



Attività Motoria e Prevenzione durante l'arco della vita

Ferrara, 11 giugno 2016

Qual è la «dose» di esercizio fisico più vantaggiosa

Giovanni Grazioplene
Università di Ferrara

Coordinatore
Gruppo Regionale Esercizio Fisico Adattato
Servizio Prevenzione Collettiva e Sanità Pubblica
Regione Emilia-Romagna

The in-activity time bomb is ticking...

- <https://www.youtube.com/watch?v=ZL8MpZRBO98#action=share>

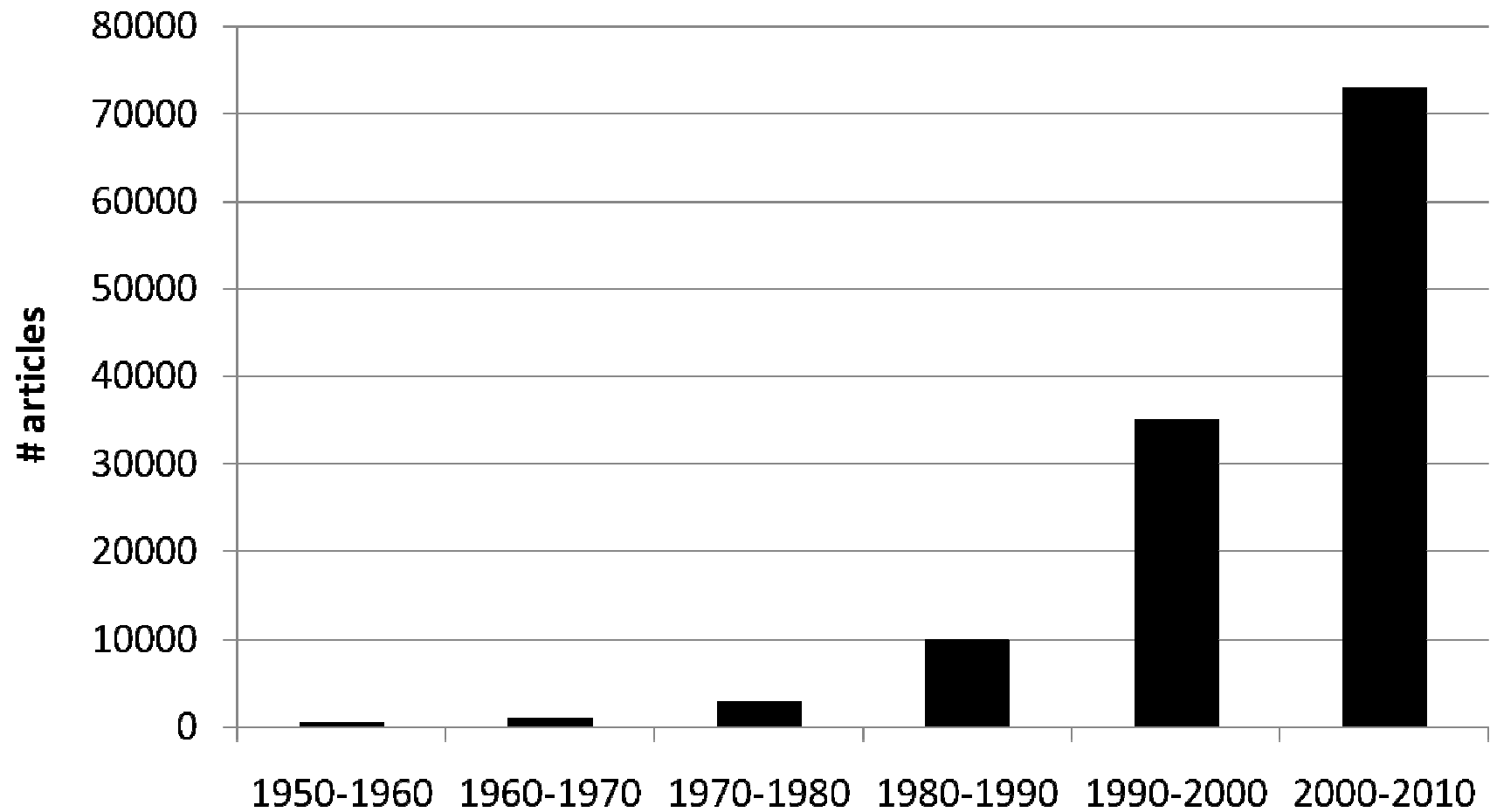


Esiste una relazione «dose»-risposta?

Esiste una «dose» ideale?

Esiste una «dose» minima utile?

Web of Science: Physical Activity or Fitness and Cardiovascular Disease



Dose di Esercizio

- Modo
- Frequenza
- Intensità
- Durata
- Progressione
- Quale?
- Quante volte a settimana?
- Quanto «forte»?
- Quanto a lungo
- ... nel tempo...

