

Performance analysis of women over 55 years on abdominal tests: impact of anthropometry and flexibility

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Summary

The objective of the present study was to evaluate the effect of anthropometric variables and flexibility on the performance of women aged 55+ years on abdominal test protocols. The sample was composed by 20 physically active volunteers, aged 55 years (median 61), who were participants in gymnastic activities program. Each volunteer performed two abdominal tests: partial trunk flexion with a 7.6 cm sliding of the hands (P1) and partial flexion of the trunk with the hands on the thighs (P2), both executed with the feet resting on the ground. For analysis, the number of correct executions (final position) was considered in each test, as recommended by the authors. Measurements of body mass, flexibility, height, waist and hip perimeters, subjective perception of exertion, and calculations of body mass index and waist-hip ratio were performed. The perception of abdominal effort, and discomfort or pain in the cervical and lumbar region were also evaluated. The results showed that there were no statistically significant associations between the analyzed indicators (Age: P1: $r_s = -0.024$, $p = 0.916$; P2: $r_s = -0.194$, $p = 0.407$; BMI: P1: $r_s = -0.064$, $p = 0.792$; P2: $r_s = -0.235$, $p = 0.327$; Waist Circumference: P1: $r_s = -0.143$, $p = 0.563$; P2: $r_s = 0.027$, $p = 0.908$; Flexibility: $r_s = -0.327$, $p = 0.169$; P2: $r_s = 0.0009$, $p = 0.991$; Hip waist ratio: P1: $r_s = -0.209$, $p = 0.371$; P2: $r_s = 0.217$, $p = 0.353$) and the performance on the tests. In addition, 35% of the participants made valid attempts on P1 while 45% produced at least one valid attempt on P2. It was concluded that both abdominal tests were adequate for the studied sample and they can be applied to adult and elderly women to assess their abdominal musculature.

Key words:

Abdominal muscles. Exercise test. Elderly. Anthropometry.

Análisis del desempeño de mujeres mayores de 55 años en test abdominales: impacto de la antropometría y flexibilidad

Resumen

El objetivo del presente estudio fue evaluar el efecto de las variables antropométricas y la flexibilidad sobre el desempeño de mujeres mayores de 55 años en protocolos de tests abdominales. La muestra, seleccionada por criterio de accesibilidad, estuvo formada por 20 voluntarias físicamente activas, mayores de 55 años (mediana 61), que participaban en actividades gimnásticas para personas mayores. Cada voluntaria realizó dos pruebas abdominales: flexión parcial del tronco con deslizamiento de las manos de 7,6 cm (P1) y flexión parcial del tronco con las manos en los muslos (P2), ambas ejecutadas con los pies apoyados en el suelo. Para el análisis, se consideró el número de ejecuciones correctas (posición final) en cada prueba, según lo recomendado por los autores. Se realizaron mediciones de masa corporal, flexibilidad, altura, perímetro de cintura y cadera, percepción subjetiva del esfuerzo y cálculos del índice de masa corporal y la relación cintura-cadera. También se evaluó la percepción de esfuerzo abdominal y de malestar o dolor en la región cervical y lumbar. Los resultados mostraron que no hubo asociaciones estadísticamente significativas entre las variables analizadas (Edad: P1: $r_s = -0,024$, $p = 0,916$; P2: $r_s = -0,194$, $p = 0,407$; IMC: P1: $r_s = -0,064$, $p = 0,792$; P2: $r_s = -0,235$, $p = 0,327$; Perímetro de cintura: P1: $r_s = -0,143$, $p = 0,563$; P2: $r_s = 0,027$, $p = 0,908$; Flexibilidad: $r_s = -0,327$, $p = 0,169$; P2: $r_s = 0,0009$, $p = 0,991$; Relación cintura/cadera: P1: $r_s = -0,209$, $p = 0,371$; P2: $r_s = 0,217$, $p = 0,353$) y el desempeño en las pruebas, y el 35% de las participantes hicieron intentos válidos en P1 mientras que el 45% produjo al menos un intento válido en P2. Se concluyó que ambas pruebas abdominales fueron adecuadas para la muestra estudiada y se pueden aplicar a mujeres adultas y mayores para evaluar su musculatura abdominal.

Palabras clave:

Músculos abdominales. Prueba de esfuerzo. Anciano. Antropometría.

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