



Fall prevention: Educational Issues

Dr. E. Freiburger
Institute of Sport Science and Sports
University Erlangen Germany

Introduction: Falls

- Falls are common in older persons over 65 years with one third falling each year with the percentage increase to nearly 50% in the population 80 years and older
- Falls are multi-causal

SPECIAL ARTICLES

Summary of the Updated American Geriatrics Society/British Geriatrics Society Clinical Practice Guideline for Prevention of Falls in Older Persons

Developed by the Panel on Prevention of Falls in Older Persons, American Geriatrics Society and British Geriatrics Society

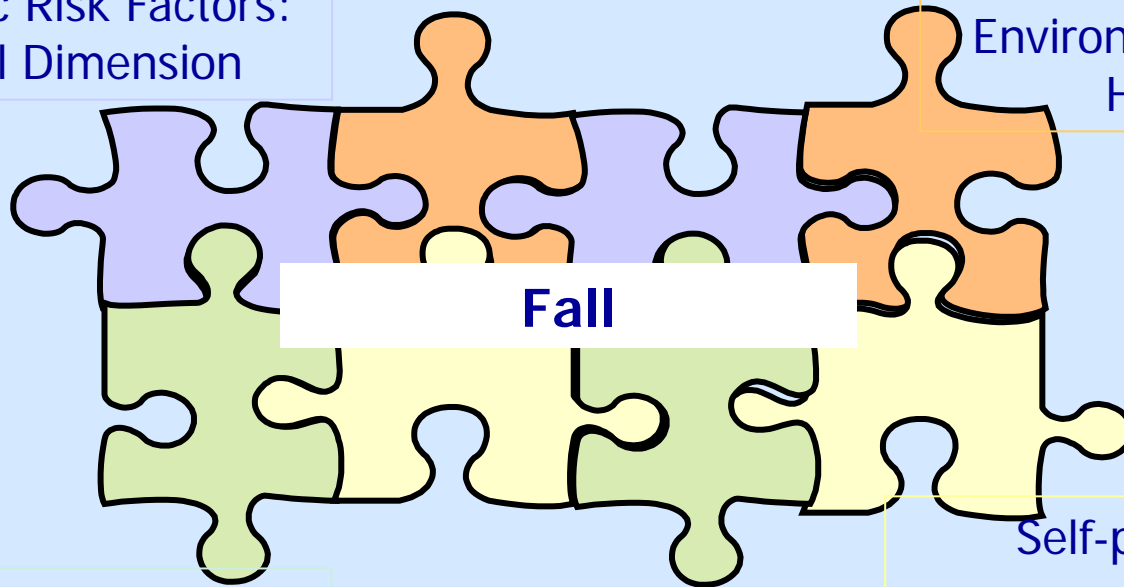
The following article is a summary of the American Geriatrics Society/British Geriatrics Society Clinical Practice Guideline for Prevention of Falls in Older Persons (2010). This article provides additional discussion of the guideline process and the differences between the current guideline and the 2001 version and includes the guidelines' recommendations, algorithm, and acknowledgments. The complete guideline is published on the American Geriatrics Society's Web site (http://www.americangeriatrics.org/health_care_professionals/clinical_practice/clinical_guidelines_recommendations/2010/). J Am Geriatr Soc 2010.

perience, and publications in fall prevention and care of older patients. Panel members included experts in physical therapy, pharmacy, orthopedics, emergency medicine, occupational therapy, nursing, home care, and geriatric clinical practice. The literature search included meta-analyses, systematic literature reviews, randomized controlled trials (RCTs), controlled before-and-after studies, and cohort studies published between May 2001 and April 2008. (The panel reviewed the RCTs published between April 2008 and July 2009 and concluded that the additional evidence did not change the ranking of the evidence or the guideline recommendations. The negative RCTs of multifactorial interventions all involved risk factor assessment with referral without direct intervention or ensuring that the interventions were instituted.)

