

Physical Activity and Ageing: a challenging couple IAGG symposium on behalf of the EUNAAPA network. www.eunaapa.org

- Prof. Dr. Marijke Hopman-Rock: Why and how to get older persons physically active: application in clinical practice and care.
- Dr. Ellen Freiberger: Falling and fall prevention: educational issues.
- Dr. Nina Waaler Loland : Never too late to become active: battle against ageism.
- Prof. dr. Federico Schena: Good practices in programmes and interventions to stimulate physical activity in older persons.
- Discussion with the audience (chaired by Federico Schena)

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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 the amount of physical activity, 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

Citations from Chodzko-Zajko et al, 2009

“ Thus, age is considered a primary risk factor for the development and progression of most chronic degenerative disease states. However, **regular physical activity substantially modifies these risks**. The largest increment in mortality benefit is seen when comparing sedentary adults with those in the next highest physical activity level “ (pg 4)

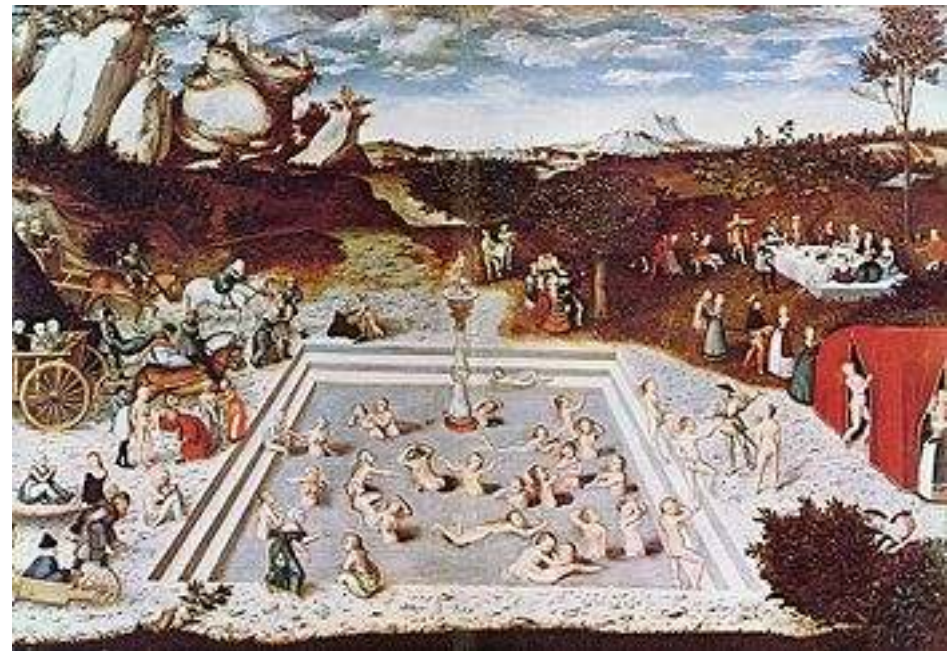
“ Multimodal exercise, usually including strength and balance exercises, and tai chi have been shown to be **effective in reducing the risk** of noninjurious and sometimes injurious falls in populations who are at an elevated risk of falling” (pg 10)

“ the outcome of treatment of some established diseases and geriatric syndromes is more effective with **higher-intensity exercise** (e.g., type 2 diabetes, clinical depression, osteopenia, sarcopenia, muscle weakness).” (pg 13)

Prof. Archie Young (1986): “Not only can exercise reverse the effects of immobilization, it can readily produce a further 10 to 20% improvement in strength and aerobic power, effectively postponing functionally important thresholds for some 10 to 20 years.”

Acta Med Scand Suppl. 1986; 711, 227-232.

Message: exercise and physical activity makes you feel younger!



