

# Physical activity in childhood - the role of evidence



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## Sport, activité physique et santé des jeunes en Suisse

Mise à jour 2004 de la prise de position scientifique

Schweizerische Zeitschrift für «Sportmedizin und Sporttraumatologie» 52 (3), 124–130, 2004

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*Revue suisse de Médecine et de traumatologie du sport* 47 (4), 175-179, 1999

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## Santé et pratique du sport pendant l'adolescence: quelques faits

Prise de position scientifique rédigée en commun par les partenaires suivants:  
Office fédéral du sport (OFSP)

Office fédéral de la santé publique (OFSP)  
Société suisse de santé publique (SGPG)  
Société suisse de Pédiatrie (SGP)  
Société suisse de Médecine du Sport (SGSM)  
Réseau santé et activité physique Suisse

# 4 'Key Tasks' of a Systematic Evidence-Based Approach to Promoting Physical Activity

- Using the evidence for the health benefits of physical activity to "make the case"  
What is the nature of the problem?
- Conducting surveillance to collect evidence on the prevalence of physical activity  
What is the problem's extent?
- Reviewing evidence on 'what works' in increasing physical activity  
What is the most effective way to tackle this problem?
- Evaluating practice  
How can progress be monitored and evaluated?



Cavill N, Foster C, Martin BW, Oja P. 2005

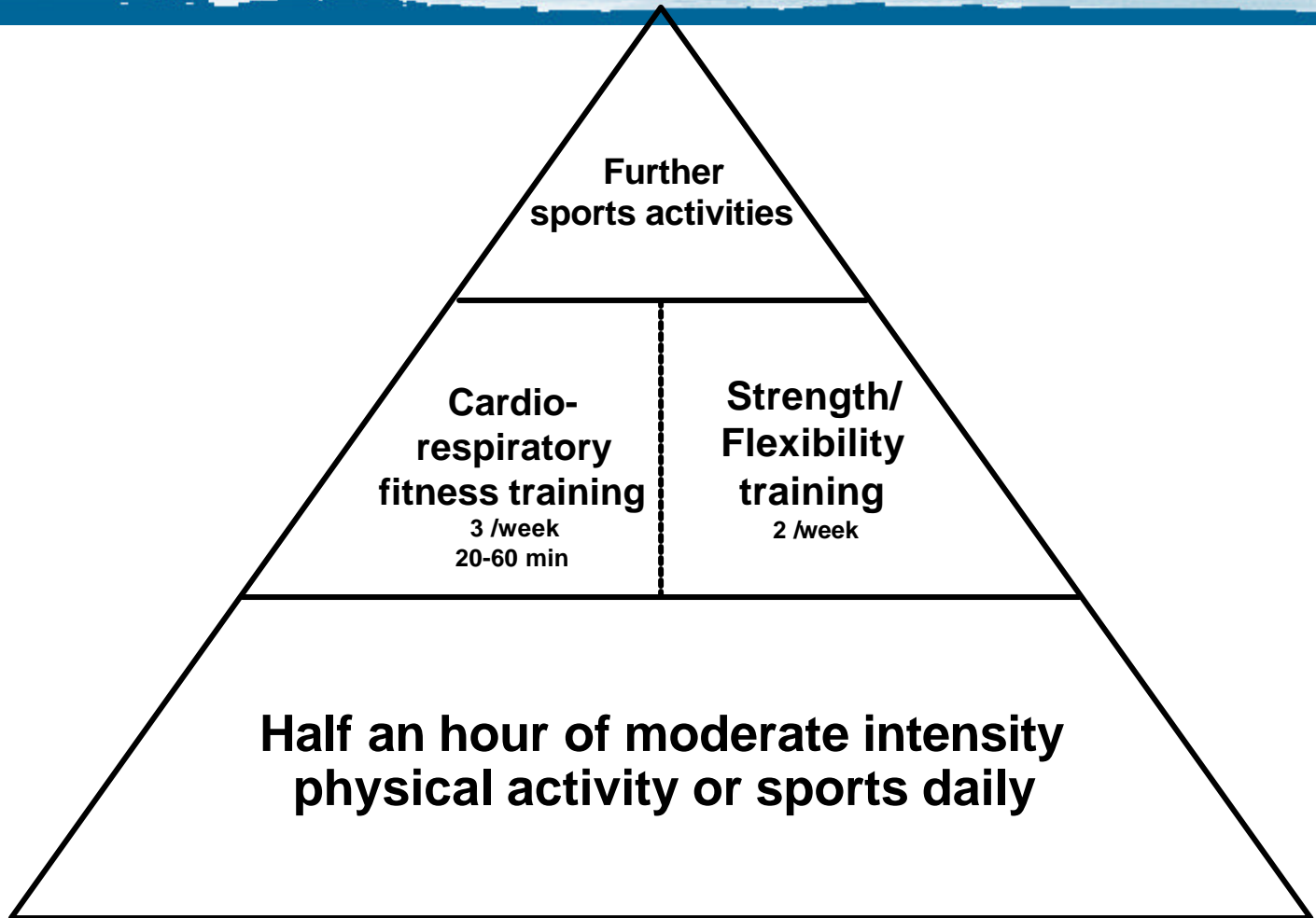
# Physical activity and health – effects in adults from international research

- Life expectancy
- Cardiovascular disease
- Diabetes
- Obesity
- Colon cancer
- (Breast cancer)
- (Prostate cancer)
- Osteoporosis
- Lower back pain
- Symptomatic gallstone disease
- Depression
- Stress tolerance
- Independence in old age



