

# 高齢者の理想的な身体活動量とフィットネス —健康長寿漁村の事例から考える—

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## Nutritional Status, Physical Activity, and Quality of Life of Elderly Persons Living on a Rural Island

by

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### ABSTRACT

The effects of aging on nutritional status, body composition, health status, physical fitness, and quality of life (QOL) were investigated in 52 elderly male (n = 20) and female (n = 32) subjects (mean age 74 years) living on a remote isolated island that has undergone a simultaneous rapid decrease in population and rapid growth of the elderly population. Acceleration monitoring (recorded every two minutes) was conducted for eight subjects (four of each gender) on three consecutive days to determine their total daily energy expenditure (TEE).

Female subjects had higher rates of obesity (62.5%) and hypertension (62.5%) than their male counterparts (20 and 40%, respectively) and had average values for the general national population in Japan. Of four QOL domains, our subjects (particularly females) had higher scores for 'social relationships' ( $3.56 \pm 0.48$ , males and females

combined) compared with a previous study for urban elderly populations in Japan ( $3.25 \pm 0.53$ ). This suggests that social communications among neighbors are important for a high QOL in the remote isolated island society. Subjects who had a high grip strength had significantly higher QOL scores than those with a low grip strength.

The daily physical activity level (PAL) of the subjects was generally low, although it is difficult to evaluate the value, as there are few studies of TEE or PAL in elderly people. The relationships between PAL and step-counts, indices of nutritional status (body mass index and percentage of body fat), and physical fitness (grip strength) suggest that walking, maintaining an ideal body weight, and promoting physical fitness have important roles in maintaining and increasing PAL in the elderly.

## 要 旨

宮城県のT島は人口100名ほどの離島である。もっとも人口が多い年代は60～70歳代であり、過疎化と高齢化が極端に進行している漁村である。小規模な漁撈と自家消費用の野菜栽培を営む高齢者(平均年齢74歳, 男性20名, 女性32名)について身体計測, 血圧測定, 握力測定, 質問票を用いたQOL評価を行った。さらに8名(男女各4名)について連続3日間の加速度モニタリングによる身体活動量測定を行った。女性は男性に比べて肥満・高血圧者割合が高かった。さらに女性は全国平均に比べても肥満・高血圧者割合が高かった。QOLの結果は男女ともに「社会的関係」領域の得点が高く, 離島における近所づきあいの重要性が示唆された。また握力が高い群はQOLが高かった。身体活動量は全般的に低値であったが, 高齢者の身体活動量の評価は難しく, 長期間の測定, 季節性を考慮すること, 活動内容の詳細な検討といった課題が浮かび上がった。また高齢者の身体活動量を維持・増進させるためには, よく歩くこと, 適正体重を維持し肥満にならないこと, 体力・筋力を増進させることが有益であることが示唆された。