## COMPARISON OF HOME- AND GYMNASIUM-BASED RESISTANCE TRAINING ON FLEXIBILITY IN THE ELDERLY

John H. BILLSON\*, Jones F. CILLIERS\*, Juan J. PIETERSE\*\*, Brandon S. SHAW\*, Ina SHAW\* & Abel L. TORIOLA\*

\*Tshwane University of Technology, Department of Sport, Rehabilitation and Dental Sciences, Pretoria, Republic of South Africa
\*\*Tshwane University of Technology, Department of Biomedical Technology, Pretoria, Republic of South Africa

## **ABSTRACT**

Aging results in a natural loss of flexibility, which is especially essential in the maintenance of functional abilities of the aged to perform activities of daily living. Resistance training may provide a stimulus for flexibility, in addition to its extensive health benefits, since its action is through a full range of motion. The purpose of this study was to compare the effects of a home- and gymnasium-based resistance training programme on flexibility in the elderly. Forty-nine inactive elderly males and females aged 55 to 85 years were assigned to either an eight-week, three times weekly home- (HB) (n=25) or a gymnasium-based (GB) (n=24) resistance training programme at a rating of perceived exertion of 11 to 12 (very mild discomfort). Both groups were equally effective at significantly (p<0.05) increasing right shoulder flexion, right shoulder extension, left and right internal rotation, left and right external rotation, and left and right hip flexion. This study demonstrates that a home- or gymnasium-based programme can improve flexibility and allow the elderly to maintain functional ability and lead independent lives.

**Key words**: Elderly; Joint mobility; Strength training; Weight training.