

## Why and how to get older persons physically active: application in clinical practice and care

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BODY@WORK



## Topics

- The effects of Physical Activity (PA) and Exercise in older persons: scientific evidence
- HEPA guidelines and actual levels of PA
- Level of evidence for behavioural change strategies
- PA and exercise motivation
- Discussion

Submitted: Biddle et al. position stand ECSS



**AMERICAN COLLEGE  
of SPORTS MEDICINE**

POSITION STAND

## Exercise and Physical Activity for Older Adults

This pronouncement was written for the American College of Sports Medicine by Wojtek J. Chodzko-Zajko, Ph.D., FACSM, (Co-Chair); David N. Proctor, Ph.D., FACSM, (Co-Chair); Maria A. Fiatarone Singh, M.D.; Christopher T. Minson, Ph.D., FACSM; Claudio R. Nigg, Ph.D.; George J. Salem, Ph.D., FACSM; and James S. Skinner, Ph.D., FACSM.

### SUMMARY

The purpose of this Position Stand is to provide an overview of issues critical to understanding the importance of exercise and physical activity in older adult populations. The Position Stand is divided into three sections: Section 1 briefly reviews the structural and functional changes that characterize normal human aging, Section 2 considers the extent to which exercise and physical activity can influence the aging process, and Section 3 summarizes the benefits of both long-term exercise and physical activity and shorter-duration exercise programs on health and functional capacity. Although no amount of physical activity can stop the biological aging process, there is evidence that regular exercise can minimize the physiological effects of an otherwise sedentary lifestyle and increase active life expectancy by limiting the development and progression of chronic disease and disabling conditions. There is also emerging evidence for

(see Table 1 for a summary of these recommendations) (167). Furthermore, the College has now developed best practice guidelines with respect to exercise program structure, behavioral recommendations, and risk management strategies for exercise in older adult populations (46). Recently, the Department of Health and Human Services published for the first time national physical activity guidelines. The *2008 Physical Activity Guidelines for Americans* (50) affirms that regular physical activity reduces the risk of many adverse health outcomes. The guidelines state that all adults should avoid inactivity, that some physical activity is better than none, and that adults who participate in

some health benefits. that for most health he amount of physical ity, greater frequency,

Chodzko-Zajko et al, 2009, MSSE  
Paper summarizes levels of evidence of PA and exercise

## Levels of evidence for PA and exercise on health

Level of Evidence A,B,C	Positive effects on Health parameters	Disease Prevention (primary)	Tertiary prevention
A (overwhelming from RCT's and observational studies)	Body weight (BMI) Body fat Blood pressure HDL/LDL cholesterol Glucose intolerance Sleep pattern Disability (review underway) Muscle strength	CHD Diabetes mellitus II Osteoporosis	CHD Diabetes mellitus II
B (strong evidence)	Cognitive decline Bone mass Sarcopenia Self esteem	Stroke Depression Colon cancer Breast cancer Dementia	COPD Osteoporosis (osteopenia) Stroke Anxiety, depression Reumatoid arthritis Epilepsy Cystic fibrosis
C (generally positive or suggestive evidence)	Co-ordination Reaction time Quality of life (? C/D) Independent living Falls		Osteoarthritis Kidney disease Low back pain Parkinson disease

American College of Sports Medicine. *Med Sci Sports Exerc* 1998;30:992-1008

Mosterd et al, 1996; Chodzko-Zajko et al, 2009

## Citations from Chodzko-Zajko et al, 2009

“The largest increment in mortality benefit is seen when comparing sedentary adults with those in the next highest physical activity level” (pg 4)

“ Multimodal exercise, usually including strength and balance exercises, and tai chi have been shown to be **effective in reducing the risk** of noninjurious and sometimes injurious falls in populations who are at an elevated risk of falling” (pg 10)

“ the outcome .....is more effective with **higher-intensity exercise** (e.g., type 2 diabetes, clinical depression, osteopenia, sarcopenia, muscle weakness).” (pg 13)



# Physical Activity and Public Health in Older Adults: Recommendation from the American College of Sports Medicine and the American Heart Association

