



WHO-Workshop on integration of physical activity data

The collection of data on physical activity by the Italian Behavioral Risk Factor Surveillance System – PASSI (and other sources)

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# Available data on PA

- **OKkio alla salute**
  - Data collected by health departments coordinated by National Institute of Health (ISS) by self-administered questionnaires
  - Study population: students in the 3<sup>rd</sup> year of primary school (ages 8-9 y) in 18/21 regions (45,000 kids)
  - Cluster sampling of classes at local or regional level
  - Repeated surveys every two years (first year 2008)
- **Multiscopo – aspects of every day life**
  - Data collected by National Institute of Statistics (ISTAT) by face-to-face/self-administered questionnaires
  - From 1993 annually repeated surveys on national and regional level
  - Study population >3 years (24,000 families)
  - Delay in dissemination of data
  - Only few PA items included not very useful for public health planning and evaluation (no definition of PA is given)
  - Lack of data on Local Health Unit (LHU) level



## PASSI (Progressi delle Aziende Sanitarie per la Salute in Italia)

- 2005 and 2006:
  - Two pilot cross-sectional studies testing materials and methods for the future implementation of a surveillance system
- In 2006 the MoH funded the National Centre for Epidemiology, Surveillance and Health Promotion (CNESPS) to develop ongoing surveillance of behavioral risk factors and preventive measures included in the National Prevention Plan



# Method

- Ongoing (monthly) data collection in each participating Local Health Unit (LHU):
  - telephone interviews of at least 275 persons/year/LHU (in 2007: 21,489 interviews, 85% response rate)
  - Interviewers: LHU personnel using a standardized questionnaire (questions adapted from BRFSS, Cindi, Steps, ISTAT → comparisons)
- Participants selected from LHU population registers using stratified random sampling
- Inclusion criteria: age 18-69, residence in catchment area, availability of telephone number (mobile or land-line, obtained through various sources)



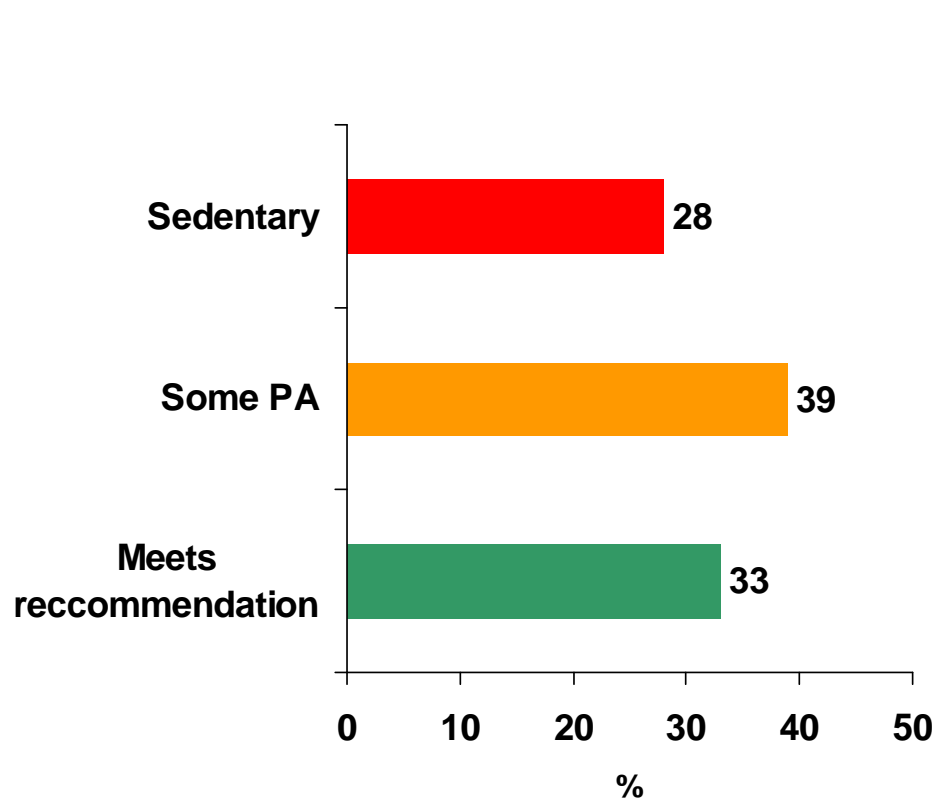
# Questions about PA

- Adapted from Behavioral Risk Factor Surveillance System (BRFSS) physical activity module
- Items covered:
  - Frequency
  - Duration
  - Intensity
  - Life domains: work related PA is included
  - Self-evaluation of level of PA
  - Advice and follow-up given by health care workers