RPE Scale	Rate of Perceived Exertion
10	Max Effort Activity Feels almost impossible to keep going. Completely out of breath, unable to talk. Cannot maintain for more than a very short time.
9	Very Hard Activity Very difficult to maintain exercise intensity. Can barely breath and speak only a few words
7-8	Vigorous Activity Borderline uncomfortable. Short of breath, can speak a sentence.
4-6	Moderate Activity Breathing heavily, can hold short conversation. Still somewhat comfortable, but becoming noticeably more challenging.
2-3	Light Activity Feels like you can maintain for hours. Easy to breathe and carry a conversation
1	Very Light Activity Hardly any exertion, but more than sleeping, watching TV, etc

Epidemiology and Prevention

Cardiovascular Health Behavior and Health Factor Changes (1988–2008) and Projections to 2020

Life's Simple 7

- 1 Control Cholesterol
- 2 Eat Better
- 3 Lose Weight
- 4 Get Active
- 5 Manage Blood Pressure
- 6 Reduce Blood Sugar
- 7 Stop Smoking



Table 1. Definitions of Cardiovascular Health Metrics, as Defined by the American Heart Association's 2020 Strategic Impact Goals Committee

Metric	Level of Cardiovascular Health		
	Poor	Intermediate	Ideal
Smoking	Current smoker	Quit smoking <12 mo	Never smoker or quit smoking ≥12 mo
Diet*	Diet score=0–1	Diet score=2–3	Diet score=4–5
Physical activity†	No physical activity	1–149 min/wk of moderate intensity, 1–74 min/wk of vigorous intensity, or 1–149 min/wk moderate plus vigorous intensity activity (whereby time in vigorous activity is doubled)	≥150 min/wk of moderate intensity, ≥75 min/wk of vigorous intensity, or ≥150 min/wk of moderate plus vigorous intensity activity (in which time in vigorous activity is doubled)
Body weight	BMI ≥30 kg/m ²	BMI 25–29.9 kg/m ²	BMI <25 kg/m ²
Glucose/diabetes mellitus	FPG ≥126 mg/dL or diagnosed diabetes mellitus with HbA _{1c} ≥7%	FPG 100–125 mg/dL or diagnosed diabetes mellitus with HbA _{1c} <7%	FPG <100 mg/dL
Cholesterol	Total cholesterol ≥240 or treated total cholesterol >200 mg/dL	Total cholesterol 200–239 or treated total cholesterol <200 mg/dL	Total cholesterol <200 mg/dL
BP	Treated BP >140/>90 and SBP ≥140 or DBP ≥90 mm Hg	SBP 120–139 or DBP 80–89 or treated BP <140/<90 mm Hg	BP <120/<80 mm Hg



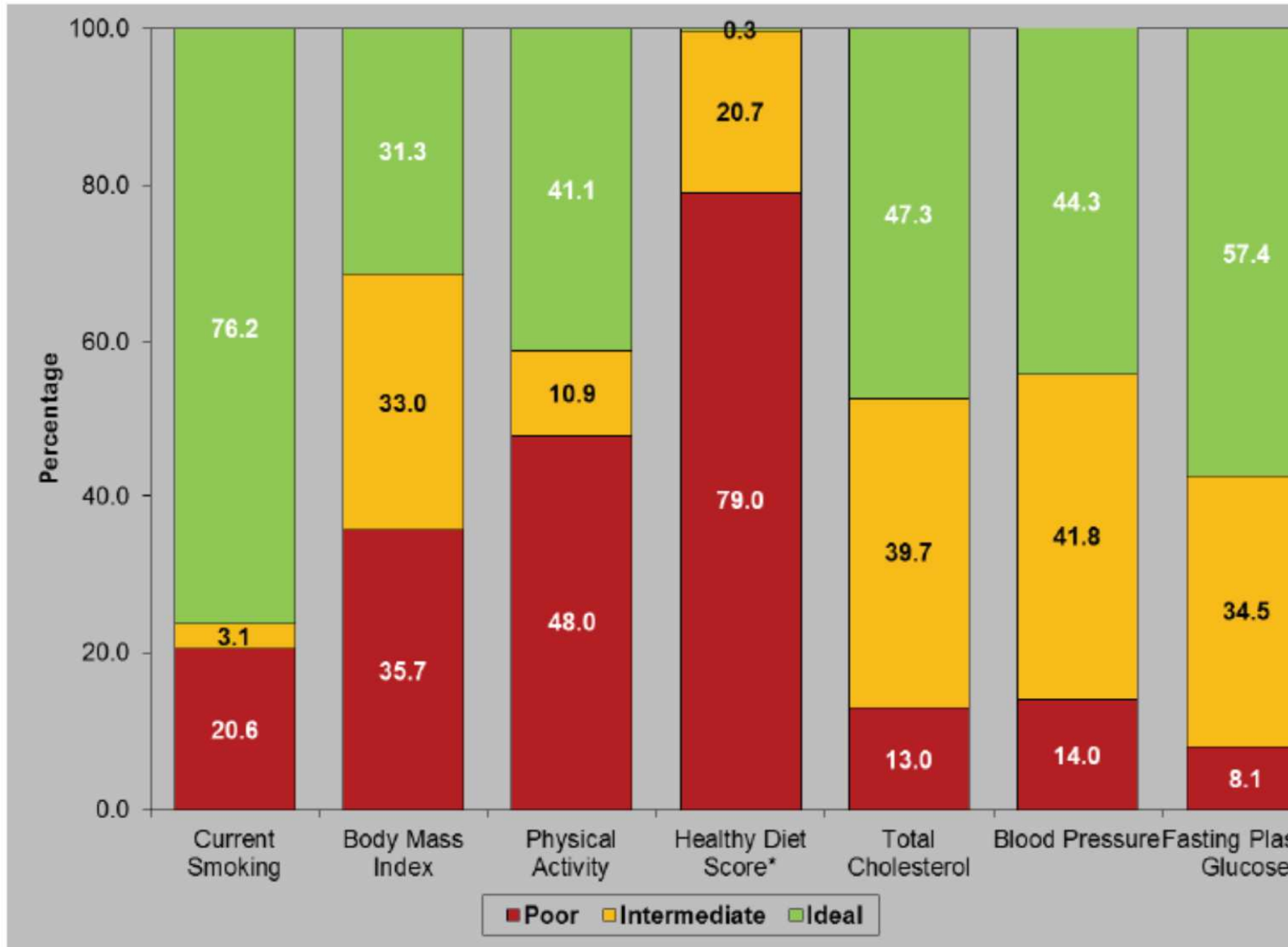
2 Learn the AHA Recommendations for Physical Activity in Adults.