The fountain of youth by Lucas Cranach de Oude

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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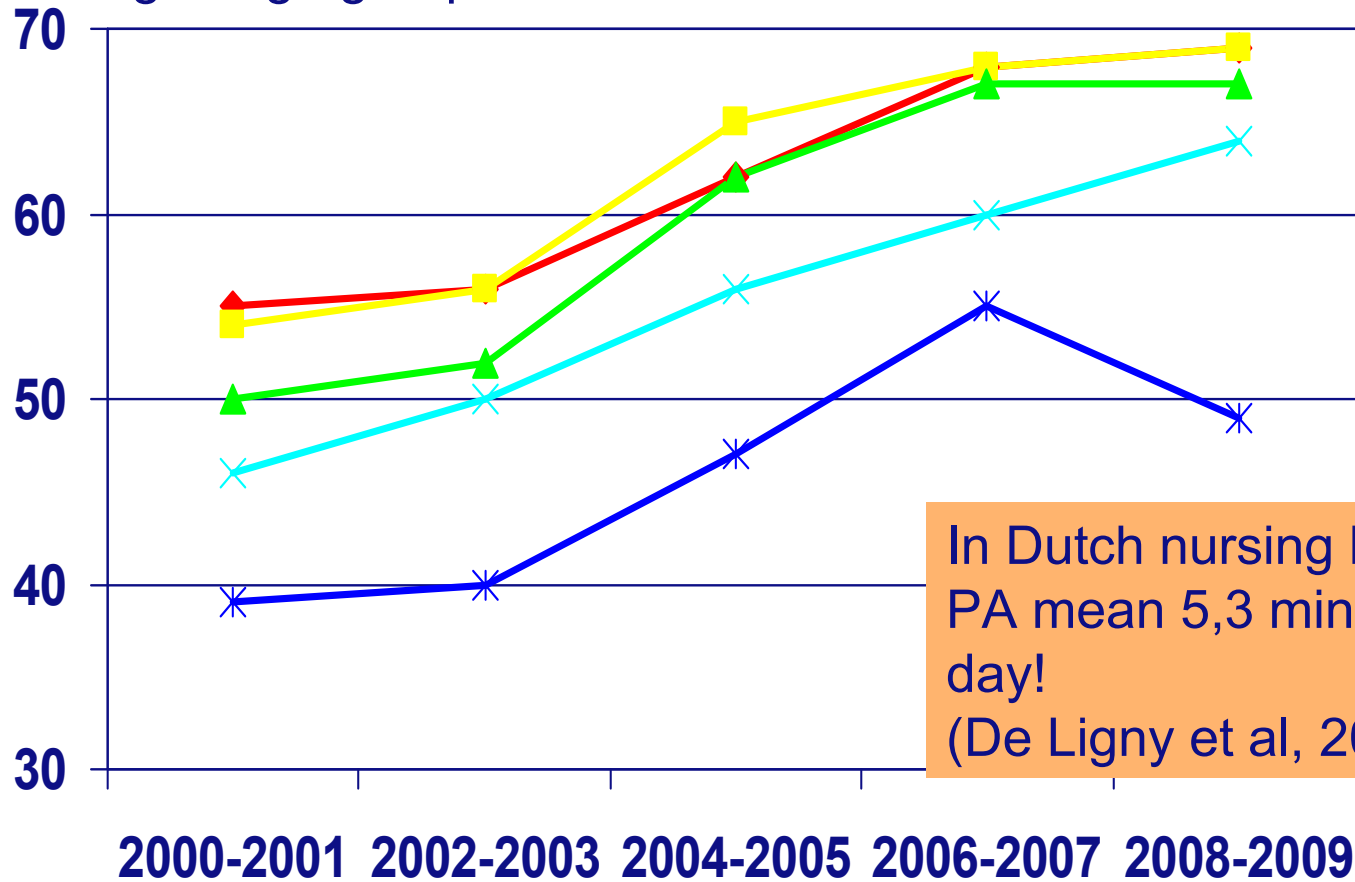
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ABSTRACT

