this research and divided into nine groups: one control group, two ovariectomized (OVX) groups, two OVX groups treated with estrogen, two OVX groups treated with Ca-vit D3, two OVX groups treated with estrogen and Ca-vit D3. All of the rats except the control groups were ovariectomized as model for pstmepausal estrogen deficiency state. The treatment was done in two or four weeks. The animals were killed with cervical discoloration, the mandible were excised and soaked on Hydrogen Peroxide 10%. Then the mandible's heights on right buccal side were measured from the mandibular base to the alveolar crest. It is concluded that hormonal substitution therapy and combination of the hormonal substitution therapy and Ca-vit D3 can maintain the normal mandibular height. Mandibular height of groups with therapy using Ca-vit D3 have slightly lower means compared to control group but without significant difference statistically. The best therapy is combination of hormonal substitution therapy and Ca-vit D3.