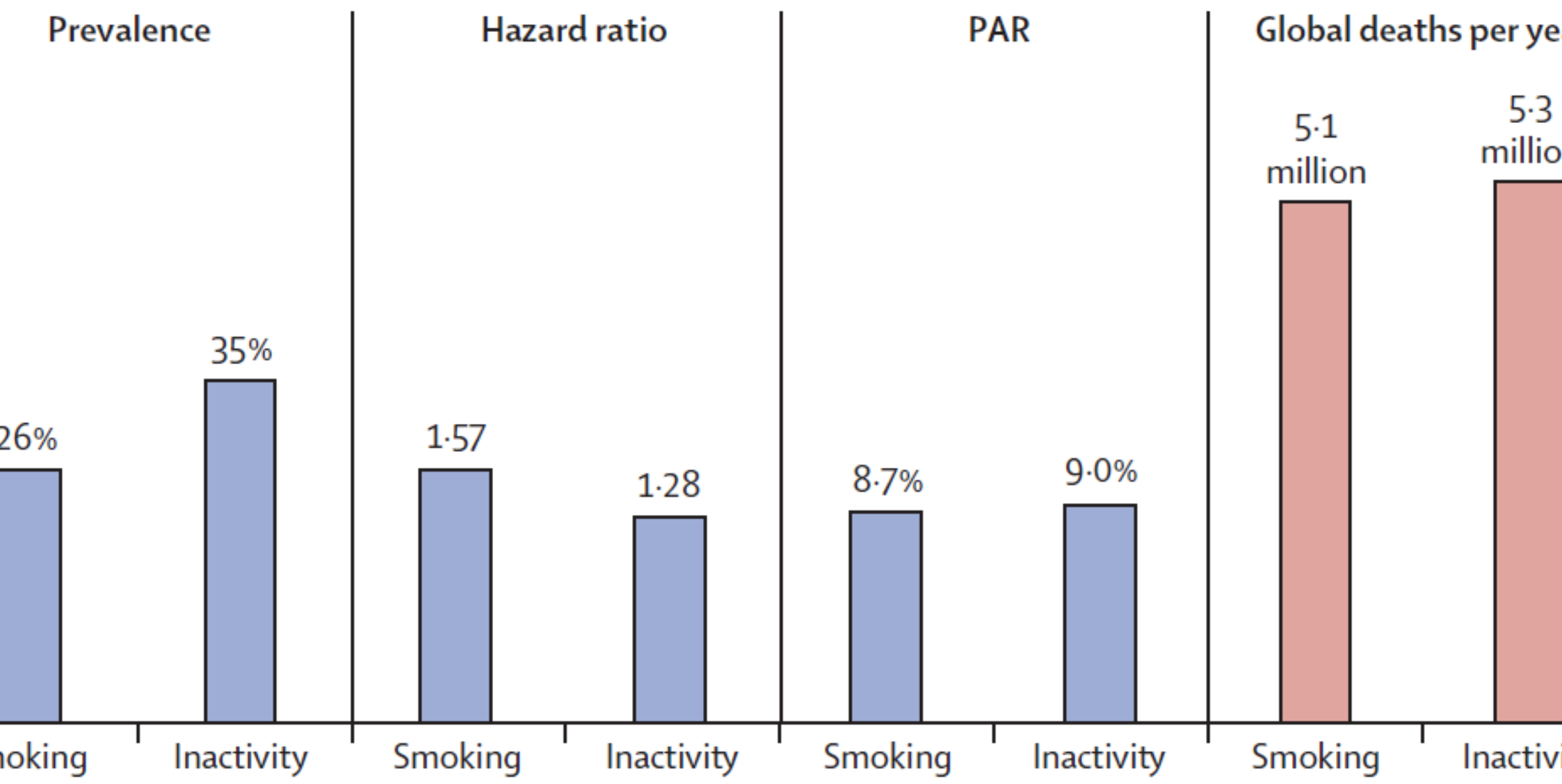
For Overall Cardiovascular Health:

At least 30 minutes of moderate-intensity aerobic activity  **At least 5 days** per week for a total of **150 minutes** 



American Heart Association | American Stroke Association®

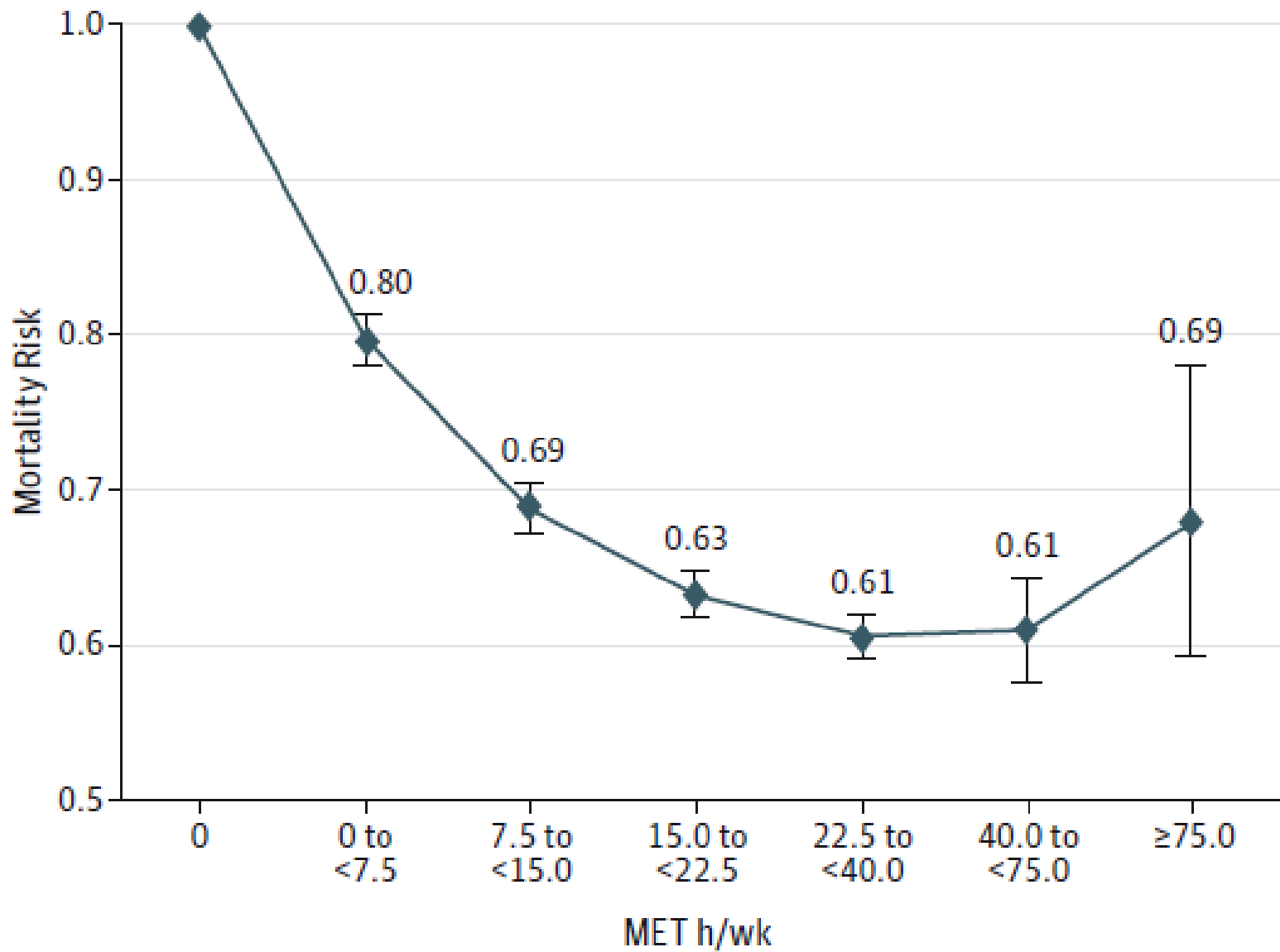




rch

inal Investigation

Association of Leisure-Time Physical Activity with Risk of 26 Types of Cancer in 1.44 Million Adults