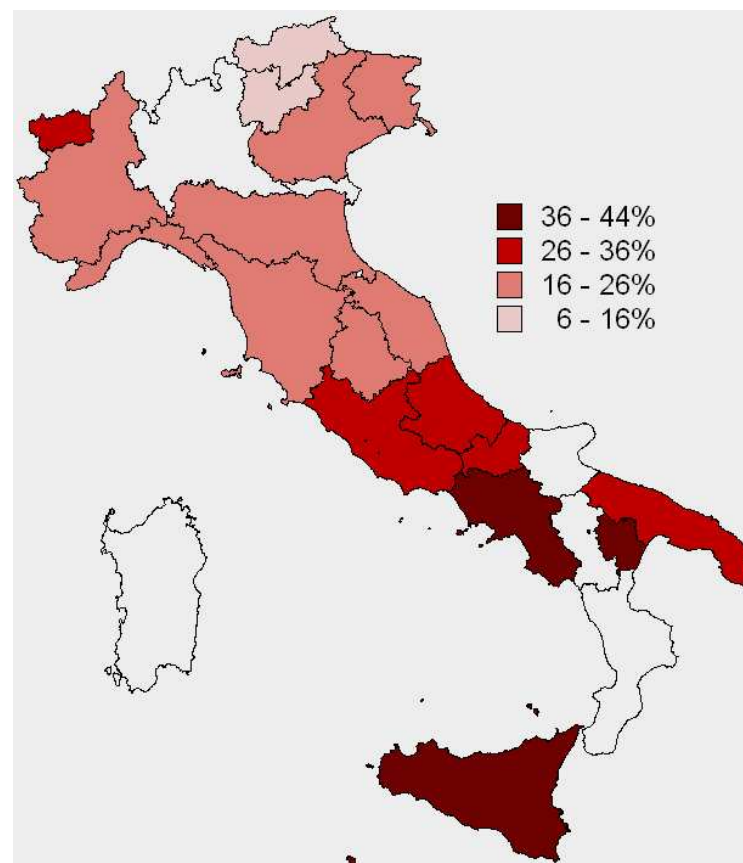
# Results: Levels of PA

Pooled data - PASSI 2007



Recommended level of PA:  
*Healthy People 2010*

Sedentary Lifestyle



# Sedentary Lifestyle

## Risk groups

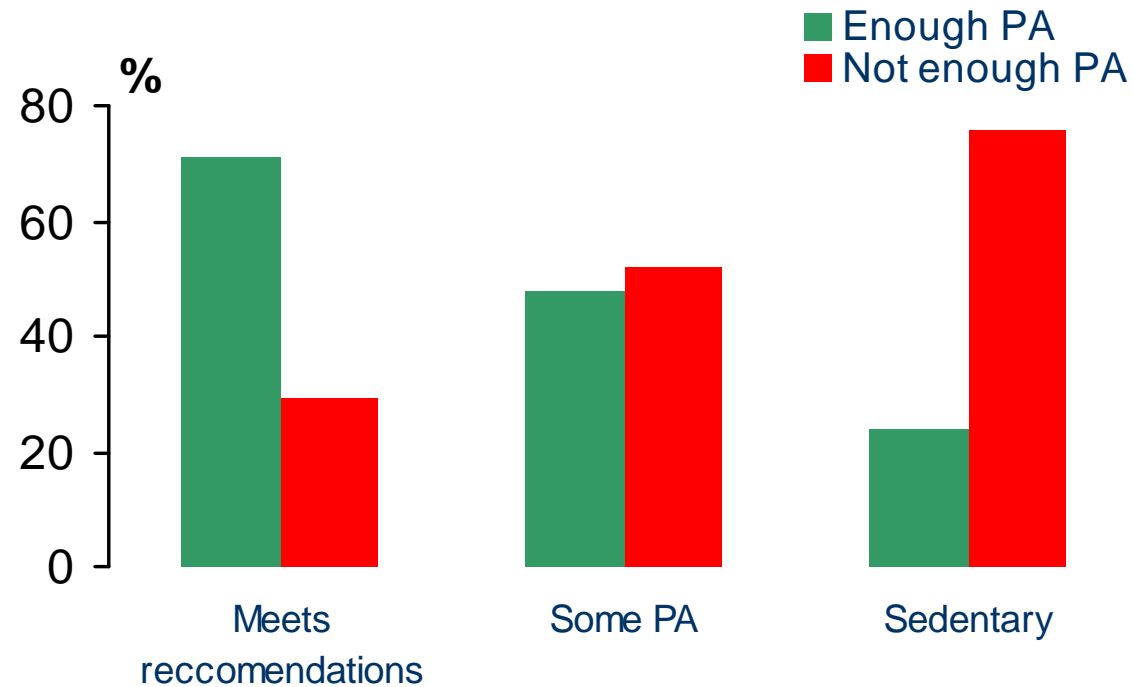
- At significant higher risk\* for having a sedentary lifestyle:
  - Women
  - Older people
  - Less educated people
  - Poorer people