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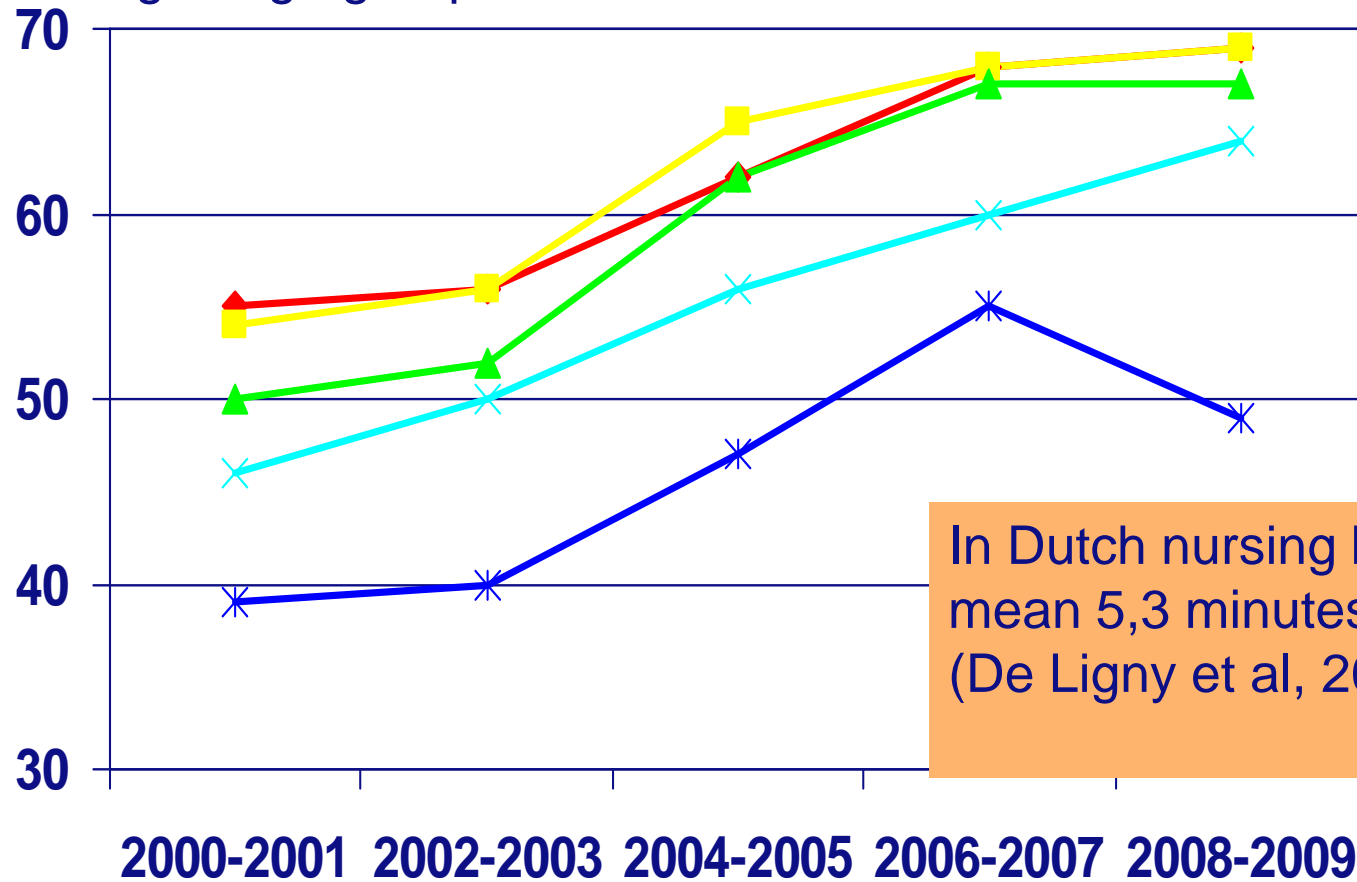
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## ABSTRACT

NELSON, M. E., W. J. REJESKI, S. N. BLAIR, P. W. DUNCAN, J. O. JUDGE, A. C. KING, C. A. MACERA, and C. CASTANEDA-SCEPPA. 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.*, Vol. 39, No. 8, pp. 1435–1445, 2007. **Objective:** To issue a recommendation on the types and amounts of physical activity needed to improve and maintain health in older adults. **Participants:** A panel of scientists with expertise in public health, behavioral science, epidemiology, exercise science, medicine, and gerontology. **Evidence:** The expert panel reviewed existing consensus statements and relevant evidence from primary research articles and reviews of the literature. **Process:** After drafting a recommendation for the older adult population and reviewing drafts of the Updated Recommendation from the American College of Sports Medicine (ACSM) and the American Heart Association (AHA) on Physical Activity and Public Health in Older Adults.