n=661,137
Età=62 (range 21-98)
Follow-up=14,2 anni

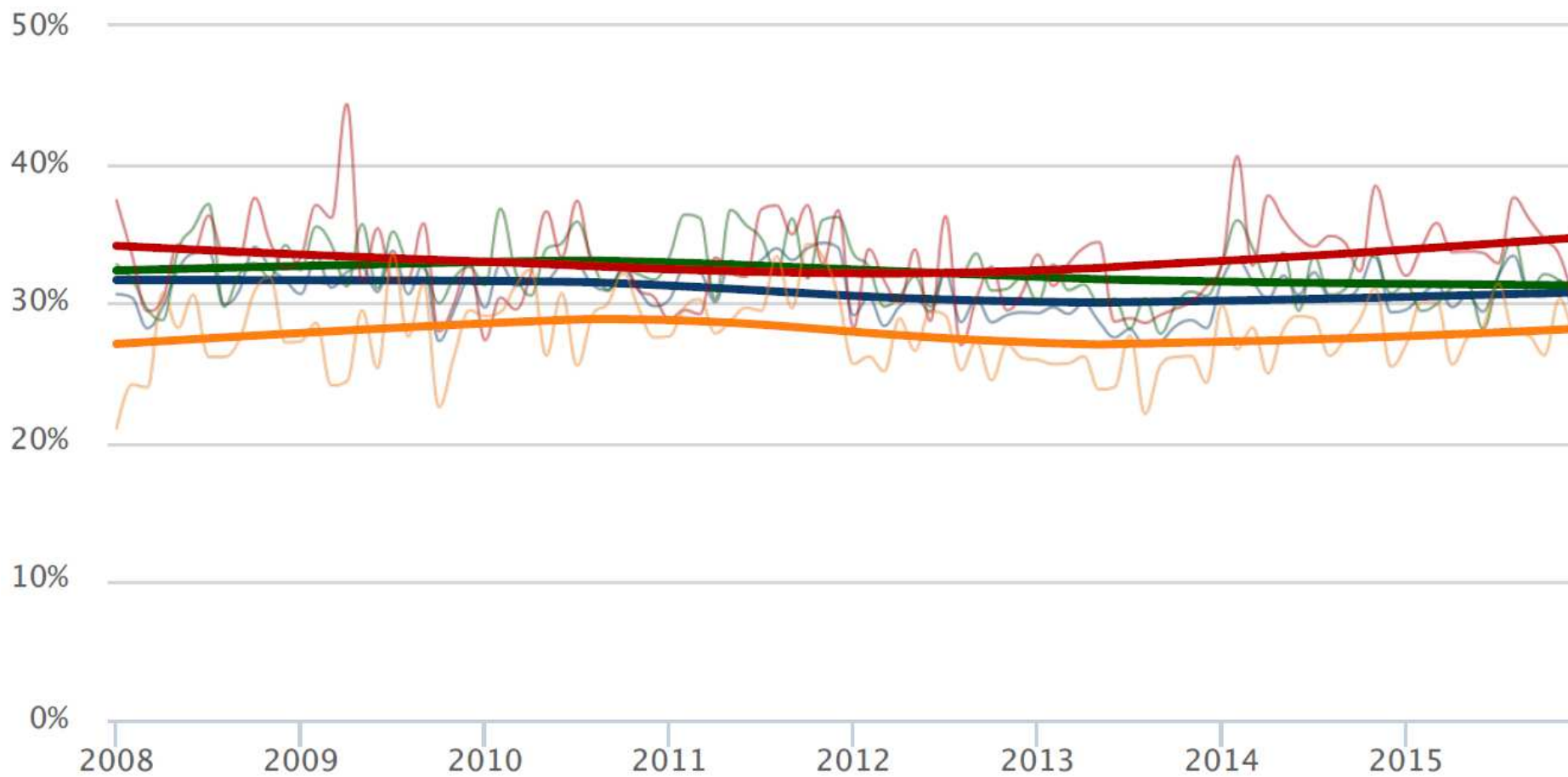
Dati corretti per fattori confondenti

1-2× 2-3× 3-5× 5-10× ≥10
Multiples of minimum recommended LTPA level

- These costs could be avoided if all Europeans were to achieve an average of **20 minutes per day** of simple and inexpensive activities such as **walking**.
- Even interventions to bring just one-fifth of currently inactive Europeans up to the recommended levels of regular activity would yield benefits worth up to **€ 16.1 billion per year**.