\* confirmed by logistic regression



# Self-judgement of PA

Pooled data - PASSI 2007



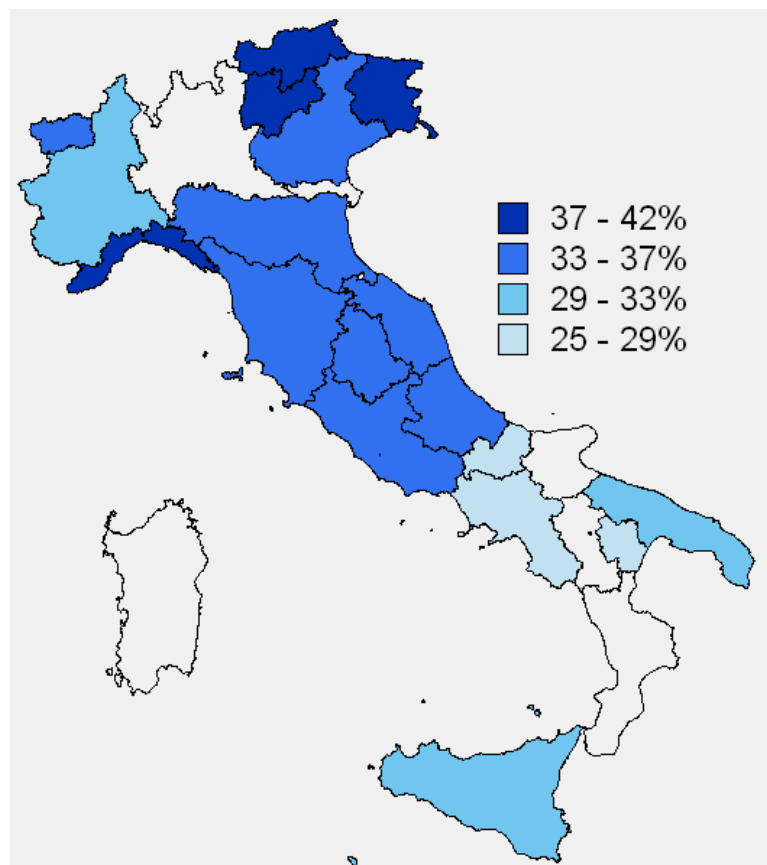
24% of sedentary population is convinced to practice enough PA



# Advice given by health care workers

Pooled data - PASSI 2007

Percentage of people reporting to have been advised on PA



- On average advice was given to:
  - 30% of interviewed people
  - 28% of interviewed people with sedentary lifestyle



# Trends

- 2007 is the first year of ongoing data collection → at present no trends are available
- 2006: pilot study using short version of IPAQ => data impossible to compare



## How to address challenges in PA surveillance

- Establish universal recommendations on PA → mission impossible!
  - Define a pattern of data collection feasible for different definitions
    - Good experience with BRFSS PA-module
    - Collecting data on days and minutes broken down by intensity of PA → allows to adapt to new guidelines if requested \*
  - On national level: better stick to established definitions:
    - Highlight trends - ranking
    - Detection of risk groups
    - Implementation and
    - Evaluation of preventive actions
- } More important than exact point-estimates

\* Prevalence of Self-Reported Physically Active Adults - United States, 2007, MMWR, December 5, 2008 / 57(48);1297-1300, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5748a1.htm>

# Integration of data in Italy

- **OKkio**
  - PA of school-children
- **PASSI** → ongoing monitoring:
  - Level of PA and meeting of recommendations
  - Trends/ranking
  - Risk factors
  - Advice by health care workers
- **Multiscopo** –aspects of every day life
  - Additional information on regional level
    - Use of public transport
    - Time spent watching TV
    - Population practicing sports



# Role of WHO



**2008-2013  
Action Plan  
for the Global Strategy for the  
Prevention and Control of  
Noncommunicable Diseases**

- Much importance is given to surveillance
  - a fundamental tool for producing evidence and evaluate effectiveness in health promotion and public health
- More support by WHO for surveillance systems tailored for monitoring Gaining Health
- Strengthening of networking
- → share ideas, problem solving, best practices