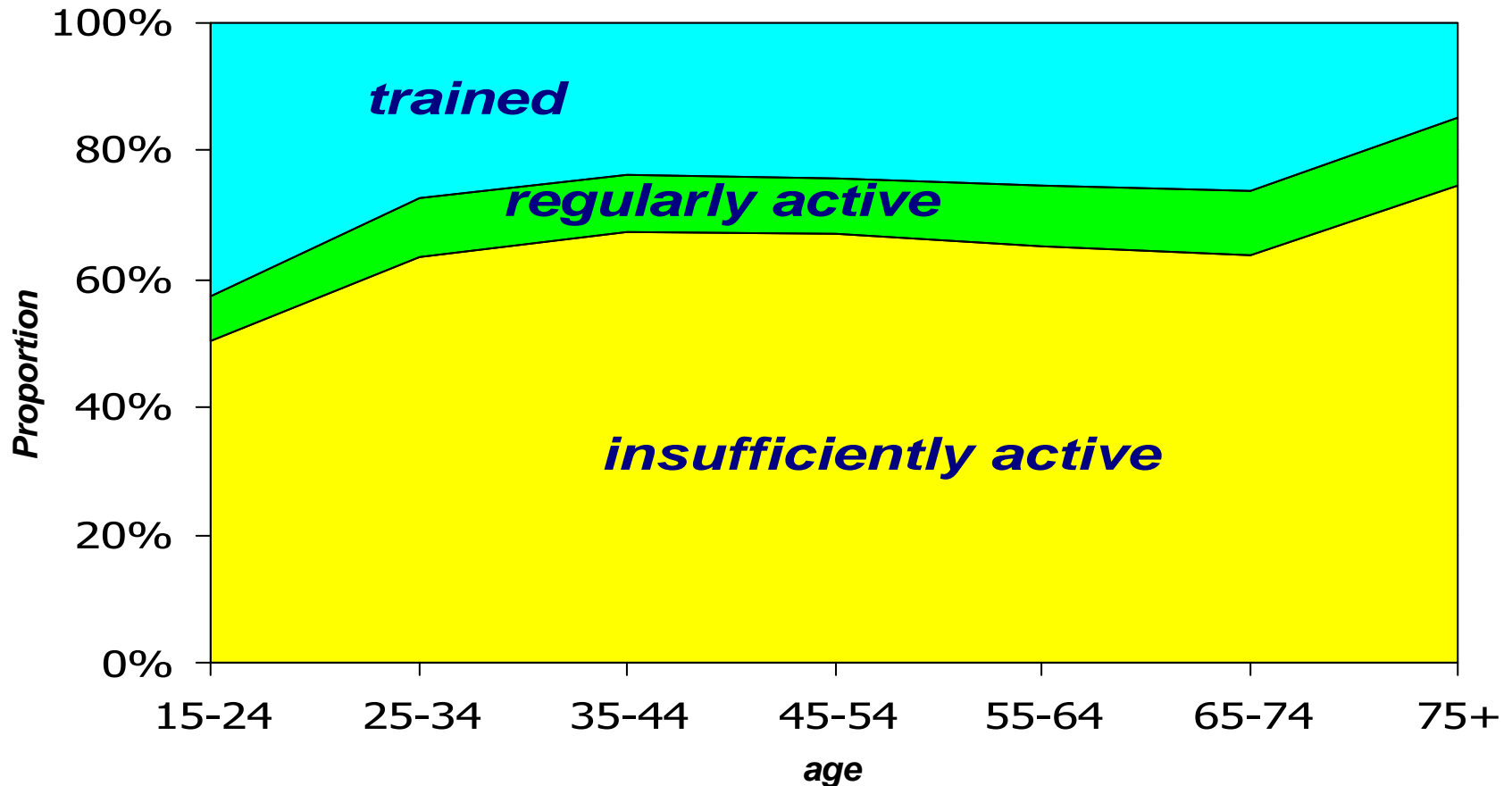
BM, 28.05.98

# The Swiss HEPA recommendations



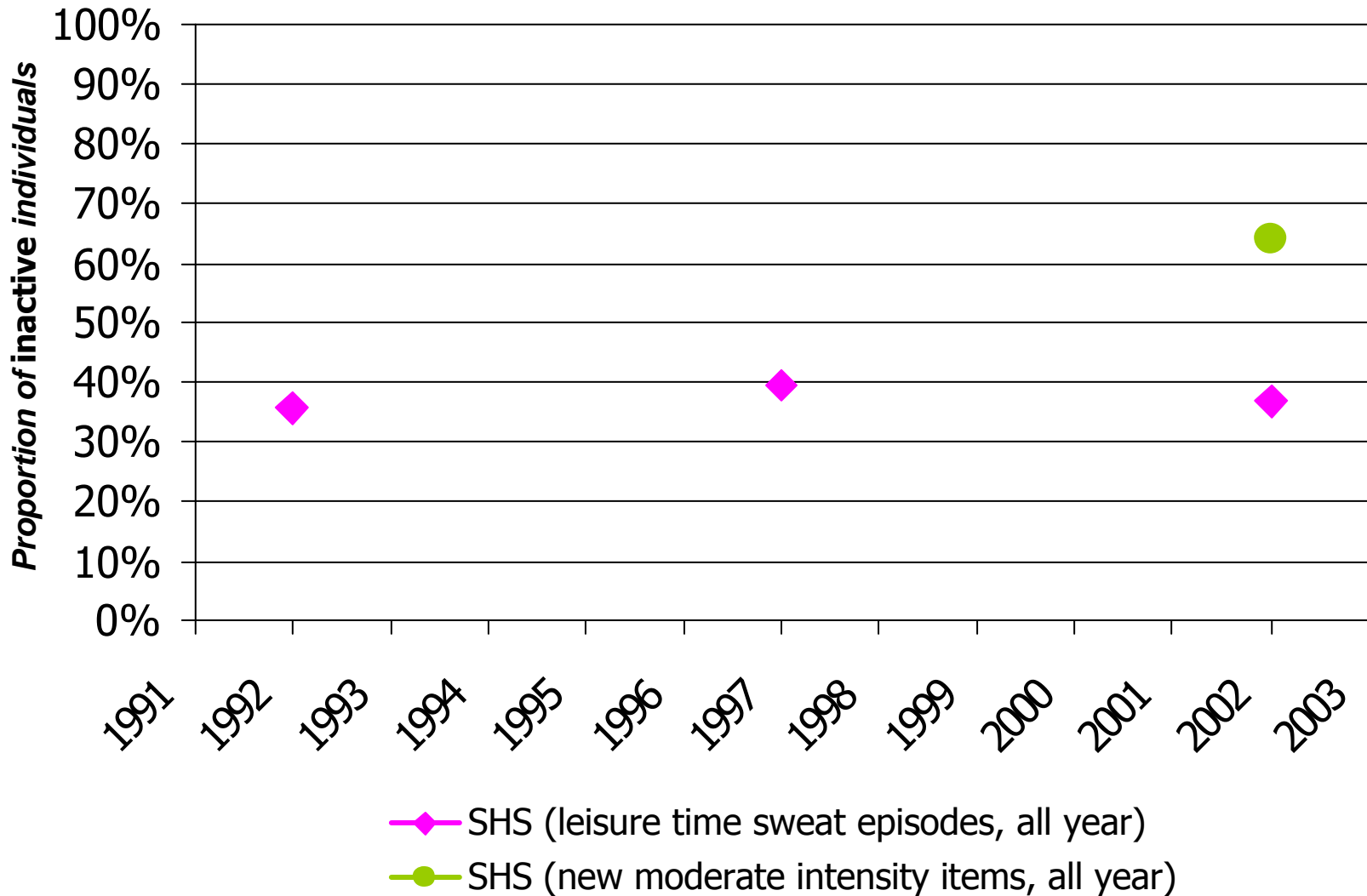
# Swiss Health Survey 2002

## Physical activity according to age group



- Trained individuals report at least 3 days per week with vigorous intensity activities during leisure time
- Regularly active individuals report at least half an hour of moderate intensity activities on five days of the week
- Insufficiently active individuals report less or no physical activity

# Monitoring of Physical Activity in Switzerland



# Development of culturally adapted interventions for adults with study of effectiveness in Switzerland

- Workplace
- Primary health care
- Conscript Swiss Army
- Tourist region
- Human powered mobility



ongoing



Cavill N, Foster C, Martin BW, Oja P. 2005



# Evaluation of large scale projects and programmes for adults implemented in Switzerland

- Majority of infrastructure (Swiss Hiking etc.) -
- Majority of offers (sport clubs, fitness industry etc.) -
- Vita Parcours +
- Cycling in Switzerland +
- SlowUp +
- Allez Hop ++
- Active-online.ch ++
- Seed Money approach ☹

