EFFECT OF DIFFERENT ARM AND FOREARM POSITIONS ON GRIP STRENGTH

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ABSTRACT

Upper limb plays an important role in activities of daily living. The hand is used in many different ways in our daily lives. The prime function of the hand is grip. Grip strength provides an objective index of the functional integrity and overall strength of upper limb. Many sporting events require high activity levels of grip muscles. The aim of this study was to evaluate the effects of different arm and forearm positions on grip strength. Grip strength was measured of 110 subjects between the age group of 18 to 25 years at 12 different hand positions in standing posture. Handgrip strength of the subjects was measured by using a Hydraulic hand dynamometer. Analysis of variance on grip strength showed significant differences in grip strength in various combinations of arm and forearm positions. The position with highest mean grip strength was at shoulder in 180º of flexion, elbow extended with forearm pronated and lowest mean grip strength at 180º of shoulder flexion, elbow 90º flexed with forearm supinated. The clinical significance of the study is of utmost important for sports person using grip in their play like tennis, wrestling, basketball and baseball.