# Extra slides



# Background

- 57 million inhabitants
- 21 regions
- Universal health care and preventive services →  
Local Health Units (LHU):  
1 unit per 300,000 residents  
(100,000 – 1,000,000)



# The questionnaire

**114 questions, many administered to specific subpopulations (e.g. cancer screening) or categories (e.g. present smokers)**

Questionario PASSI 2007 – Versione Operativa 13/02/07

A CURA DEL COORDINATORE	
<input type="checkbox"/> Titolare	n° esecuzione
<input type="checkbox"/> Sostituto	
<input type="checkbox"/> Sostituto di sostituto	

**Sistema di sorveglianza  
PASSI**



Regione \_\_\_\_\_ ASL \_\_\_\_\_

Comune di residenza dell'interessato \_\_\_\_\_ Codice ISTAT del Comune \_\_\_\_\_

**Topics included: priorities of the National Health Plan**

- quality of life
- smoking habits
- **physical activity**
- diet
- alcohol consumption
- driving behavior
- cardiovascular risk factors
- cancer screening
- vaccinations
- mental health
- domestic accidents
- socio-demographic aspects



# Recommended level of PA

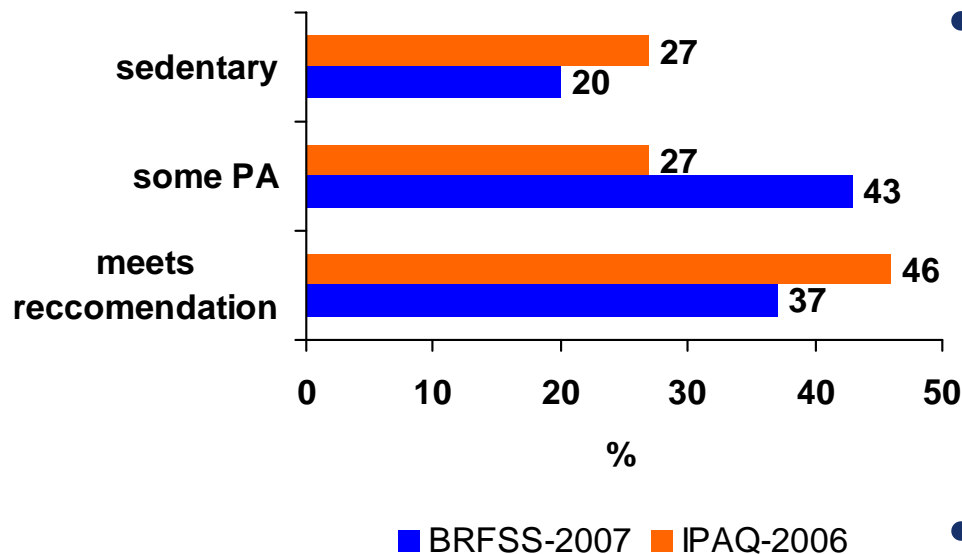
- *Healthy People 2010:*
  - at least 30 minutes of moderate-intensity activity, 5 days per week
  - or 20 minutes of vigorous-intensity activity, 3 days per week

Source: US Department of Health and Human Services. Objectives 22-2 and 22-3. In: Healthy people 2010, Washington, DC; 2000. Available at <http://www.healthypeople.gov>.



# IPAQ vs BRFSS

Region of Emilia-Romagna – PASSI 2006/2007



- Ainsworth BE et al.: IPAQ gives higher estimates:
  - for the lowest physical activity category by 0.2-13.3%
  - for the highest physical activity category by 0-16.4%”

- This is confirmed by our data → direct comparison of the BRFSS and IPAQ prevalence estimates is not recommended

Source: Ainsworth BE, et al.,  
Comparison of the 2001 BRFSS and the  
IPAQ physical activity questionnaires,  
Med Sci Sports Exerc. 2006  
Sep;38(9):1584-92



# Main problems in comparison of data

OPEN ACCESS Freely available online

## Confusion and Conflict in the Status of Middle-Aged Men

Dylan Thompson<sup>1\*</sup>, Alan M. Batterham<sup>2</sup>, Dar Philippe Walhin<sup>1</sup>

<sup>1</sup>School for Health, University of Bath, Bath, United Kingdom, <sup>2</sup>United Kingdom

### Abstract

**Background:** Physical activity can be used to gauge physical activity status. However, different studies used physical activity recommendations to define physical activity status.