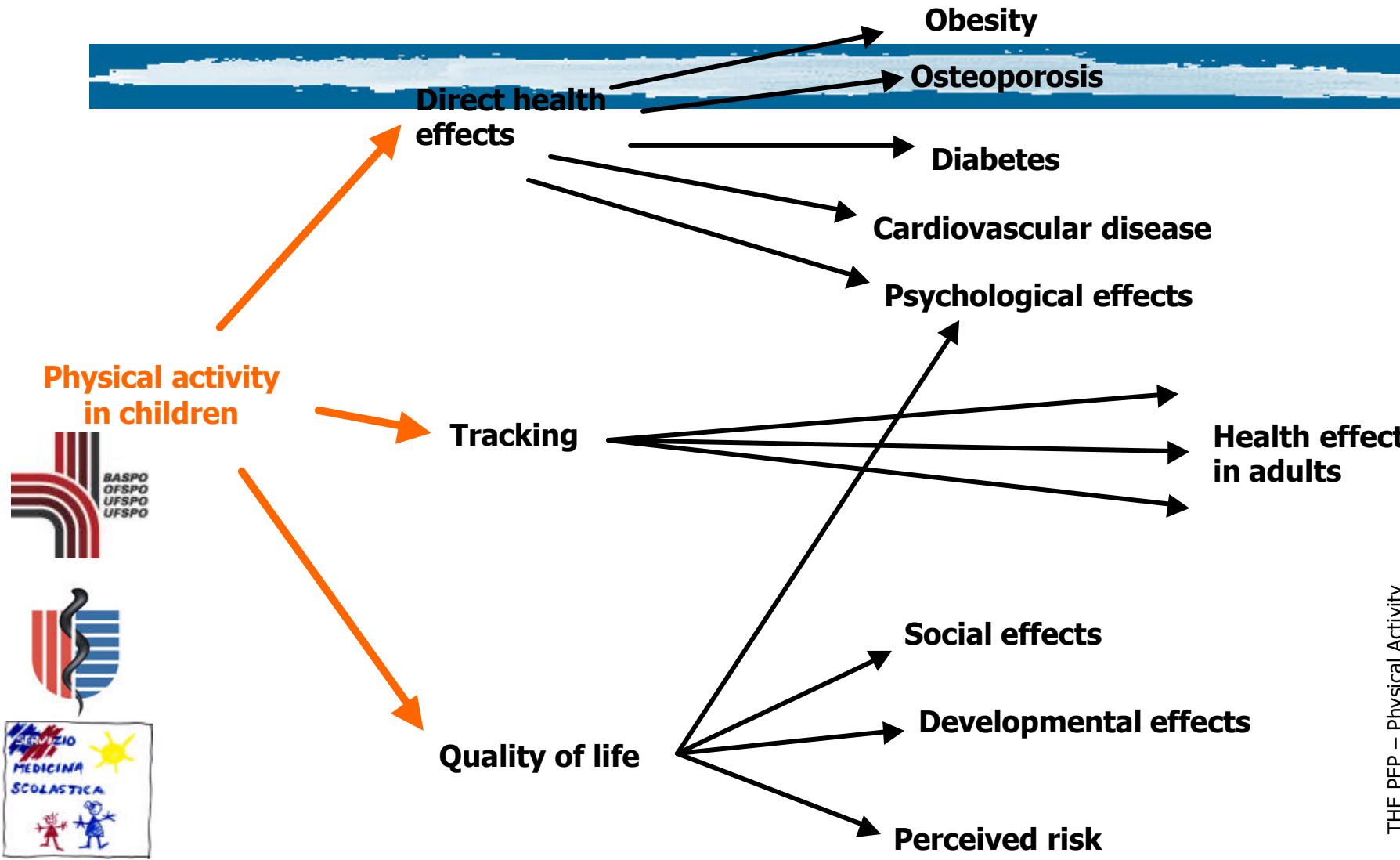


# Evidence-Based Approach to Promoting PA

	Adults
■ Evidence for health benefits	+++
■ Surveillance	++
■ Effectiveness	+
■ Evaluating Practice	(+)