Falls are Multi-Causal

Intrinsic Risk Factors:
Physical Dimension

Environmental
Hazards



Intrinsic Risk Factors:
Cognitive Dimension

Self-perception &
Behavior

Evidence for Fall Prevention in CD Older Persons

Effective Exercise for the Prevention of Falls: A Systematic Review and Meta-Analysis

Catherine Sherrington, PhD,*†‡ Julie C. Whitney, MSc,§ Stephen R. Lord, DSc,†
Robert D. Herbert, PhD,* Robert G. Cumming, PhD,‡ and Jacqueline C. T. Close, MD†||

OBJECTIVES: To determine the effects of exercise on falls prevention in older people and establish whether particular trial characteristics or components of exercise programs are associated with larger reductions in falls.

Key words: falls; exercise; meta-analysis

Sherrington et al.
(2008) JAGS 56:
2234-2243

Downloaded from bmj.com on 8 June 2009

BMJ Multifactorial assessment and targeted intervention for preventing falls and injuries among older people in community and emergency care settings: systematic review and meta-analysis

S Gates, J D Fisher, M W Cooke, Y H Carter and S E Lamb

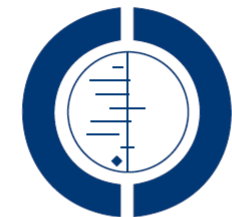
BMJ 2008;336:130-133; originally published online 18 Dec 2007;
doi:10.1136/bmj.39412.525243.BE

Updated information and services can be found at:
<http://bmj.com/cgi/content/full/336/7636/130>

Gillespie et al.
(2009)

Interventions for preventing falls in older people living in the community (Review)

Gillespie LD, Robertson MC, Gillespie WJ, Lamb SE, Gates S, Cumming RG, Rowe BH



THE COCHRANE
COLLABORATION®

This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library* 2009, Issue 2

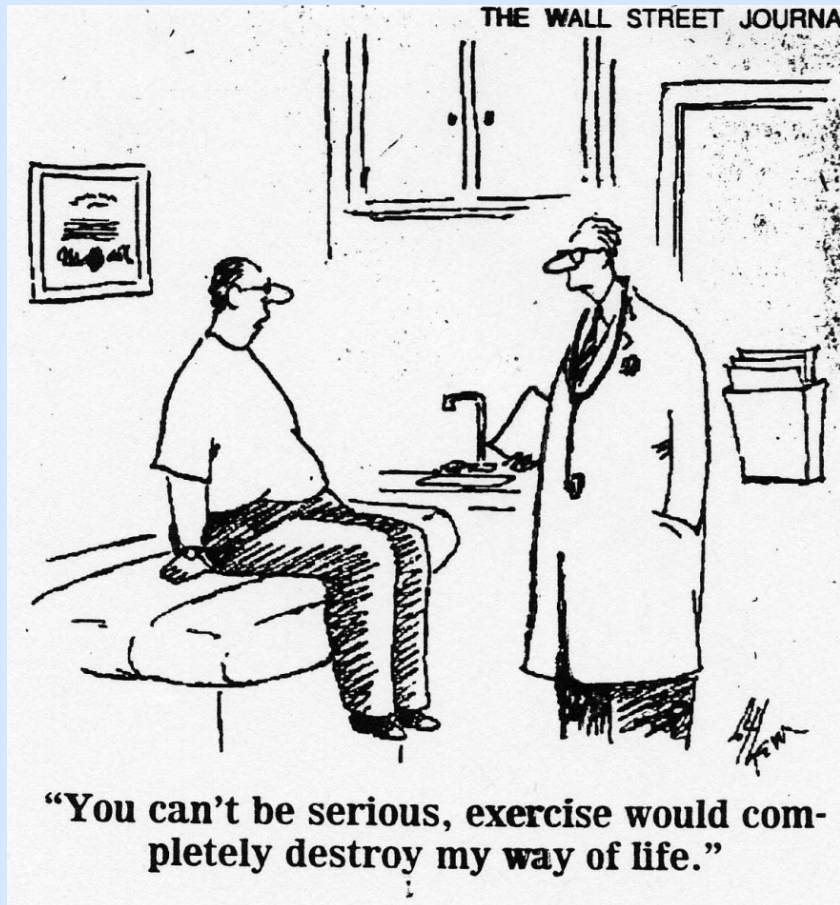
<http://www.thecochranelibrary.com>



WILEY
Publishers Since 1807

Interventions for preventing falls in older people living in the community (Review)
Copyright © 2009 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