**Methods and Findings:** Variations of physical activity recommendations were assessed using synchronic data. The proportion of men defined as active (A) or not sufficiently active (N) was 0.87 (95% CI, 0.84–0.90) and 0.13 (95% CI, 0.10–0.16), respectively. The proportion of men classified as active and not sufficiently active was 0.24 (95% CI, 0.15–0.33) between the 12 recommendations (days of the week, moderate to vigorous intensity, and duration).

**Conclusions:** Physical activity status and even ostensibly small differences in physical activity recommendations could be variably described by each physical activity recommendation with variable success.

*We examined the commonality in the classification of physical activity status between twelve variations of physical activity recommendations for general health in ninety men aged 45–64 years.*

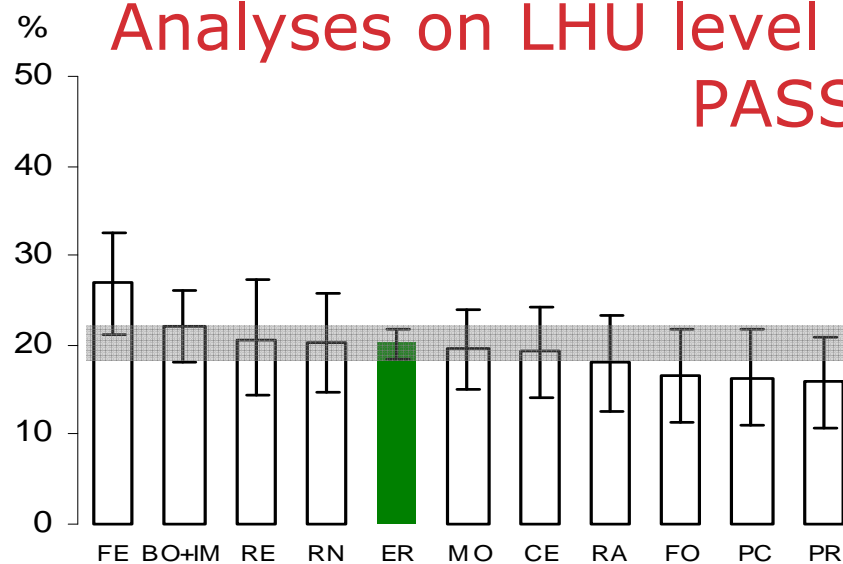
- *Approximately nine out of every ten men in the present study could be variably described as either active or not sufficiently active*

→ *Either the effective dose or prescription that underlies each physical activity recommendation is different or each recommendation is seeking the same prescriptive outcome but with variable success...*