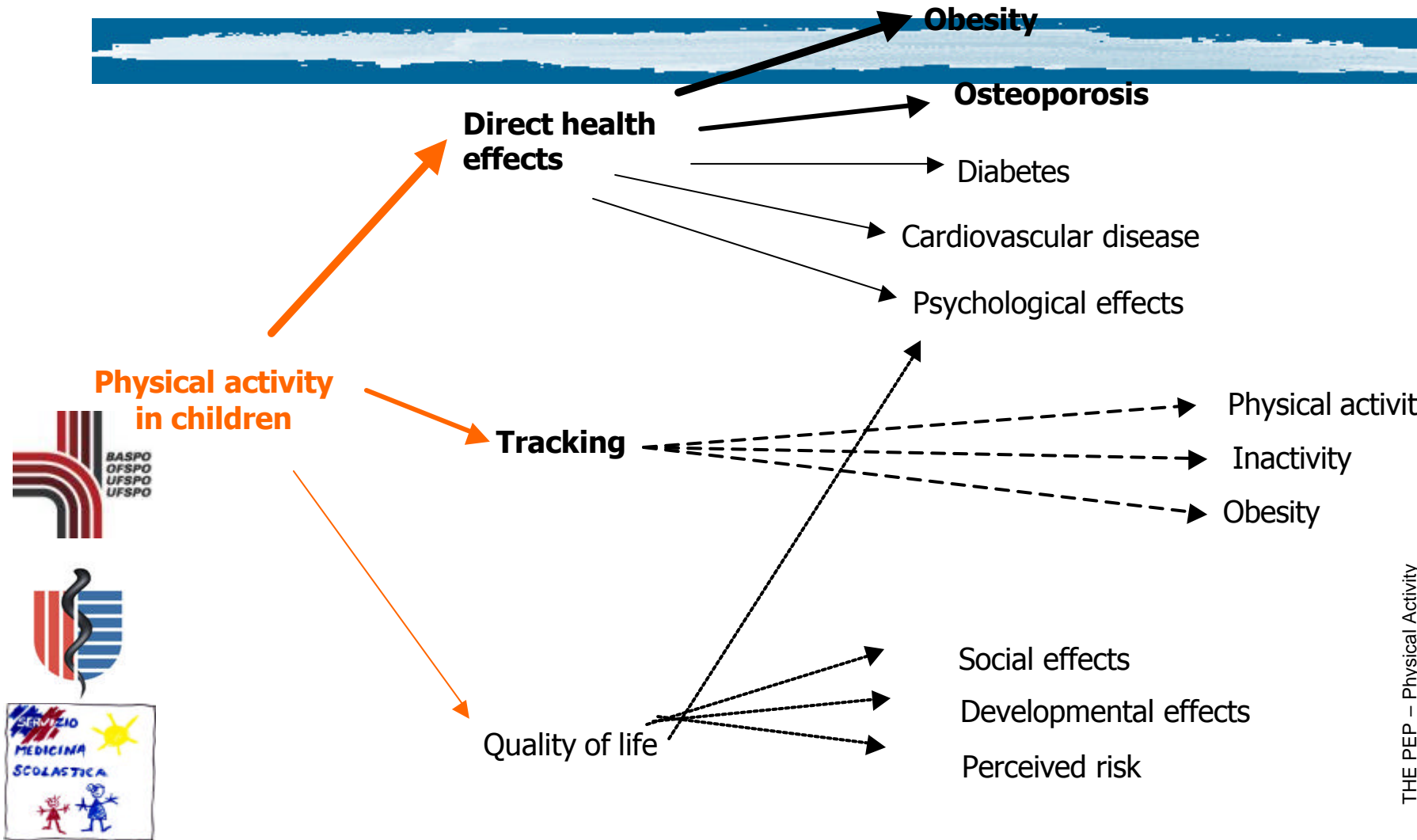


# Potential health effects



THE PEP - Physical Activity

# Health Effects in international research

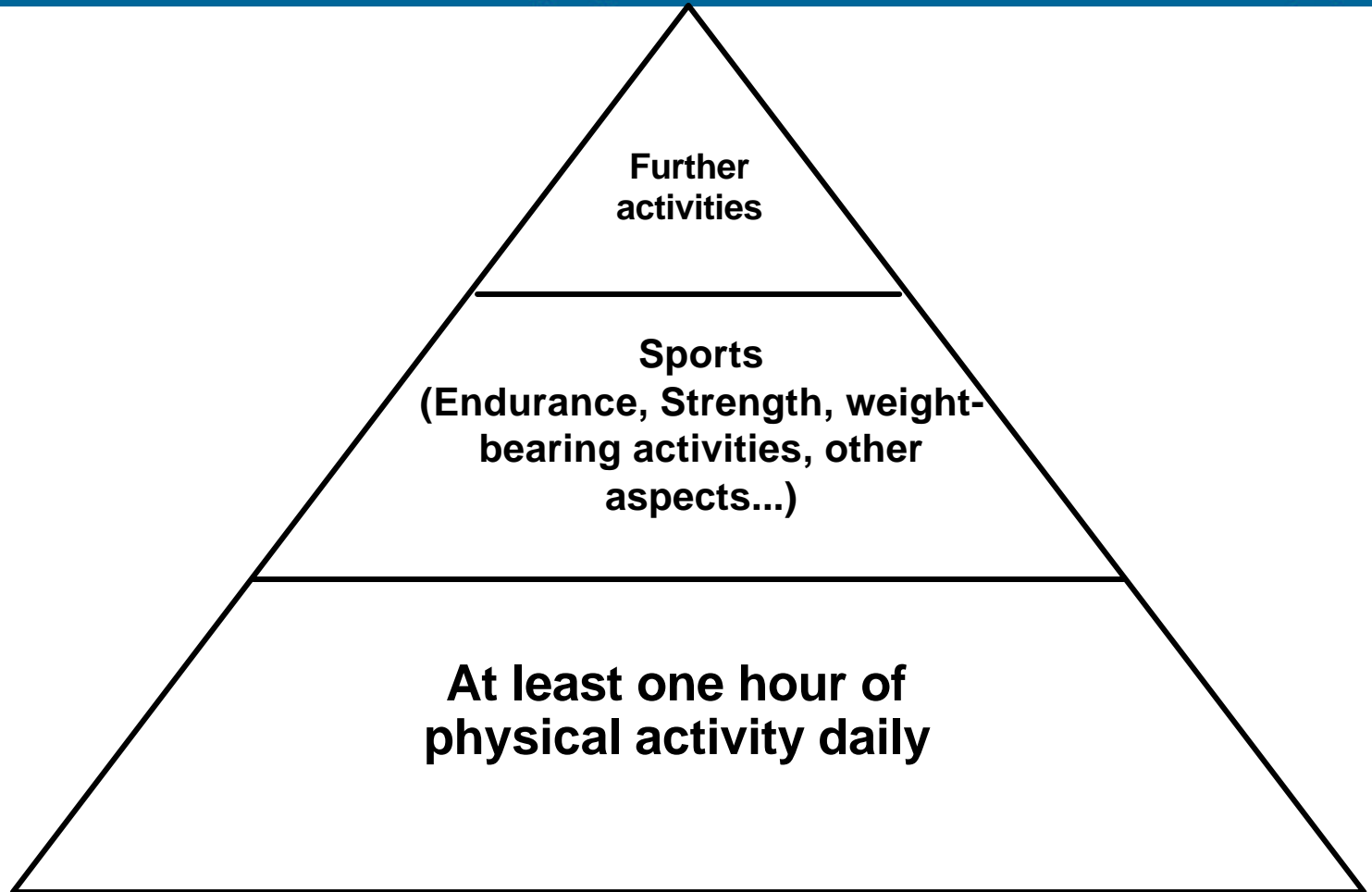


# Why is the evidence for health effects of physical activity in children (still) weaker than in adults?

- Physical inactivity -> chronic disease
- Positive and negative aspects of poor tracking
- Measurement of physical activity still in development
- Methodological limitations for complex outcomes (e.g. developmental effects)



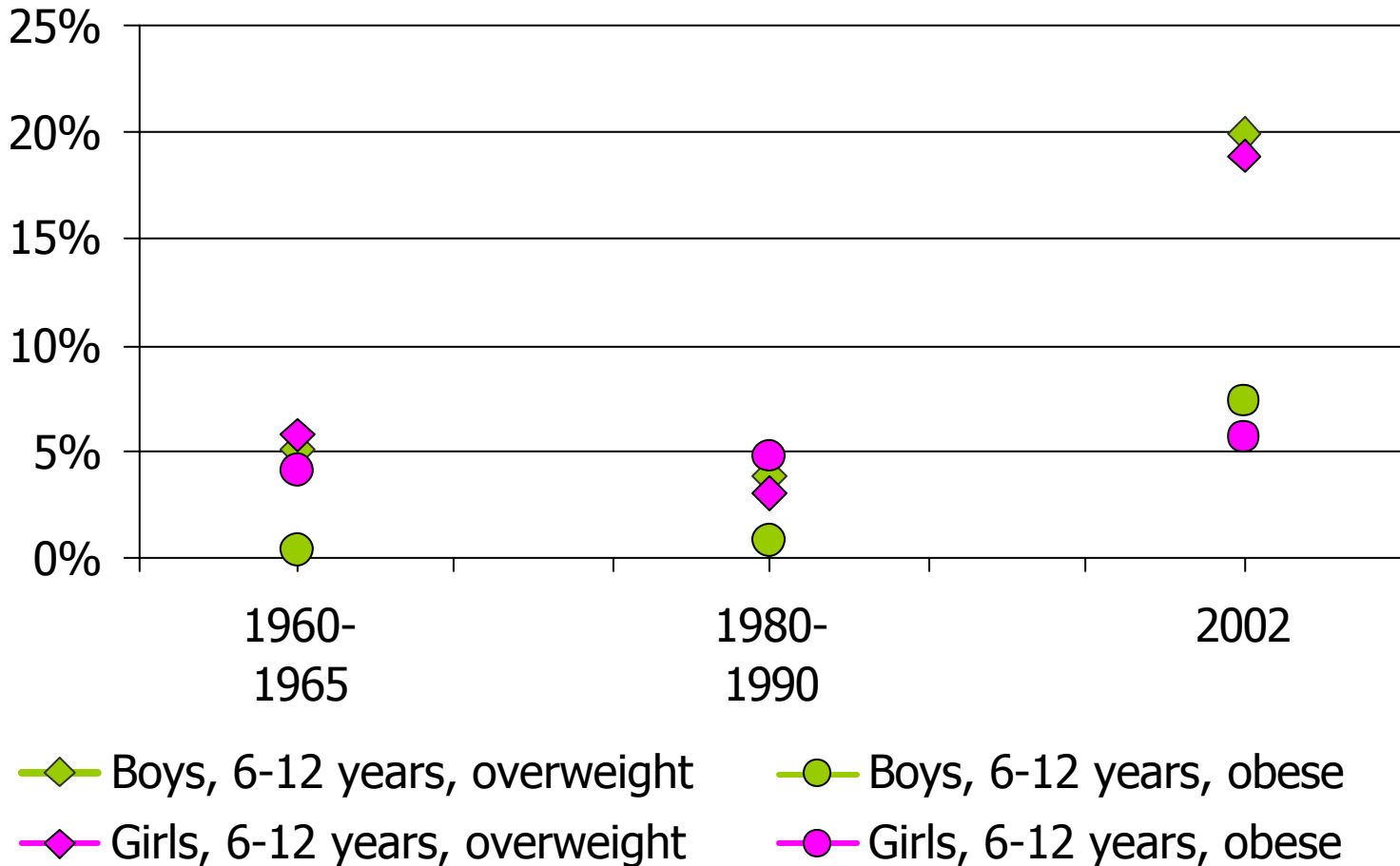
# PA recommendations for children (still under discussion...)