Serie storica Consiglio fare attività fisica per area geografica

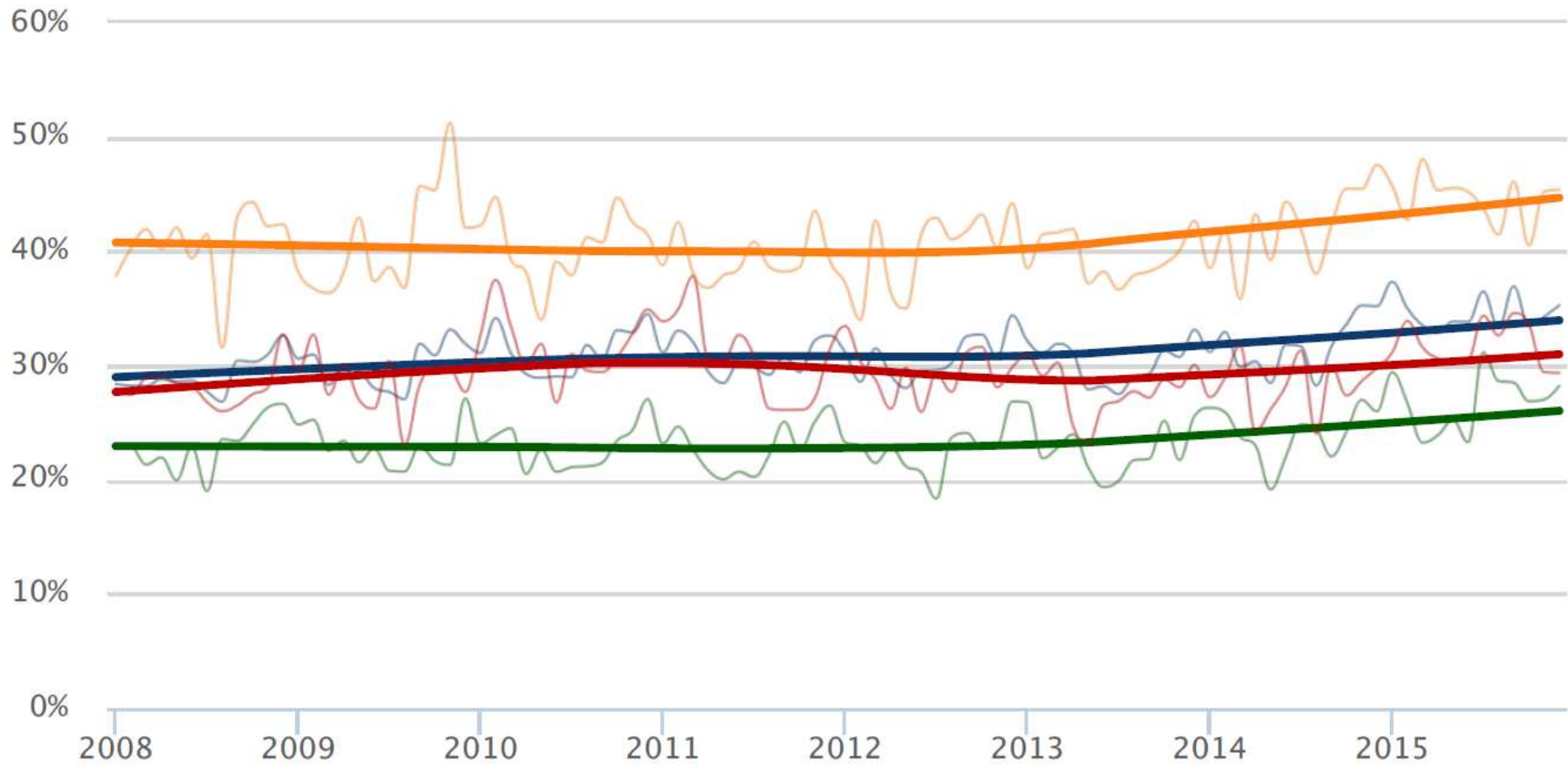
Passi 2008-2015



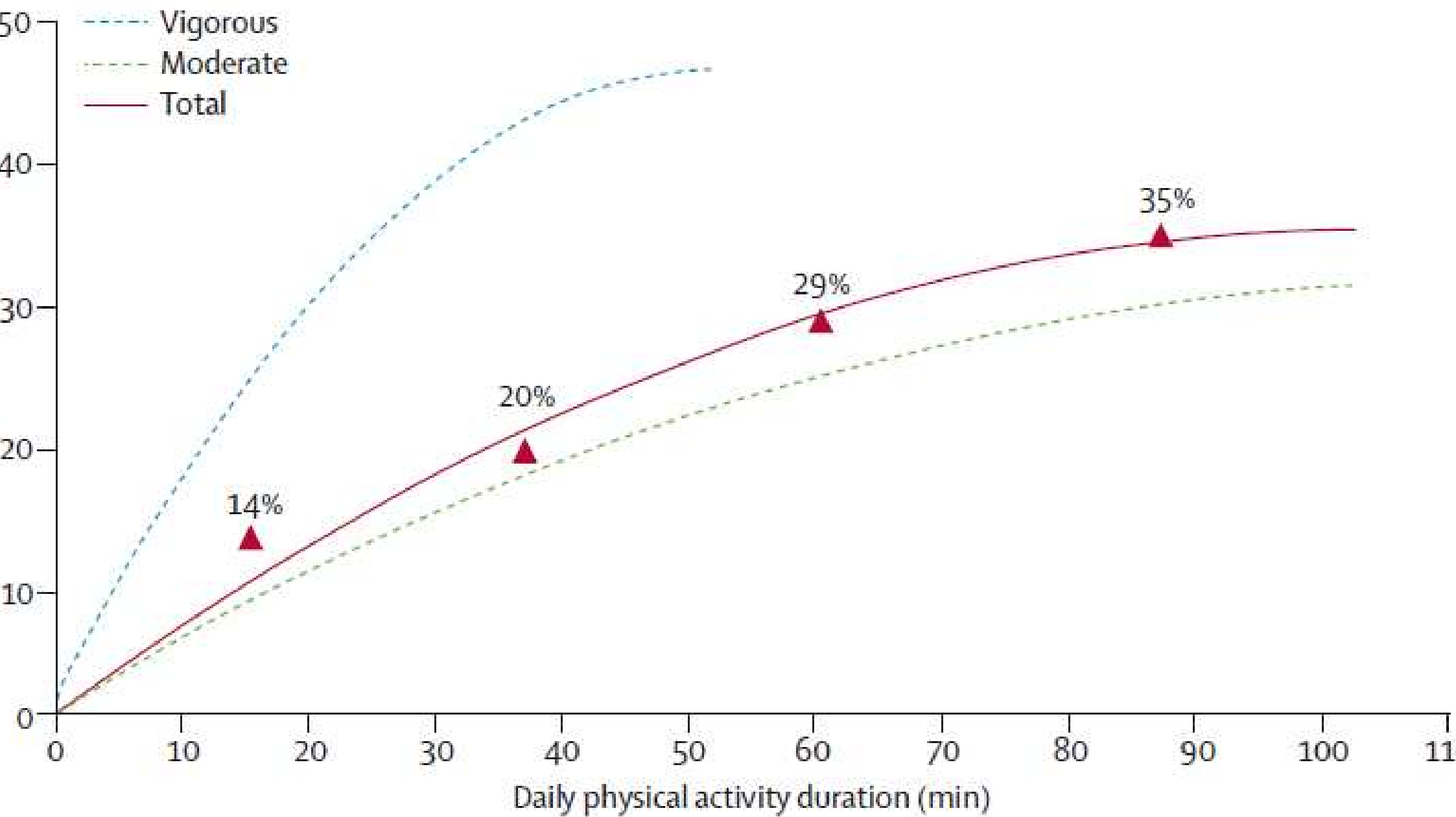