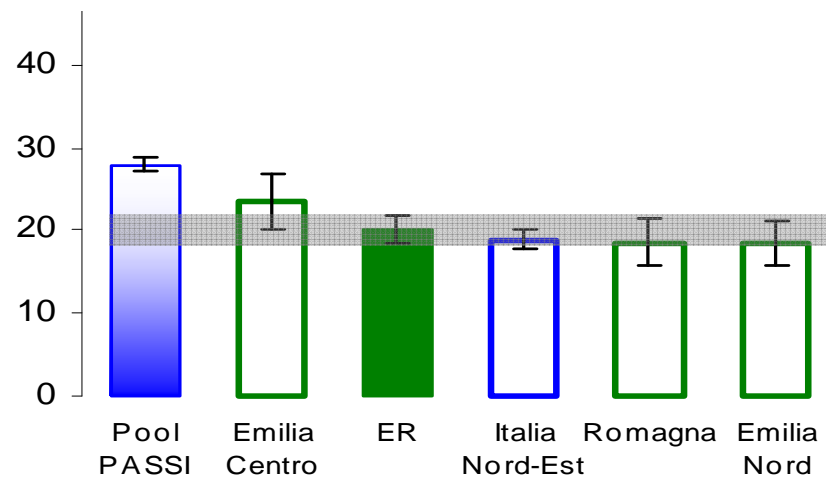
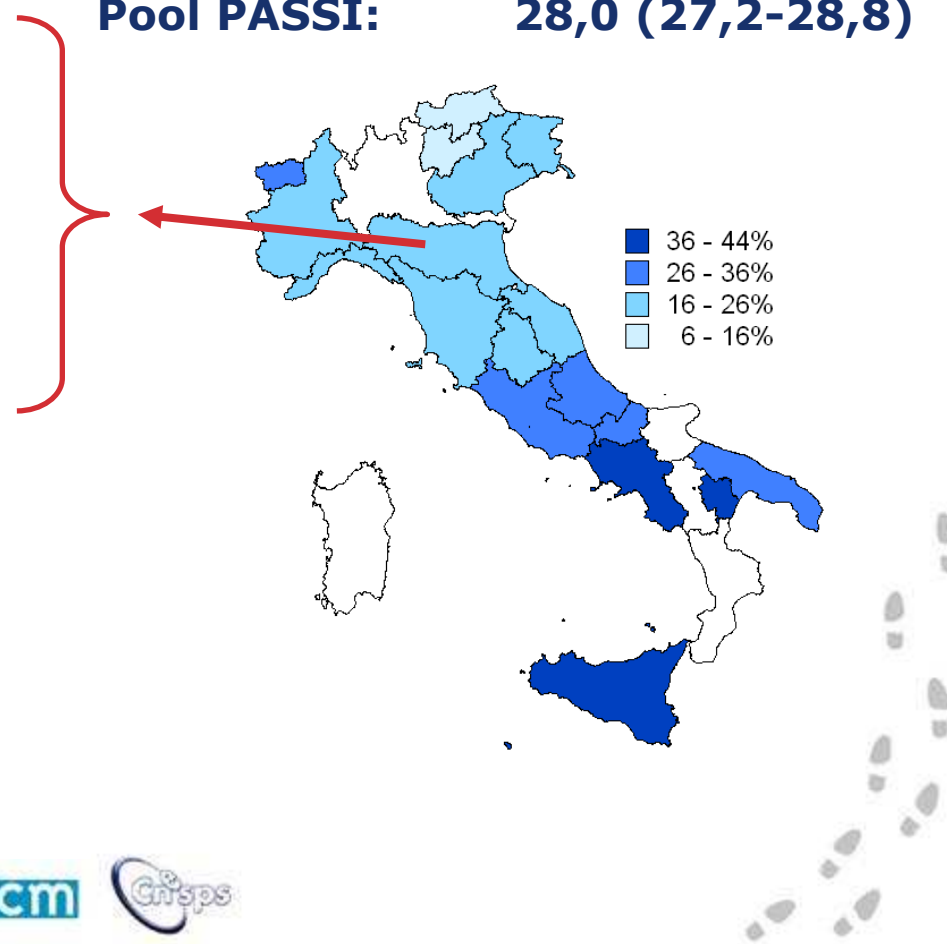


# Sedentary lifestyle (%)

Analyses on LHU level –Region Emilia-Romagna  
PASSI 2007



**Emilia-Romagna: 20,1 (18,3-21,8)**  
**Pool PASSI: 28,0 (27,2-28,8)**





## OKKio alla SALUTE: Methodology

- **Study population:** students in the 3<sup>rd</sup> year of primary school (ages 8-9 y) in 18 regions
- **Sampling:** cluster sampling of classes at local or regional level
- **Consent:** children weighed and measured unless parents specifically refused (opt out consent)
- **Questionnaires on diet and physical activity:** administered to children, parents and teachers



# Domande su attività fisica

## Children:

- 1) Ieri pomeriggio hai giocato all'aperto? Sì No
- 2) Ieri pomeriggio hai fatto qualche sport? Sì No
- 3) Questa mattina come sei venuto a scuola?  
In scuolabus in macchina a piedi in bicicletta in altro modo

## Parents:

- 1) In una settimana normale, quanti giorni il/la bambino/a fa attività fisica per almeno un'ora alla settimana? (sport, ginnastica, danza, ecc o altre attività fisiche fatte in palestra o all'aperto)  
0giorni 1g 2g 3g 4g 5g 6g 7g

## Teachers:

- 1) Quante ore di attività motoria fanno gli alunni di questa classe alla settimana? N. ore \_\_\_\_\_
- 2) Nella giornata di ieri, gli alunni di questa classe hanno fatto almeno un'ora di attività motoria curriculare? Sì No