# Physical Activity Behaviour in Swiss Children 0-10 years



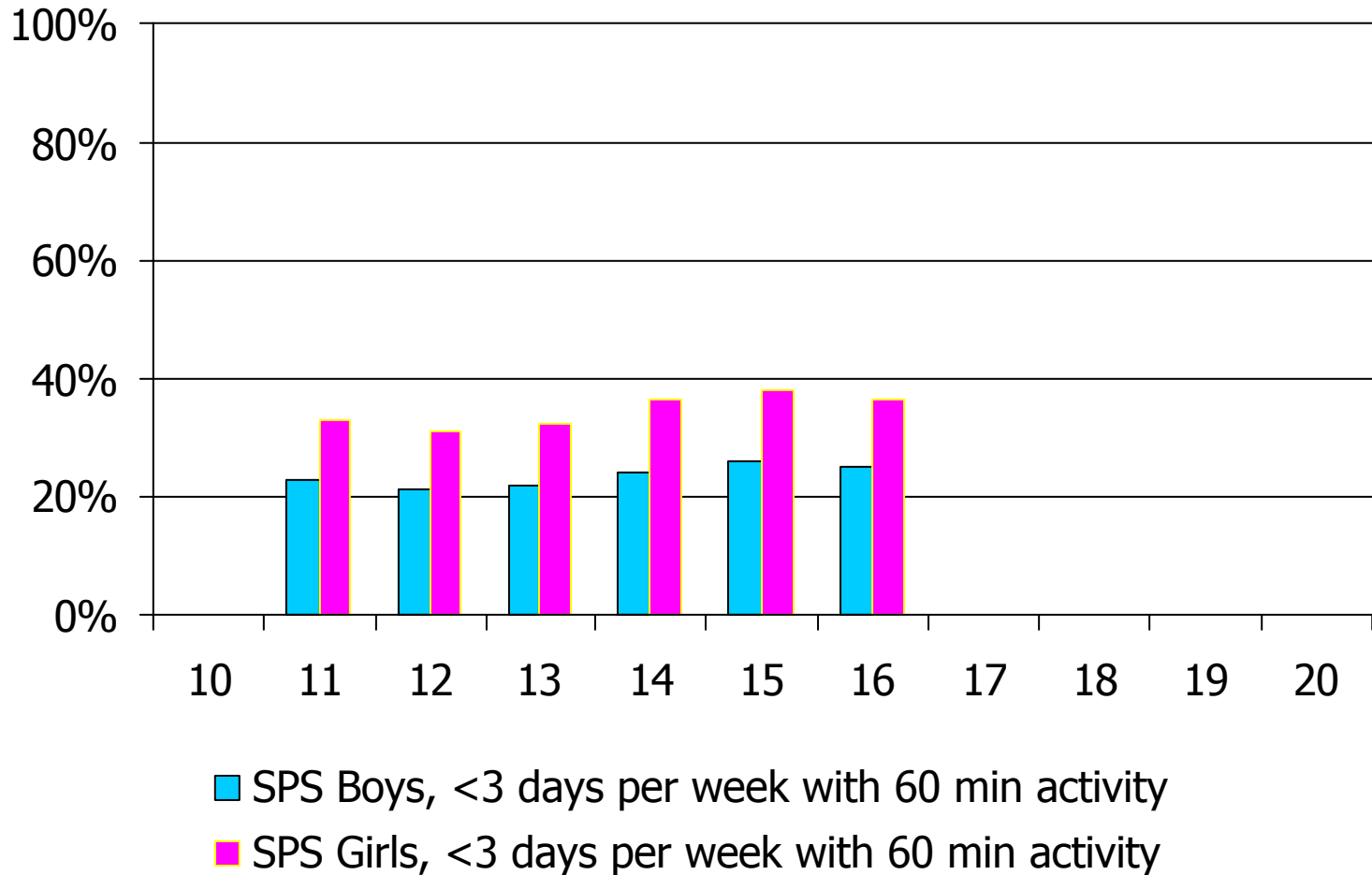
# Overweight and obesity in Swiss children CDC references, n=232/205/2431





