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Special Article

Recommendations on Physical Activity and Exercise for Older Adults Living in Long-Term Care Facilities: A Taskforce Report

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A B S T R A C T

A taskforce, under the auspices of The International Association of Gerontology and Geriatrics—Global Aging Research Network (IAGG-GARN) and the IAGG European Region Clinical Section, composed of experts from the fields of exercise science and geriatrics, met in Toulouse, in December 2015, with the aim of establishing recommendations of physical activity and exercise for older adults living in long-term care facilities (LTCFs). Due to the high heterogeneity in terms of functional ability and cognitive function that characterizes older adults living in LTCFs, taskforce members established 2 sets of recommendations: recommendations for reducing sedentary behaviors for all LTCF residents and recommendations for defining specific, evidence-based guidelines for exercise training for subgroups of LTCF residents. To promote a successful implementation of recommendations, taskforce experts highlighted the importance of promoting residents' motivation and pleasure, the key factors that can be increased when taking into account residents' desires, preferences, beliefs, and attitudes toward physical activity and exercise. The importance of organizational factors related to LTCFs and health care systems were recognized by the experts. In conclusion, this taskforce report proposes standards for the elaboration of strategies to increase physical activity as well as to prescribe exercise programs for older adults living in LTCFs. This report should be used as a guide for professionals working in LTCF settings.

Older adults living in long-term care facilities (LTCFs) are a complex population, being characterized by high prevalence of dependency in activities of daily living (ADLs), multimorbidity, and

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polymedication.[1] Providing the best care for this population represents an immense challenge, particularly in the context of demographic projections for the coming decades in terms of the population aging. In its recent report,[2] the United Nations estimated that the number of people 60 years or older is expected to more than double between 2013 and 2050, with people 80 years or older constituting the age group with the fastest rate of growth. The number of people living in LTCFs[3,4] is also expected to rise, leading to an important increase in health care costs.[3–6]

One of the key challenges for the care of the institutionalized elderly is to maintain residents' functional ability, which is made up of subjects' intrinsic capacity and environmental characteristics,[7] and the ability to cope with their functional limitations for as long as possible. Overall physical activity has been shown to protect against both the incidence of ADL disability and progression of the disability severity in the general population.[8] Experts in LTCF research and clinical care, with the support of the International Association of Gerontology and Geriatrics (IAGG) and the World Health Organization, have already recognized the importance of exercise for the quality of care in the LTCF setting.[9] Scientific evidence from recent meta-analyses have shown that exercise training (ie, a subset of physical activity that is planned, structured, repetitive, and purposeful, being generally used to improve/maintain physical and functional capacities), has been found to have positive effects on the ability to perform ADLs in LTCF residents.[10,11] Exercise training presents undoubtable advantages because it can positively impact several clinical outcomes that are often present in LTCF residents (eg, falls, cardiovascular diseases, mood disorders), with a low risk of adverse health events. Although exercise undeniably provides health benefits for older people,[12] current physical activity guidelines for older adults (see Table 1) were established from a public health perspective (mainly focusing on the primary prevention of noncommunicable diseases).[13,14] Due to its specificities (functional limitations, multimorbidity), the exercise-related objectives for LTCF residents understandably focus more on the maintenance of functional ability and improvements in quality of life than the primary prevention of noncommunicable diseases. Therefore, the current physical activity guidelines for older adults are certainly more appropriate for healthy community-dwelling older adults than to very old and vulnerable institutionalized elderly.

The present article reports on the results of a taskforce held in Toulouse, France, on December 1, 2015, before the Nursing Home Research International Working Group Conference (Toulouse, December 2 and 3, 2015), under the auspices of the IAGG–Global Aging Research Network (IAGG-GARN) and the IAGG European Region Clinical Section. The main objectives of this taskforce, which involved experts from the broad fields of geriatrics, particularly nursing home care, and exercise and sports sciences, particularly physiotherapy and exercise for geriatric populations, were to define strategies to increase physical activity and to establish exercise guidelines for people living in LTCFs. Scientific evidence and feasibility issues for the implementation of physical activity strategies and exercise interventions in a long-term basis in LTCFs were the main pillars for the elaboration of the guidelines reported hereafter.

Health Care Issues in LTCFs and Potential Exercise Benefits

Besides ADL dependency, LTCF residents face other important medical challenges. Dementia care, behavioral and psychological symptoms of dementia (BPSD), falls, malnutrition, pain, the use of potentially harmful drugs (eg, antipsychotics), and mood (particularly depression), being severely sedentary (bed and chair rest), and quality of life are often recognized by LTCF staff and experts as crucial issues for the care of residents.[15,16] Exercise training has the potential to improve many of these issues.

ADL Performance

The most robust information about the positive effects of exercise for people in LTCFs comes from the review and meta-analysis of randomized controlled trials (RCTs) from the Cochrane Group.[10] In this review, Crocker et al[10] found that those who exercised had better ability to perform ADLs (as measured by the Barthel Index or by the Rivermead mobility index) than controls; when pooling the results of all RCTs regardless of the tools used to measure ADLs, Crocker et al[11] found a positive effect of exercise (standardized mean difference [SMD] 0.24, 95% confidence interval [CI] 0.11–0.38; $P = .0005$; 13 studies, 2363 participants), roughly corresponding to an increase of 1.3 points on the Barthel Index 20-point scale; such improvement means, for example, that a person who was dependent on bathing became independent.

Table 1
Current Physical Activity Guidelines for Older Adults[12,13]

Minimum Recommendations of Physical Activity for Adults 65 Years and Older	
Recommendation from the American College of Sports Medicine and the American Heart Association (2007)[*]	*Recommendation from the World Health Organization (2010)*[†]
Aerobic/endurance (bouts of >10 min). Moderate-intensity aerobic PA, 30 minutes, 5 d/wk or vigorous-intensity aerobic PA, 20 min, 3 d/wk. These moderate or vigorous PAs are in addition to the light-intensity activities performed in daily life (eg, self-care) or moderate-intensity PAs lasting 10 min or less + **Strength**. 8–10 exercises, 10–15 repetitions, for strengthening the major muscles of the body, ≥ twice/wk, moderate to high intensity + **Flexibility**. ≥ twice/wk, 10 min + **Balance/coordination**. "To reduce risk of injury from falls, *community-dwelling older adults* with substantial risk of falls should perform exercises that maintain or improve balance."[12]	**Aerobic/endurance** (bouts of ≥10 min). Moderate-intensity aerobic PA, ≥ 150 min/wk or vigorous-intensity aerobic PA, ≥ 75 min/wk + **Strength**. ≥ twice/wk, muscle-strengthening involving major muscle groups + **Balance/coordination**. ≥ 3 d/wk, for older adults with poor mobility in order to enhance balance and prevent falls.

PA, physical activity.

[*]Adapted from: Nelson ME, Rejeski WJ, Blair SN, et al. Physical activity and public health in older adults: recommendation from the American College of Sports Medicine and the American Heart Association. Med Sci Sports Exerc 2007;39:1435–1445.

[†]Adapted from: World Health Organization. Global Recommendations on Physical Activity for Health. Geneva: WHO Press, 2010.