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) Statement on

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



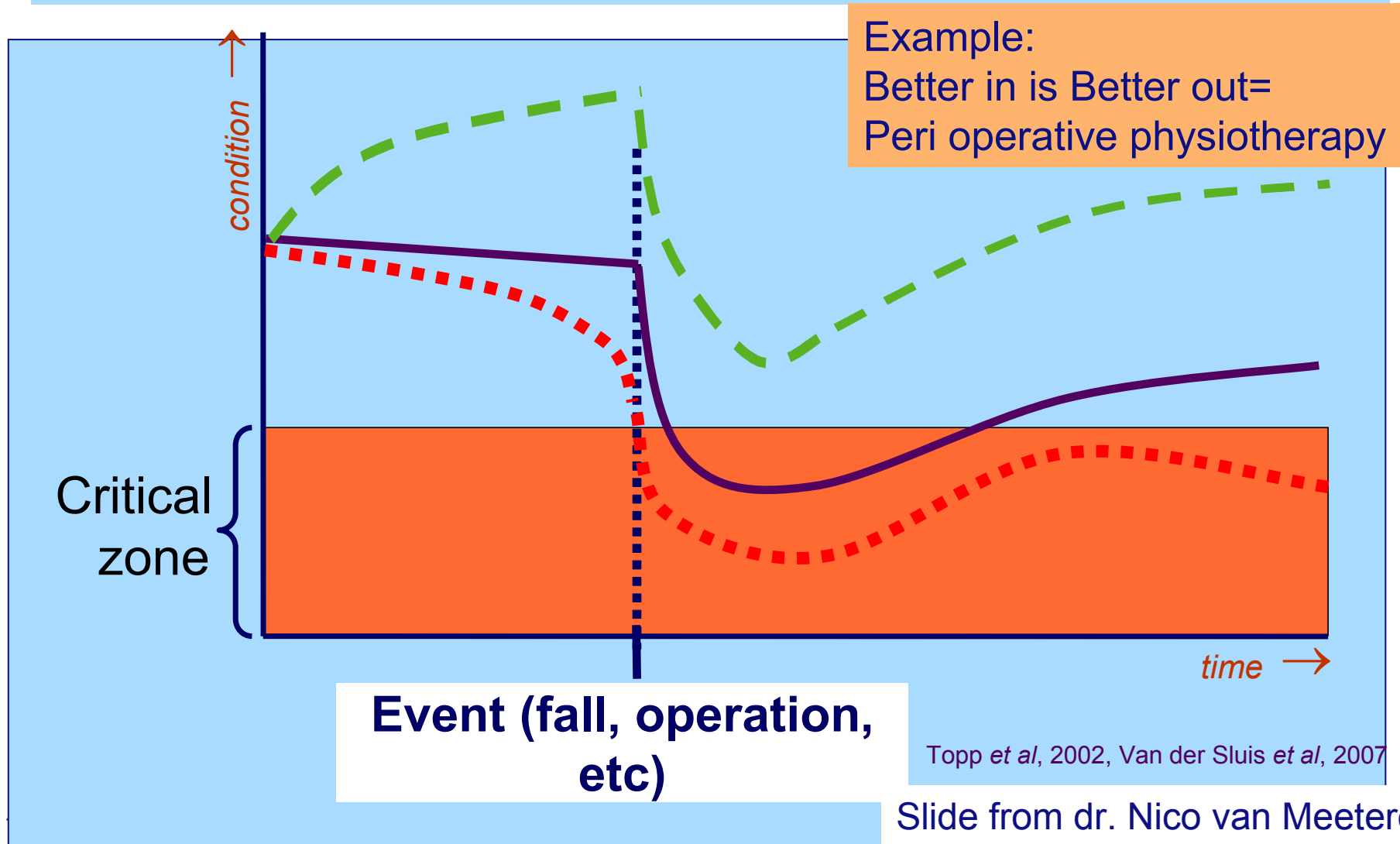
Picture Katharine Devereux, Perth Australia

- 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)

- 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?