# Physical Activity Behaviour in Swiss Children

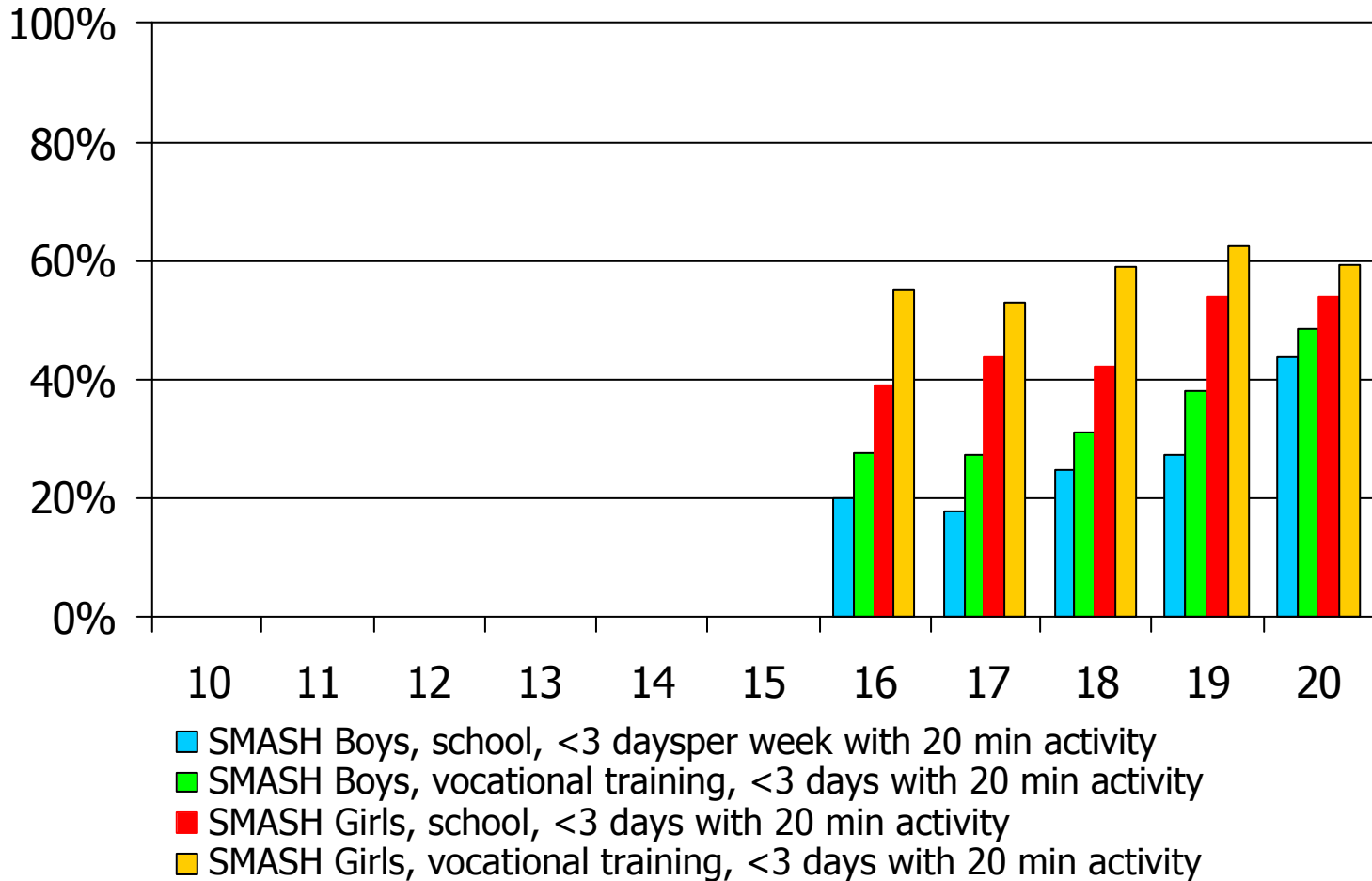
## The Swiss Pupils' Study, 11-16 years, n=5103



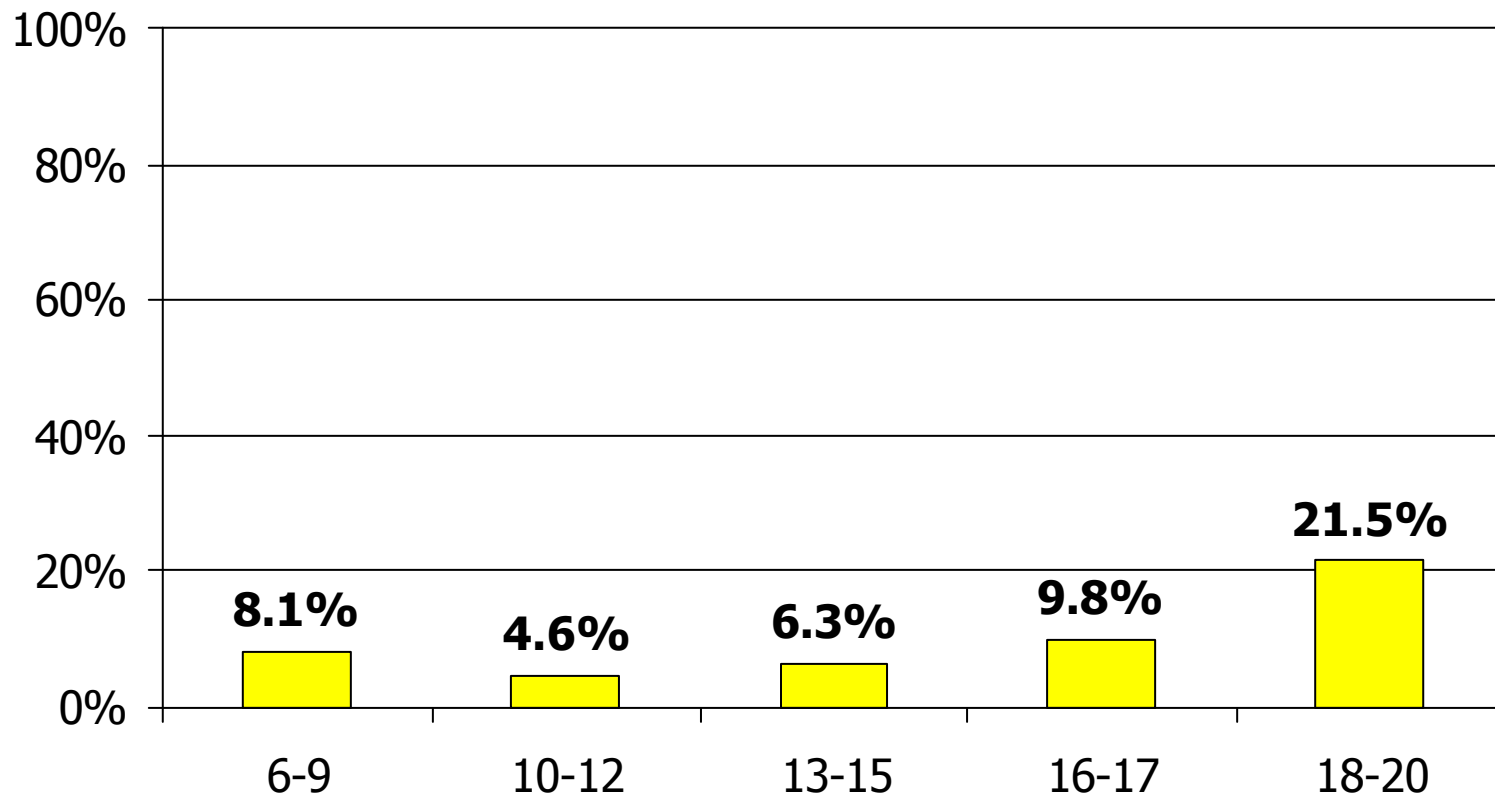
Kuendig, H., Kuntsche, E.N., Delgrande Jordan, M. & Schmid, H. (2003). Befragung zum Gesundheitsverhalten von 11- bis 16-jährigen Schülerinnen und Schüler. Deskriptive Statistik der 2002 erhobenen Gesamtschweizer Daten. Lausanne: SFA. .