— ITALIA — Nord* — Centro — Sud e Isole (* p-value <0.05)

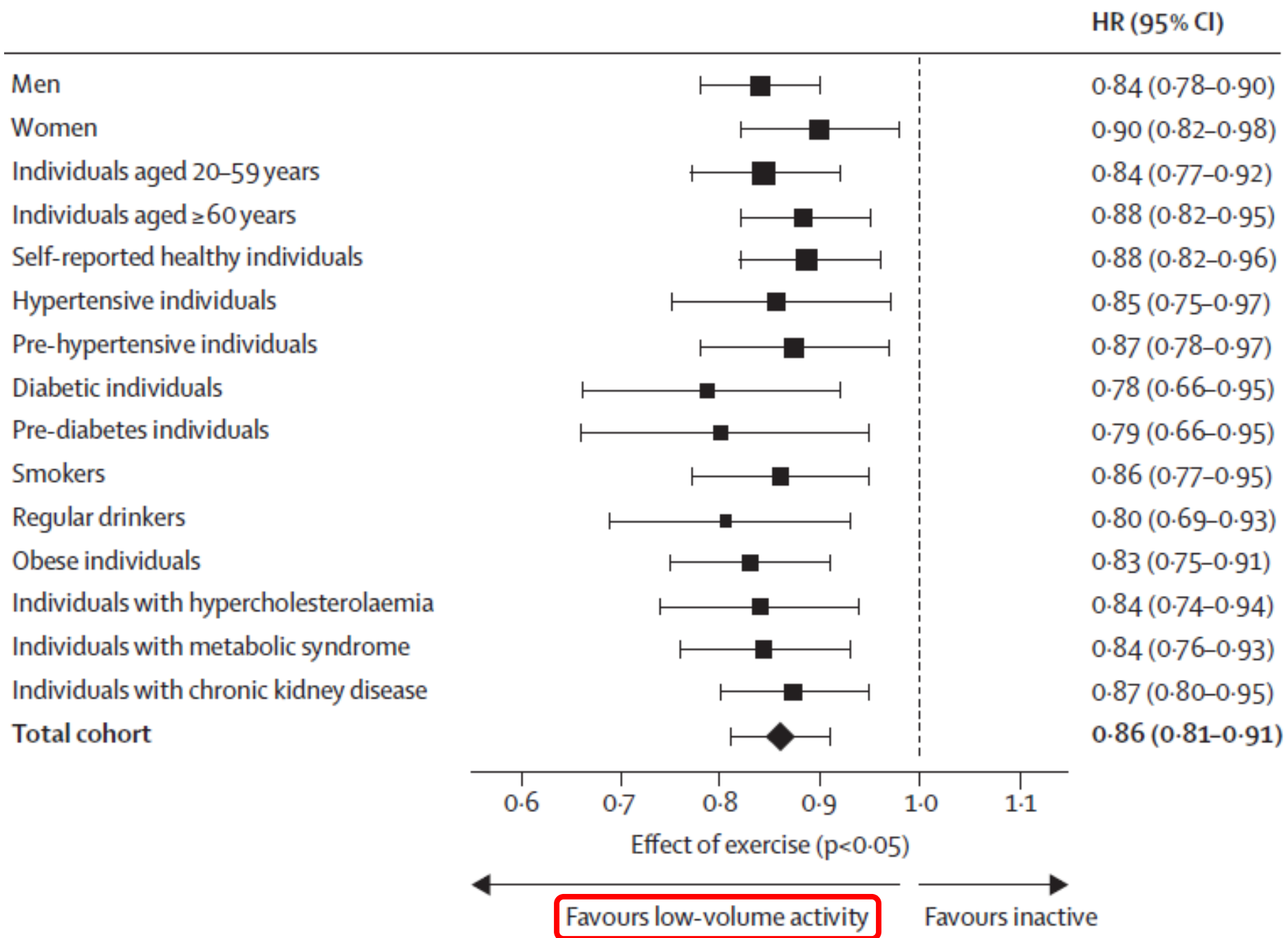
Serie storica Sedentari per area geografica