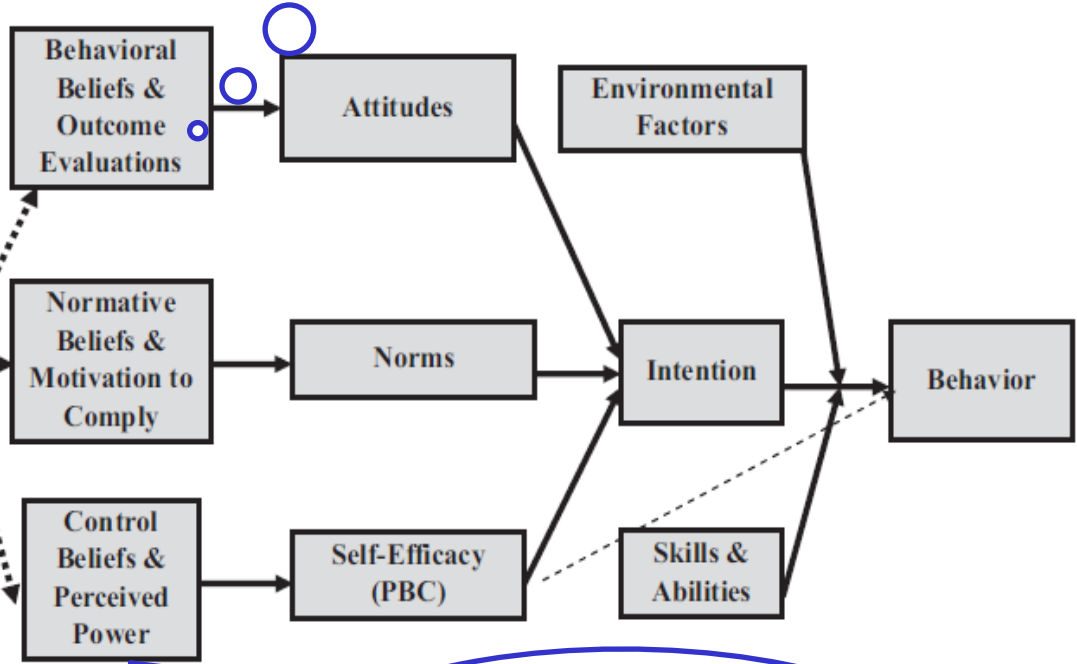
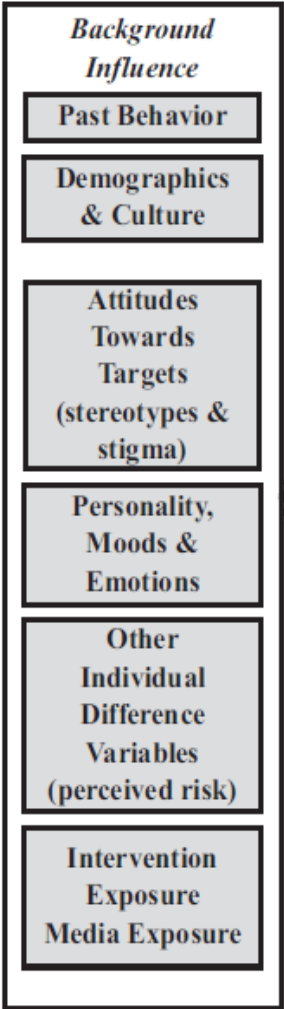
BUT: Challenges remain for Uptake of *Exercise*



1. Motivation
2. Self-Efficacy or Fear of Falling
3. Definition of Exercise and Physical Activity by Older Persons



“Why should I take part in a fall prevention class?
Falls are normal if you grow old”



“I will never be able to take part in an **exercise program**, doc, I have never done any **Exercise!**”

Difference Groups with regard to Fear of Falling

(Delbaere et al., BMJ 2010)