# Physical Activity Behaviour in Swiss Children

## The SMASH Study, 16-20 years, n=7428



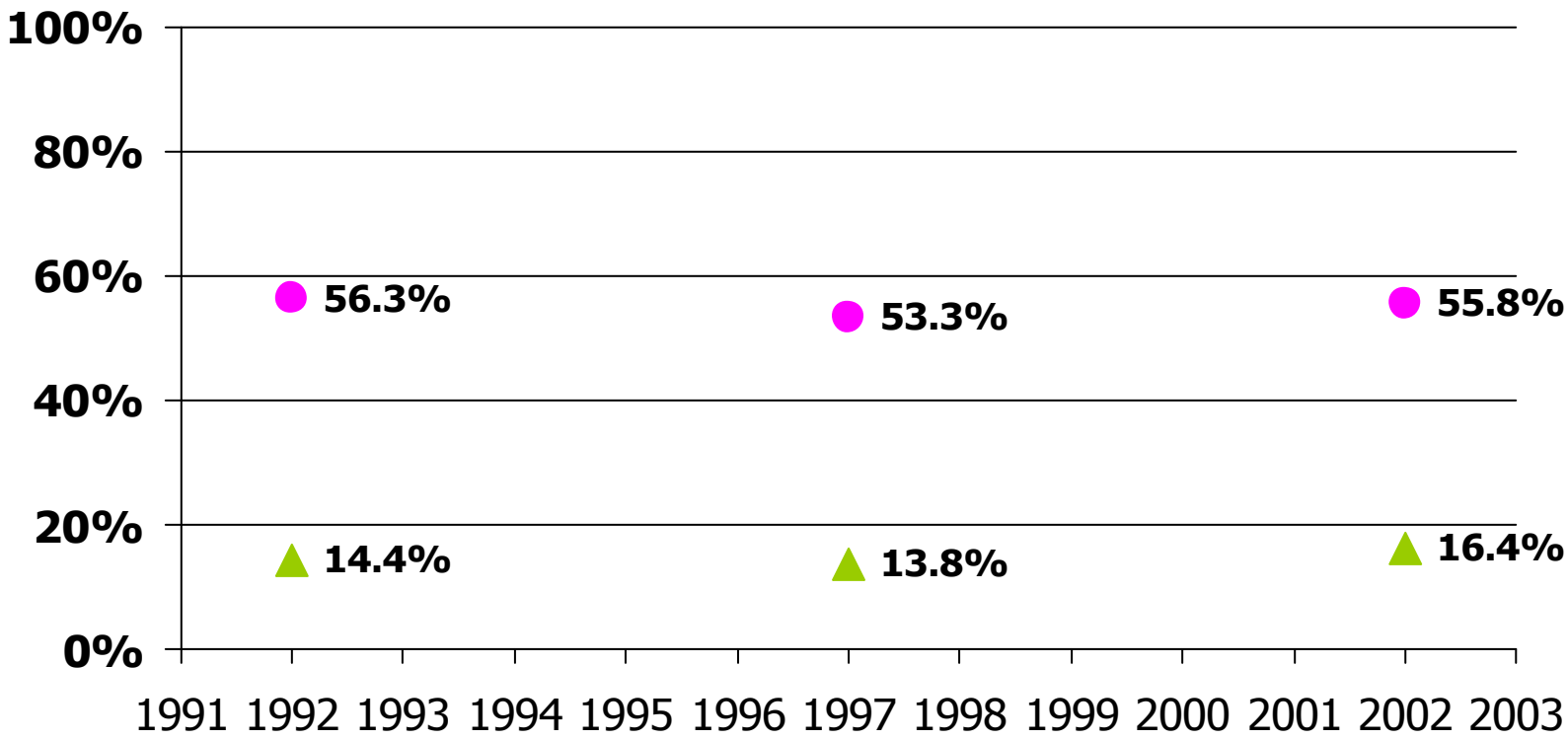
# Physical Activity Behaviour in Swiss Children National Travel Survey 2000, 6-20 years, n=4468



■ NTS Boys and Girls, percentage of trips to school with car

# Physical Activity Behaviour in Swiss Children

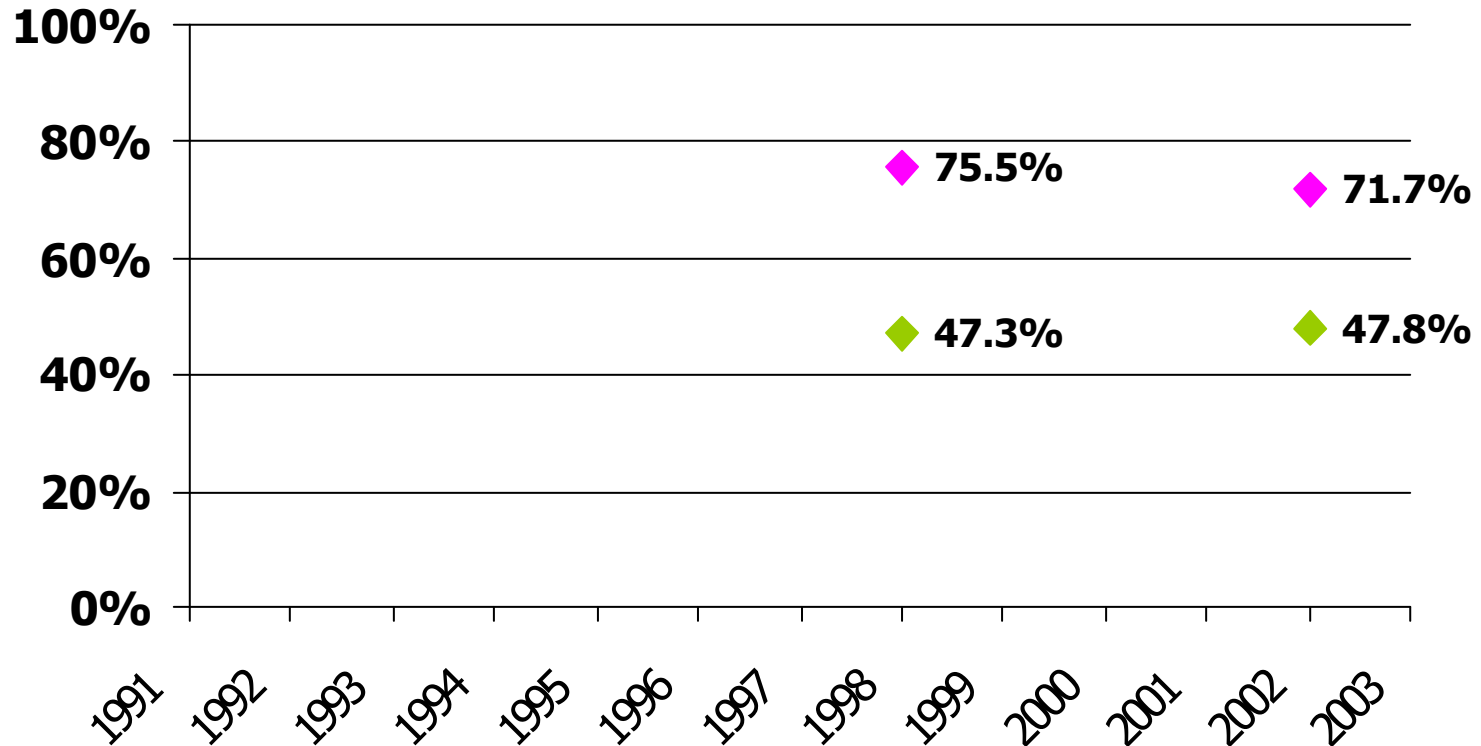
## The Swiss Health Survey, 15-20 years, n=808/703/1039