Nelson et al, MSSE, 2007  
Integration of preventive  
and therapeutic  
recommendations:  
aerobic + strength  
30 minutes a day PA

## Percentage of Dutch people meeting HEPA standards (30 minutes PA a day) according to age group



In Dutch nursing homes PA mean 5,3 minutes a day!  
(De Ligny et al, 2010)



Source: Hildebrandt et al, 2010, TNO report

## Effective strategies

- Best Practice Statement ACSM (Cress et al, 2004):  
Principles of behaviour change (in older persons):

Social support

Self-efficacy

Active choices

Health contracts

Assurance of safety

Positive reinforcement



Picture Katharine Devereux, Perth Australia

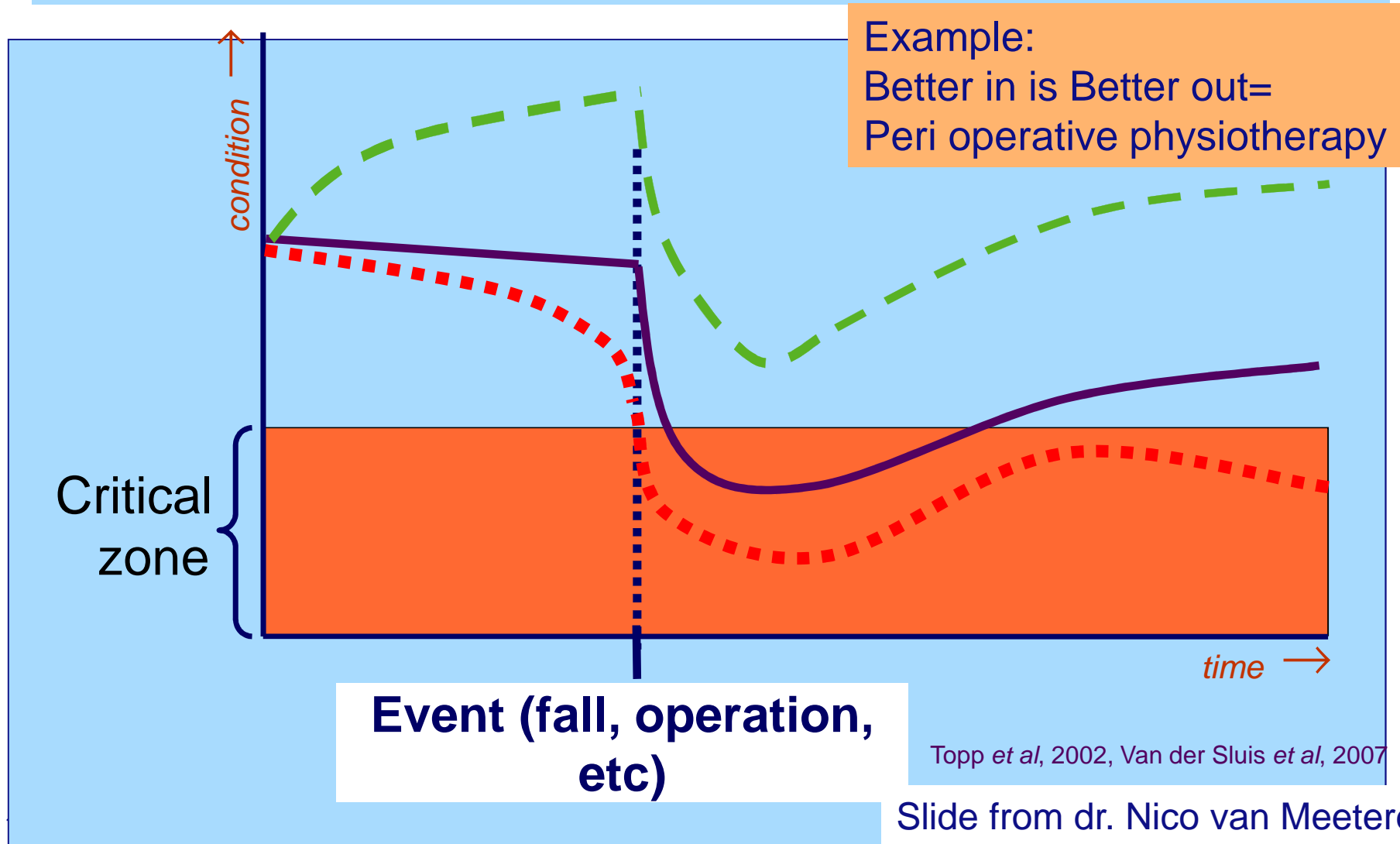
- UK National institute for health and clinical Excellence (NICE, Cavell et al, 2006, chapter older adults)  
a.o.: Exercise counselling and instruction



Systematic review on methods of promoting PA  
(Swedish Council, 2007 [www.sbu.se](http://www.sbu.se))

- Advice and counselling of patients in everyday clinical practice increases physical activity by **12–50%** for at least six months after the counselling session (**strong scientific evidence**, that means that it is supported by at least two studies with high study quality).

