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Thesis Title	The chest expansion values among adult healthy Iraqi people
Year	2015
Abstract	<p>Background: Chest expansion measurements are used to evaluate a patient's baseline status, treatment effectiveness, and progression of disease with regards to chest wall mobility and respiratory muscle function.</p> <p>Objectives: To establishing basic information about normal range of chest expansion measures among healthy Iraqis and to establish the variation of the chest expansion among Iraqi population and exploration of the relationship with age, sex and body built.</p> <p>Methods: A stratified random sampling technique was used to select a sample of 1020 persons (530 male and 490 female) aged between 20 to 70 years old from Baghdad and Al-Najaf city, Participants without any neurological, orthopedic, rheumatological or respiratory diseases or having pneumonia during the last month and smokers were excluded from the study, the chest expansion measured in 2 sites , for upper , at the level of the fifth thoracic spinous process and the third intercostal space at the mid clavicular line and for the lower thoracic excursion, the tape measure was placed at the level of the 10th thoracic spinous process and the tip of the xiphoid process by using inelastic tape measure.</p> <p>Results: The study shows that male participants have significant higher chest expansion than female participants in upper thoracic ($5\pm 0.6\text{cm}$, $4.2\pm 0.7\text{cm}$) for male and female respectively and at lower thoracic ($4.5\pm 0.6\text{cm}$, $3.7\pm 0.6\text{cm}$) ($p < 0.05$) for male and female respectively.</p> <p>VII</p> <p>Chest expansion of male and female participants at both upper and lower thoracic peak at age 20-29 and decreases thereafter with increasing age. In female participants, chest expansion was</p>

significantly correlated with BMI, which is decreased in the obese female.

Conclusion: It was concluded that chest expansion of both upper and lower thoracic increase with age increases until the 3rd decade of life, and then steadily declines after this. Male chest expansion was significantly higher than female participants.