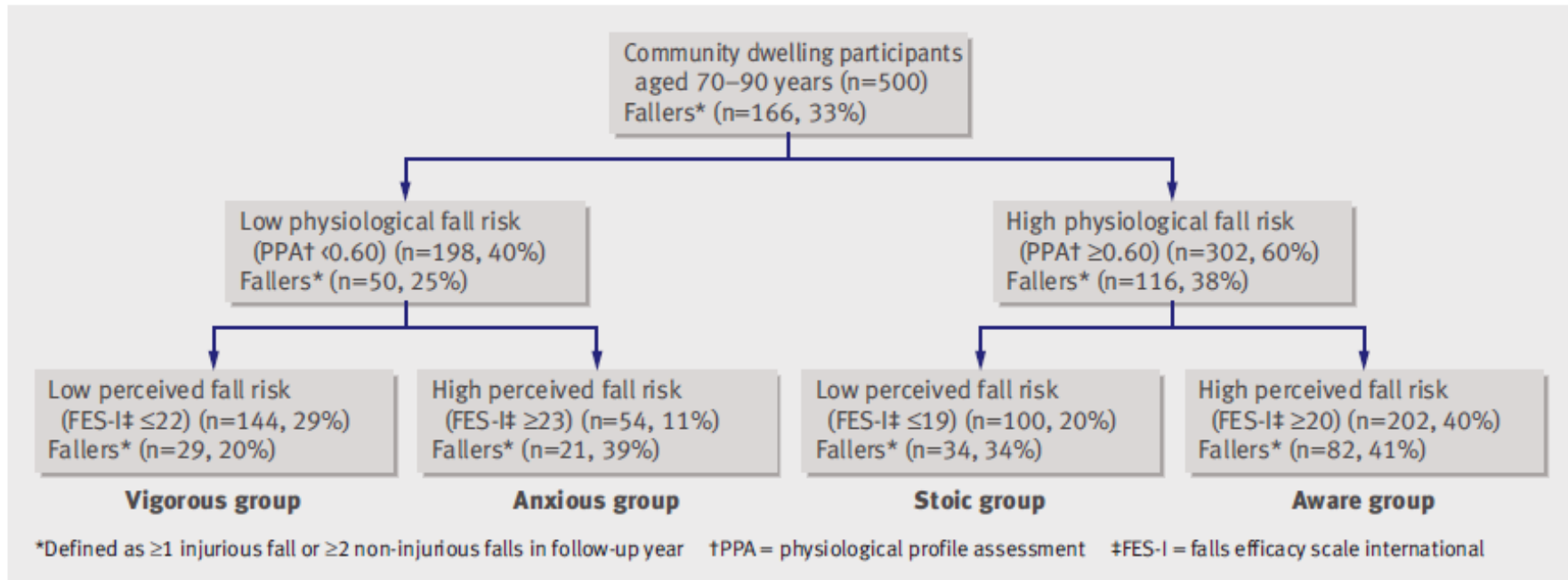


Fig 1 | Classification tree of 500 elderly people living in the community based on their physiological and perceived risks of falling