- ▲ SHS Boys and Girls, 15-20 years, <1 sweat episode in leisure time per week
- SHS Boys and Girls, 15-20 years, <3 sweat episodes in leisure time per week

# Physical Activity Behaviour in Swiss Children

## The Swiss Pupils' Study, 11-16 years, n=5103



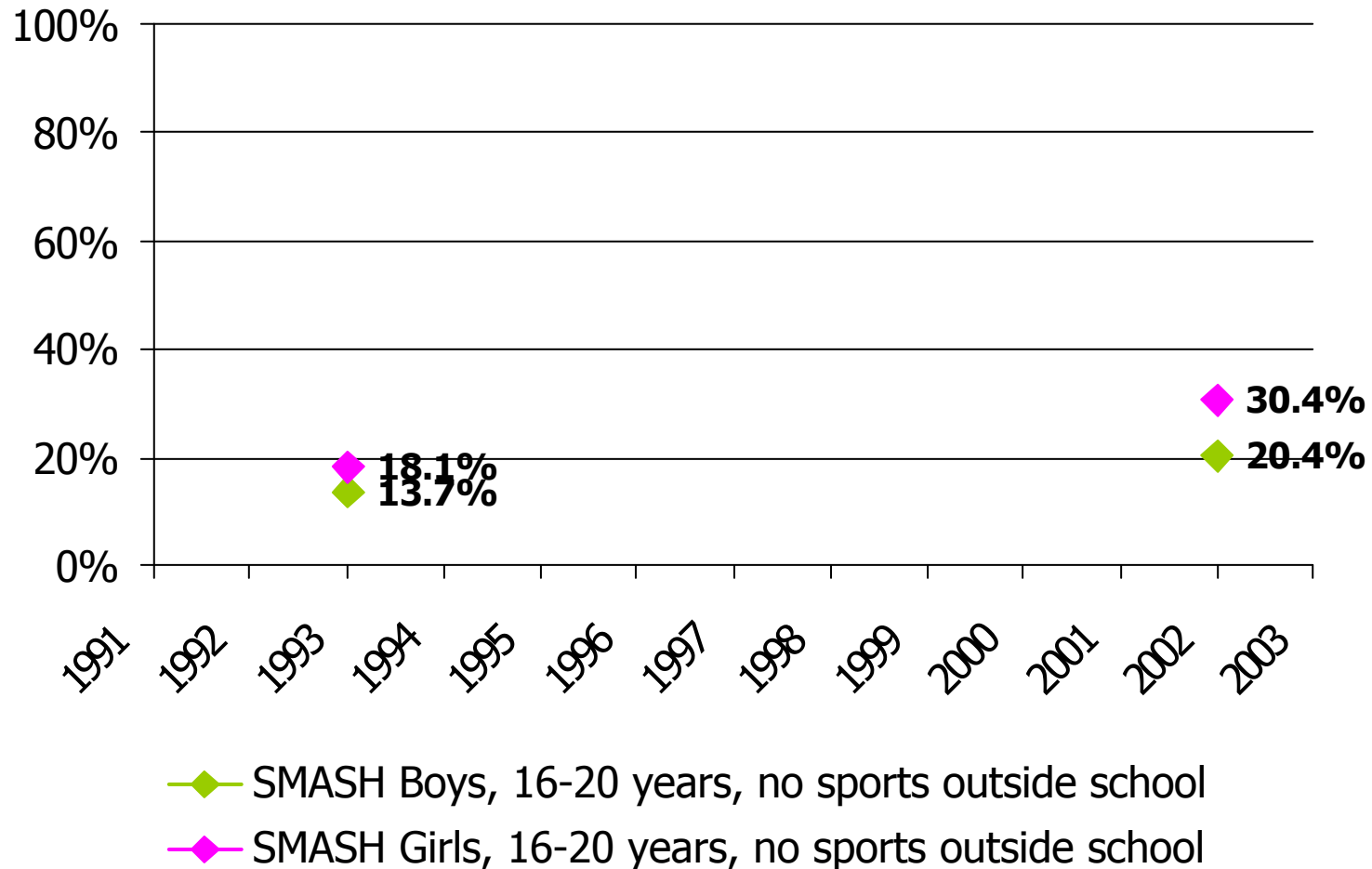
—◆— SPS Boys, 11-16 years, <4 sport sessions per week, equally weighted age groups

—◆— SPS Girls, 11-16 years, <4 sport sessions per week, equally weighted age groups

Kuendig, H., Kuntsche, E.N., Delgrande Jordan, M. & Schmid, H. (2003). Befragung zum Gesundheitsverhalten von 11- bis 16-jährigen Schülerinnen und Schüler. Deskriptive Statistik der 2002 erhobenen Gesamtschweizer Daten. Lausanne: SFA.

# Physical Activity Behaviour in Swiss Children

## The SMASH Study, 16-20 years, n=7428



Narring F et al. SMASH 2002: Swiss Multicenter adolescent survey on health 2002. Lausanne: IUMSP, 2004.

# Physical activity time trends in Swiss Children

- (BMI ↑↑)
- (Fitness ↓)
- PA under 10 years ?
- Swiss Health Study (15-20y) 1992-2002 →
- PA Swiss Pupils Study (11-16y) 1998-2002 (↓)
- SMASH (16-20y) 1993-2002 ↑



- Development of monitoring system under way (SCARPOL, recruitment, etc)



# Development of culturally adapted interventions for children with study of effectiveness in Switzerland

- Kindergarten Evillard (👍)
- KISS study (AG, BL) in development
- Feelok.ch in development
- Other projects (GE etc) in development





# Effectiveness of interventions applicable to children in international review

- Prompts to encourage stair use
- Community-wide campaigns
- School-based physical education
- Social support in community settings
- Access to places combined with informational outreach



Kahn EB, Ramsey LT, Brownson RC, Heath GW, Howze EH, Powell KE, Stone EJ, Rajab MW, Corso P (2002). The effectiveness of interventions to increase physical activity. A systematic review. *Am J Prev Med* 22: 73-107.

# Effectiveness of interventions applicable to children in international review

- Classroom-based health education focused on information provision ?
- College-based health education and physical education ?
- Classroom-based health education focused on reducing television viewing and video game playing ?



Kahn EB, Ramsey LT, Brownson RC, Heath GW, Howze EH, Powell KE, Stone EJ, Rajab MW, Corso P (2002). The effectiveness of interventions to increase physical activity. A systematic review. *Am J Prev Med* 22: 73-107.

# Evaluation of large scale projects and programmes for children implemented in Switzerland

- Majority of infrastructure (Playgrounds, sports grounds etc.) -
- Majority of offers (sport clubs etc.) -
- PE in school beginning
- Youth + Sports beginning



# Evidence-Based Approach to Promoting PA

Adults Children

■ Evidence for health benefits	+++	++
■ Surveillance	++	(+)
■ Effectiveness	+	(+)
■ Evaluating Practice	(+)	-

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■ Public awareness of problem	++	+++
■ Need for action	+++	+++

