虚弱高齢者の自立生活に必要な身体機能水準の設定

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Functional Fitness Norms on Living at Home Independently in Japanese Elderly Women

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ABSTRACT

It was important to show concrete means maintaining or improving functional fitness of elderly. However, functional fitness norms in relation to an independent lifestyle are unclear. The purpose of this study was（1）to compare the characteristics of functional fitness of Japanese elderly women living at home independently（independent group, n=27, 67.5±

6.0 yrs）with those of geriatric health services facility residents（dependent group, n=24, 81.3 ± 8.1 yrs）; and（2）to develop a minimum functional fitness standard discriminating between independence and dependence. The functional fitness variables were grip strength（GS），sit and reach（SR），one leg balance with eyes open（OLBEO），10m obstacle walking time（10OW），6-minute walking distance（6MD），sit-ups（Kraus-Weber test: KWt），functional reach（FR），standing, hand-working（HW），self-care-working（SCW）and number of daily steps（STEP）. Logistic regression was conducted to identify the factors most strongly associated with an independent lifestyle. Discriminant analysis was performed to establish functional fitness norms. Both groups were significantly different in age, which imposed a limitation on interpretation of these data. So we used the analysis of covariance（ANCOVA）to assess these data. GS, SR, 10OW, 6MD, KWt, FR, standing, HW and STEP in an independent group were significantly higher（$p<0.05$-0.0001）as compare to those in a dependent group. GS, KWt, HW and STEP were related to an independent lifestyle after adjusting age. Discriminant analysis revealed the target levels of GS, SR, OLBEO, 10OW, 6MD, KWt, FR, standing, HW, SCW and STEP for living at home independently were 16.1kg, 5.8cm, 35.2 sec, 14.5 sec, 363.0m, 20.4 points, 23.7cm, 15.0 sec, 50.4 sec, 16.7 sec and 4,542 steps, respectively. These results show the maintenance of functional fitness above those values might be important for living at home independently with keeping high ADL and QOL for elderly women.

要　旨

高齢者の在宅での自立生活に必要な身体機能水準について，新体力テスト，生活体力および1日歩行数の多方面からの評価を行い，各測定項目の維持目標値を設定した．在宅で自立した日常生活を送っている女性27名を自立群，老人保健施設に入所中の寝たきり高齢者を除く虚弱高齢者の女性24名を非自立群とし，ロジスティック回帰分析および判別分析の手法を用い，比較検討した．その結果，高齢者の自立には，年齢補正しても握力，Kraus-Weber test，手腕作業能力および1日歩行数の4項目が関与しており，握力は16.1kg以上，Kraus-Weber testは20.4以上，手腕作業能力は50.4秒以下，1日歩行数は4,542歩以上がその維持目標値として設定された．また，自立群と非自立群を判別する点は，長座体前屈が5.8cm，開眼片足立ちが35.2秒，10m障害物歩行が14.5秒，6分間歩行が363.0m，ファンクショナル・リーチが23.7cm，起居能力が15.0秒，身辺作業能力が16.7秒であった．これら，高齢者が在宅での自立生活に必要な身体機能水準の設定は，身体機能低下の程度の把握や運動訓練の目標設定およびフィードバックなどにも応用できる可能性が示唆された．