5

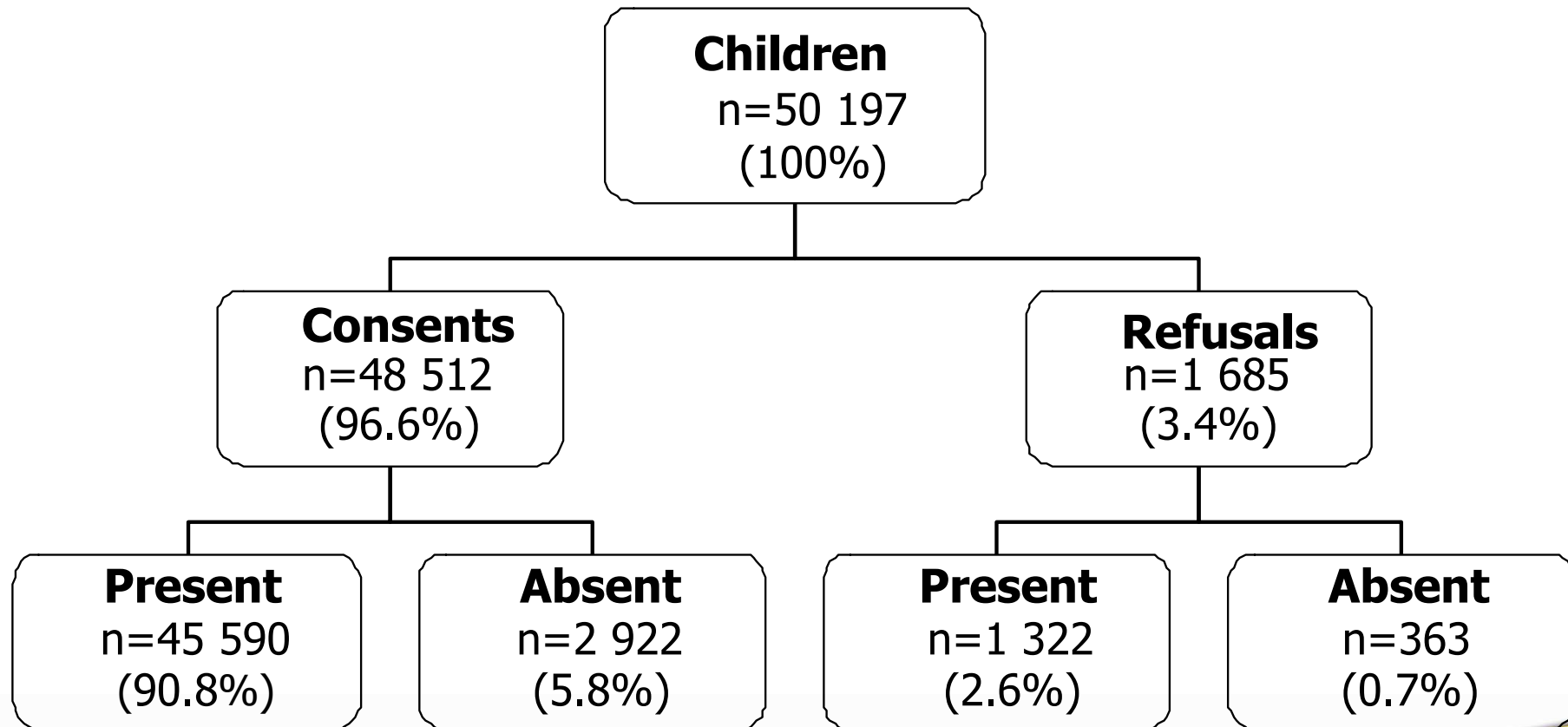
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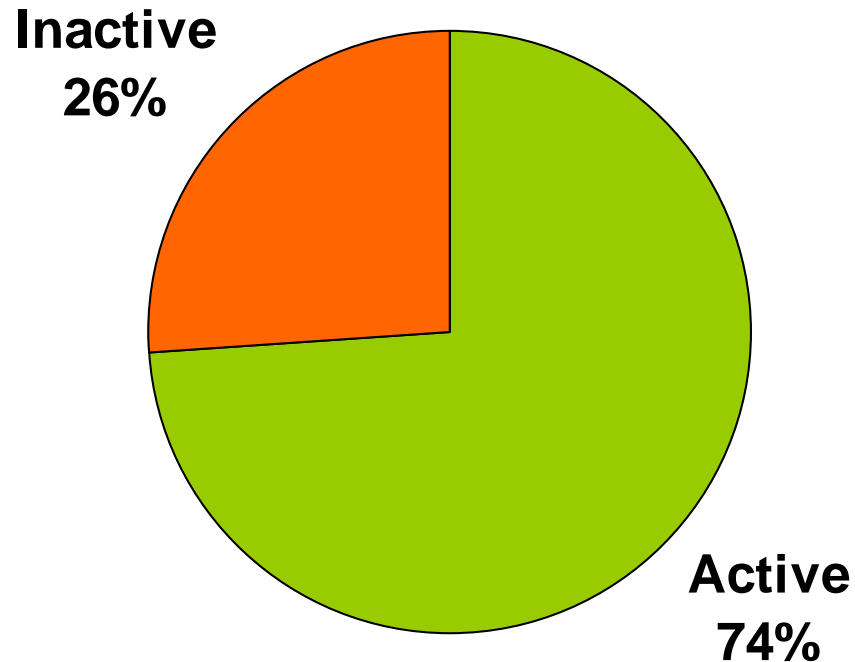
# Study participation