Conclusion: Challenges in the recruitment process



Overall Uptake rates between 15-20%

Broad continuum of CD with high active – to inactive persons

Different expectation of participants on program

BUT: Challenges remain II

2. Environmental Issues: Transportation and Location



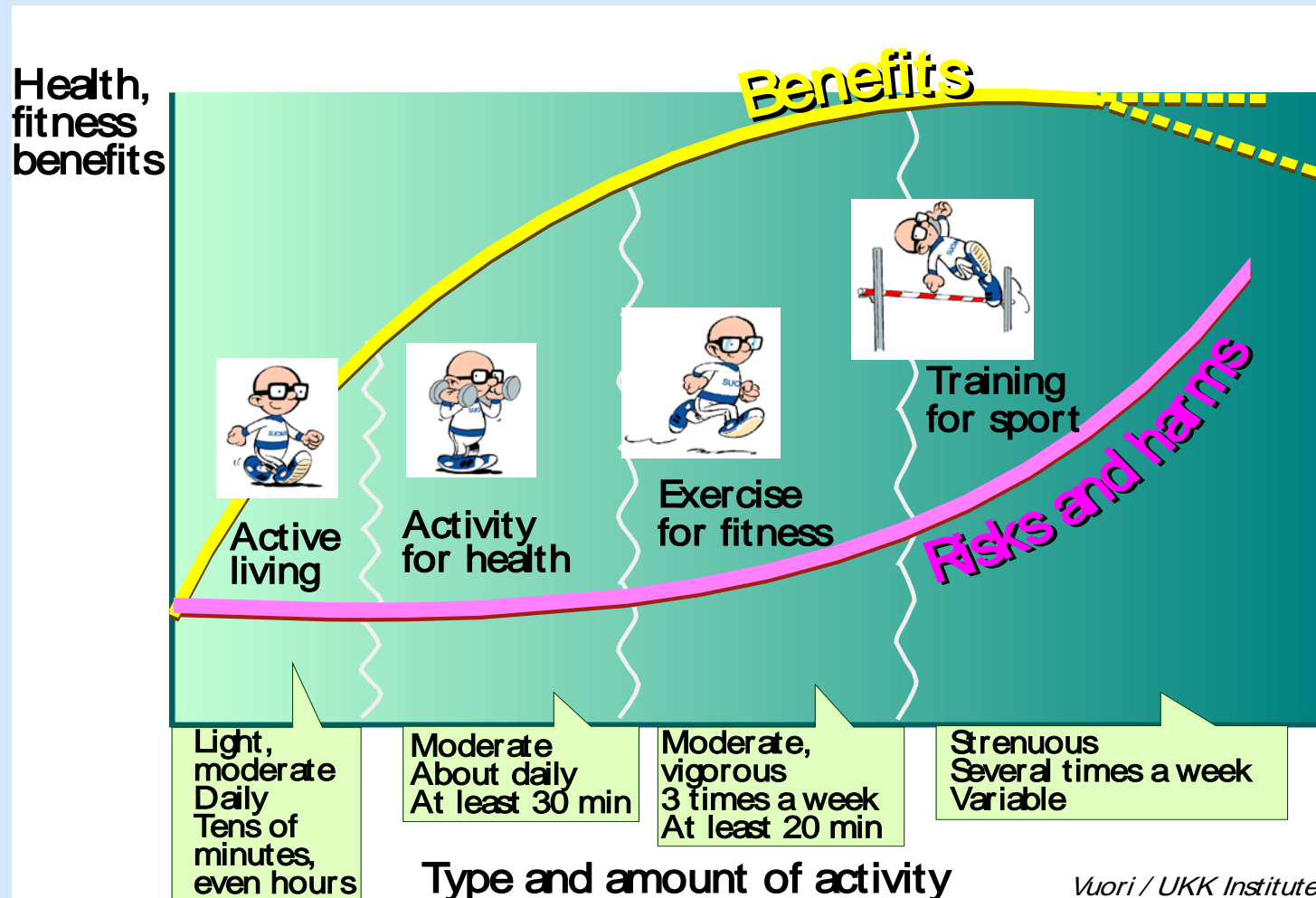
BUT: Challenges remain III

3. Socio-cultural Issues: Gender & Migration Issue



BUT: Challenges remain IIII

Does-Response question



"Taylor and Target the Program" *Dose-Response Issue*

	Typ of Training	Moderate frailty	Severe frailty
Chandler	Resistance	—	★
Gill	Home-based	—	★
Faber	Mobility vs. Tai Chi	★	—
Luukinen	exercise	★	—

- Evidence is sparse but data suggest that based on older adult's functional level they will response different to exercise training?
 - Chandler et al., 1998; Gill et al., 2002, Faber et al., 2006; Luukinen et al., 2006

Conclusion: Promoting Fall Prevention Exercise Programs

Example of Germany

Knowledge about
socio-demographic
Issues

Knowledge in
Psychological
Aspects

**Educational Issues
specified in Fall
Instructor
Curriculum**

Knowledge of Risk
Factors & Assessment

Knowledge for
promoting e.g. location,
announcements ,
financial aspects

Knowledge in Dose-
Response Issues
regarding Exercise &
Best Practice



**“I can change a pumpkin into a carriage,
but if you want to turn fat into muscle,
you’ll have to exercise two hours a day.”**

Dr. Ellen Freiberger

Institute of Sport Science and Sports

Gebbertstr. 123 b

91058 Erlangen/Germany

Tel. ++49- 09131-8524565

Fax: ++49-09131-8528198

E-mail: ellen.freiberger@sport.uni-erlangen.de