Example:
Better in is Better out=
Peri operative physiotherapy

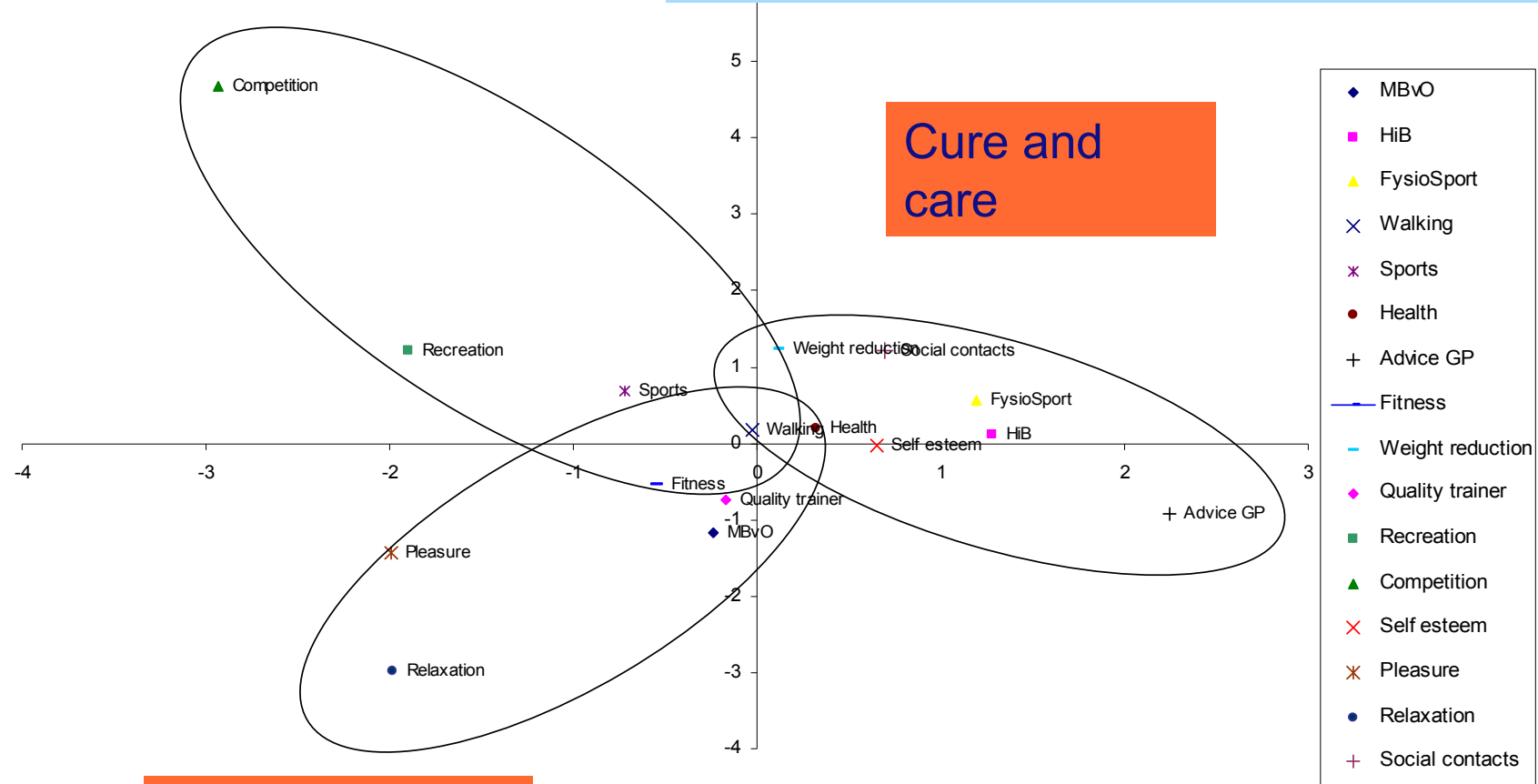
Event (fall, operation, etc)

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



Relax and Enjoy

Stiggelbout e.a., JAPA, 2008

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**
- **INTROSPECTION: WHAT IS YOUR BARRIER TO PRESCRIBE PHYSICAL ACTIVITY AND EXERCISE???**



**A Little Introspection
Never Hurts!**

Thanks for your attention!

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www.EUNAAPA.org

www.paseonet.org

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