2 610 classes (3<sup>rd</sup> year of primary school) sampled





# How many children were inactive\* the day before the survey?

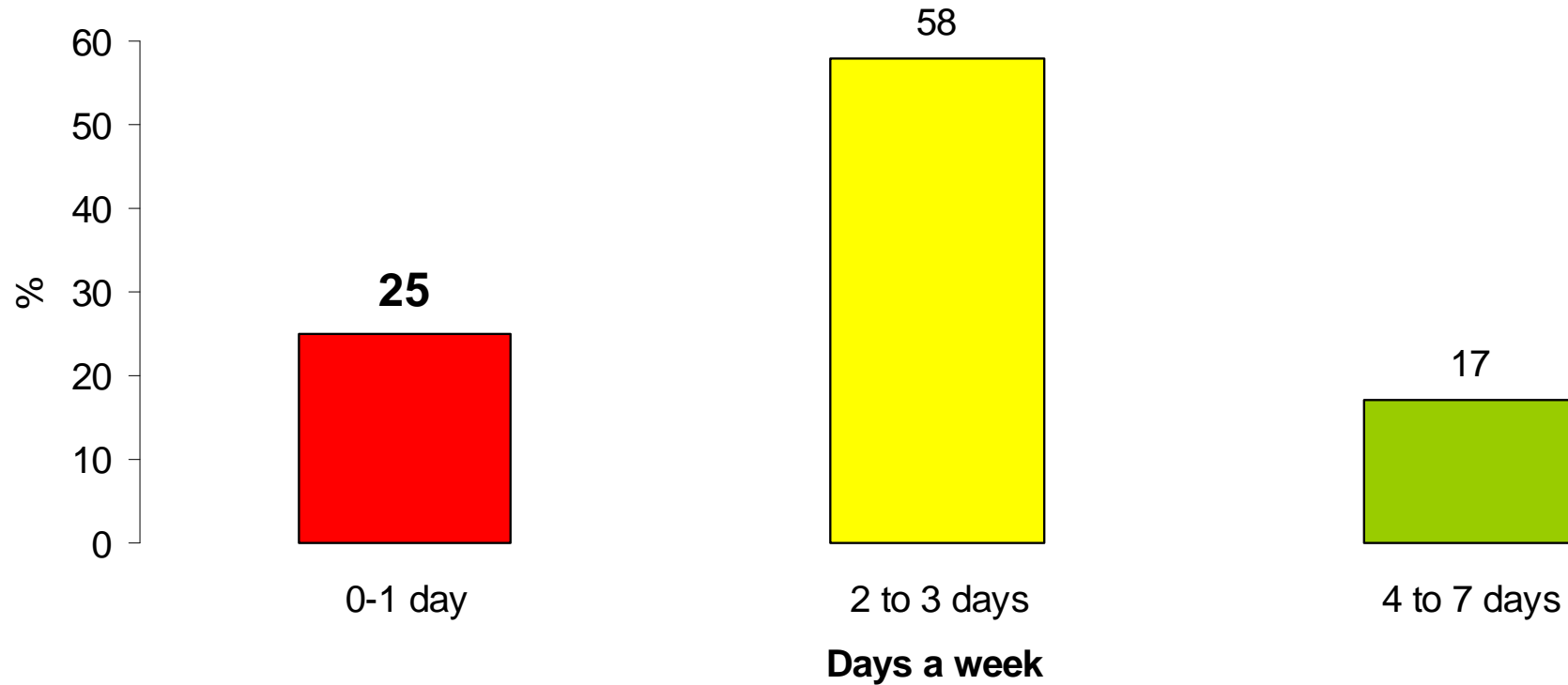


- Male > female
- In small towns more than in cities
- No differences according to mother's level of education

\* no physical education lesson at school, no playing outside and no sport the day before



# How many days a week do children exercise?



- Higher for males
- In small towns more than in cities

## Data collection (by 9/1/2008)

- 20/21 Regions have begun data collection since April 2007, though not all at the same time
- Health personnel involved and trained: ~ 1.000
- Complete interviews: 40.264
  - 21.996 in 2007
  - 18.268 in 2008
- 2008:
  - Response rate: 87%
  - Substitution rate 13%
    - Refusal rate 9%
    - Not found 4%

