

- Document Type** : Thesis
- Document Title** : *Effect of Different Vegetable Oils on the Activities of ATPase Enzymes in Rat Heart Muscles*
تأثير أنواع الزيوت النباتية المختلفة على نشاطية إنزيمات الـ ATPase في عضلة قلب الجرذ
- Document Language** : Arabic
- Abstract** : Inhabitants of Saudi Arabia consume different types of oils from plant and animal origin. With increasing health awareness, people are avoiding oils from animal sources in an attempt to decrease their intake of cholesterol and depending on oils from plant origin only. We dont have enough studies on the effect of vegetable oils on various body functions. Since different oils contain different composition of fatty acids it will be interesting to study the effect of common vegetable oils consumed in Saudi Arabia on cardiac function by studying the cardiac enzymes, lipid profile, important minerals for cardiac health such as Ca⁺⁺ and Mg⁺⁺ and also the cardiac membrane fluidity by determining the activities of Na⁺, K⁺ - ATPase and Ca⁺⁺ -ATPase in animal model. Histological study on aorta was performed to confirm our biochemical results. In this study, seventy males Wistar rats, aged 3 months, were divided into seven groups of 10 rats each. One group was used as control. Six different plant oils (coconut, palm, olive, corn, sunflower and soybean oils) consumed in Saudi diet were given to test groups by mixing with the diet (olive oil was giving cold while other oils were heated up to 200?? then cooled before giving to the rats) at a concentration 10%,(w/w). This study concludes that Na⁺, K⁺ -ATPase and Ca⁺⁺- ATPase specific activities, cardiac enzymes and lipid profiles were not affected by the oils at 10% (w/w) conc. However, serum mineral levels Ca⁺⁺ and Mg⁺⁺ were decreased in groups fed coconut oils, palm and sunflower. Therefore, we need to conduct more studies on the relationship between dietary oils and minerals, which might have deleterious effects on cardiac health.
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