# Why should we promote behavioural change in older persons?

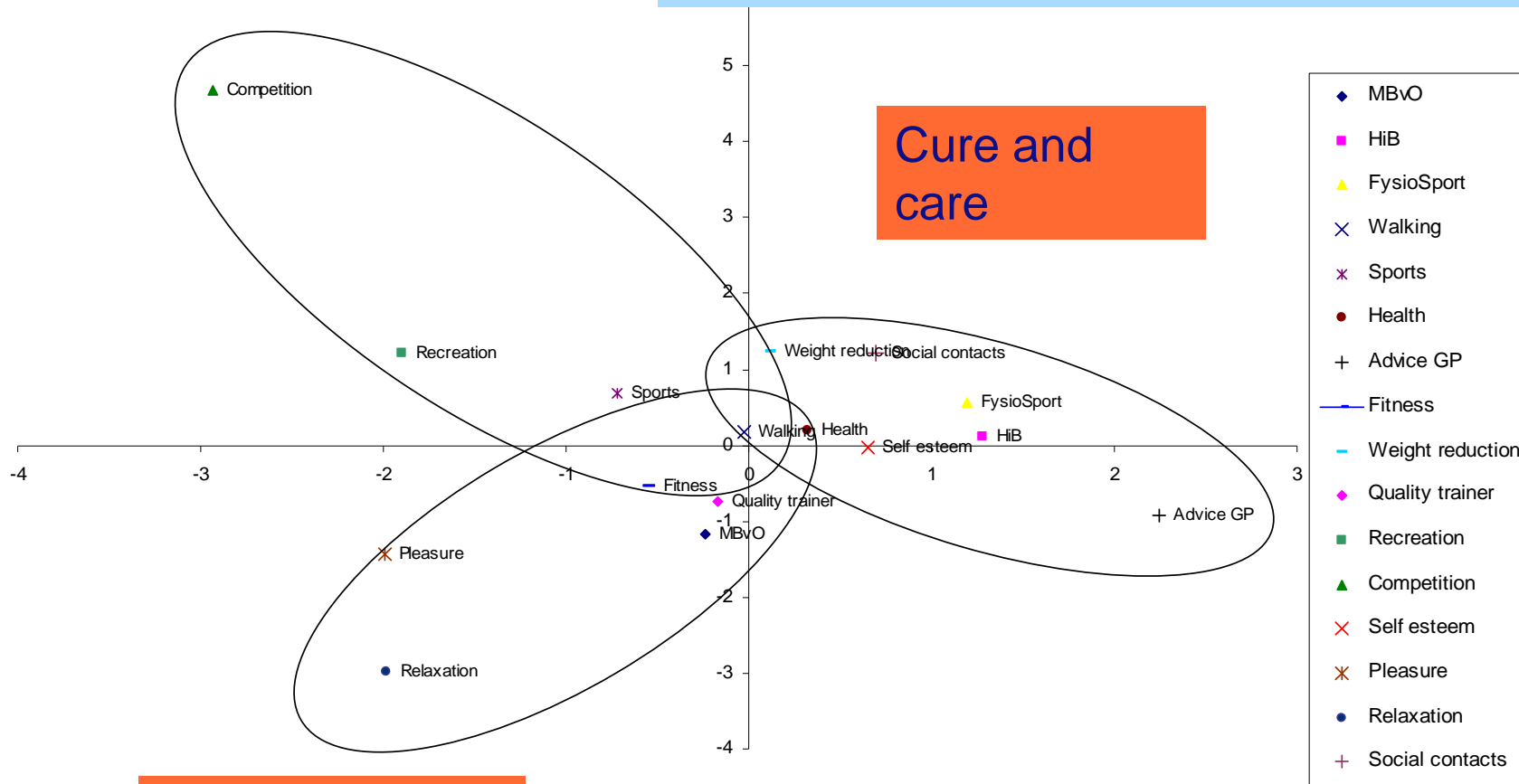


Topp *et al*, 2002, Van der Sluis *et al*, 2007

Slide from dr. Nico van Meeteren  
 Nico.vanmeeteren@tno.nl

Competition

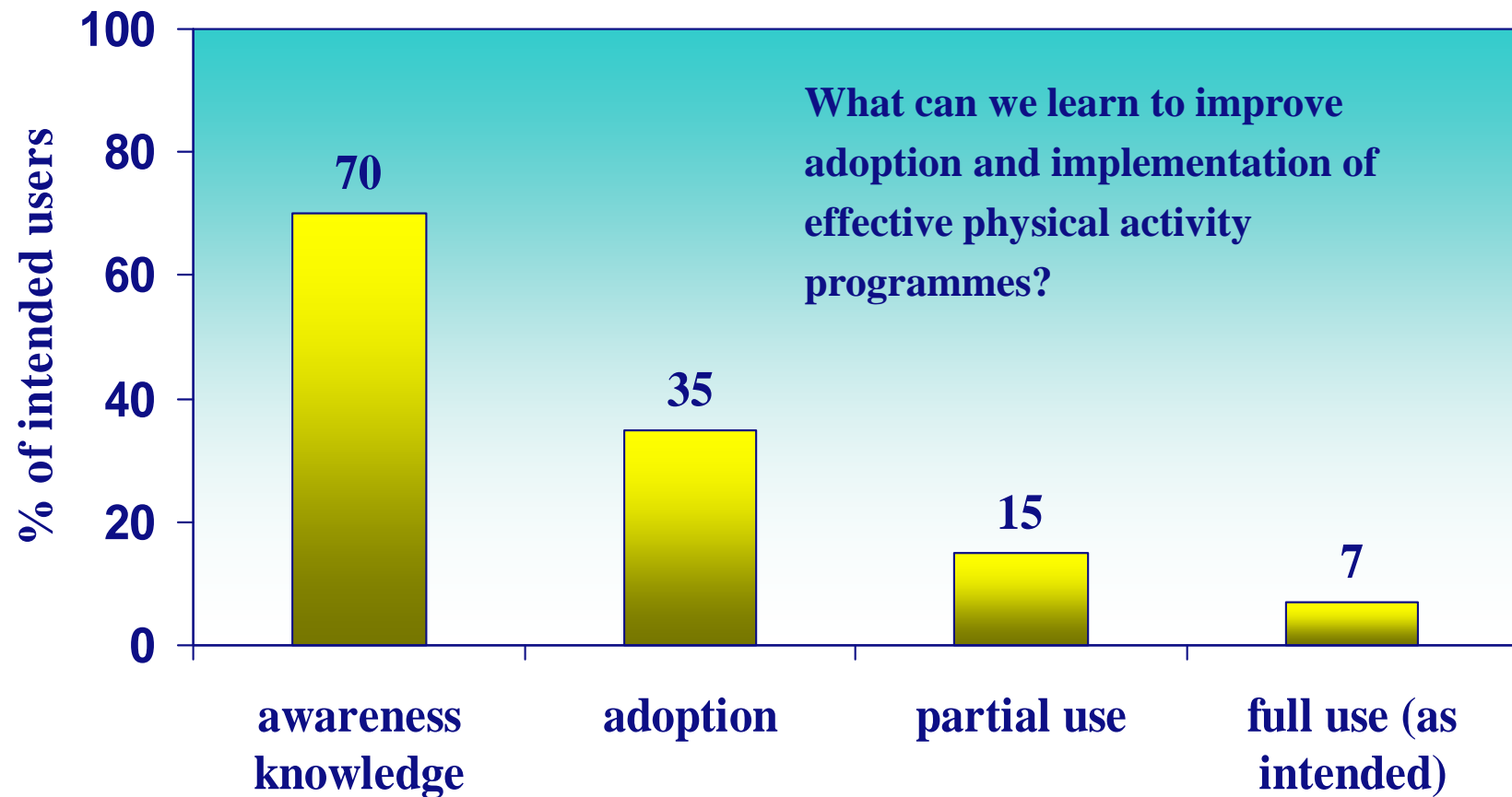
Motivations for elderly persons to start exercise



Stiggelbout e.a., JAPA, 2008

# What is the problem?

## Diffusion of innovations after one year: the implementation challenge



## Take Home messages / discussion

- **Physical activity/ exercise is very important to prevent diseases and disability in older people**
- **Older people have relatively low levels of PA**
- **Advice + Counselling is effective**
- **Adjust to motivational groups**
- **Enhance implementation of innovations**



Thanks for your attention!

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