Passi 2008-2015

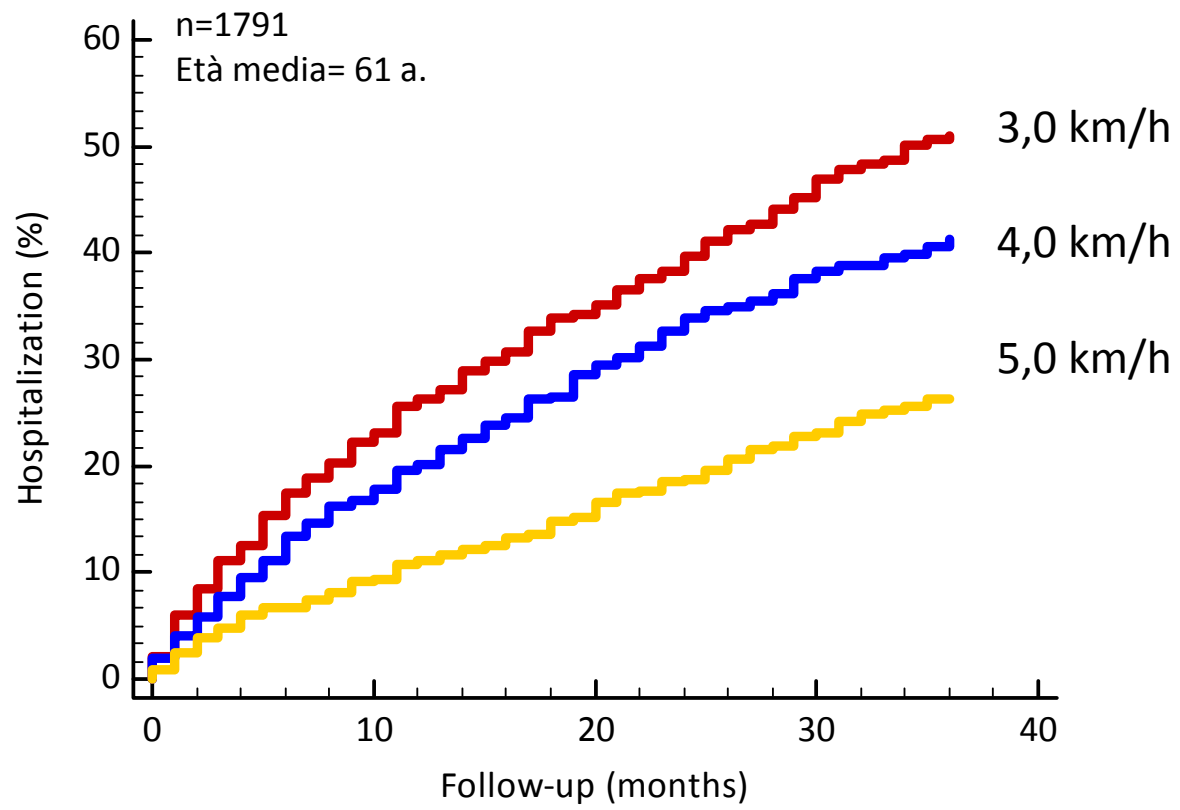


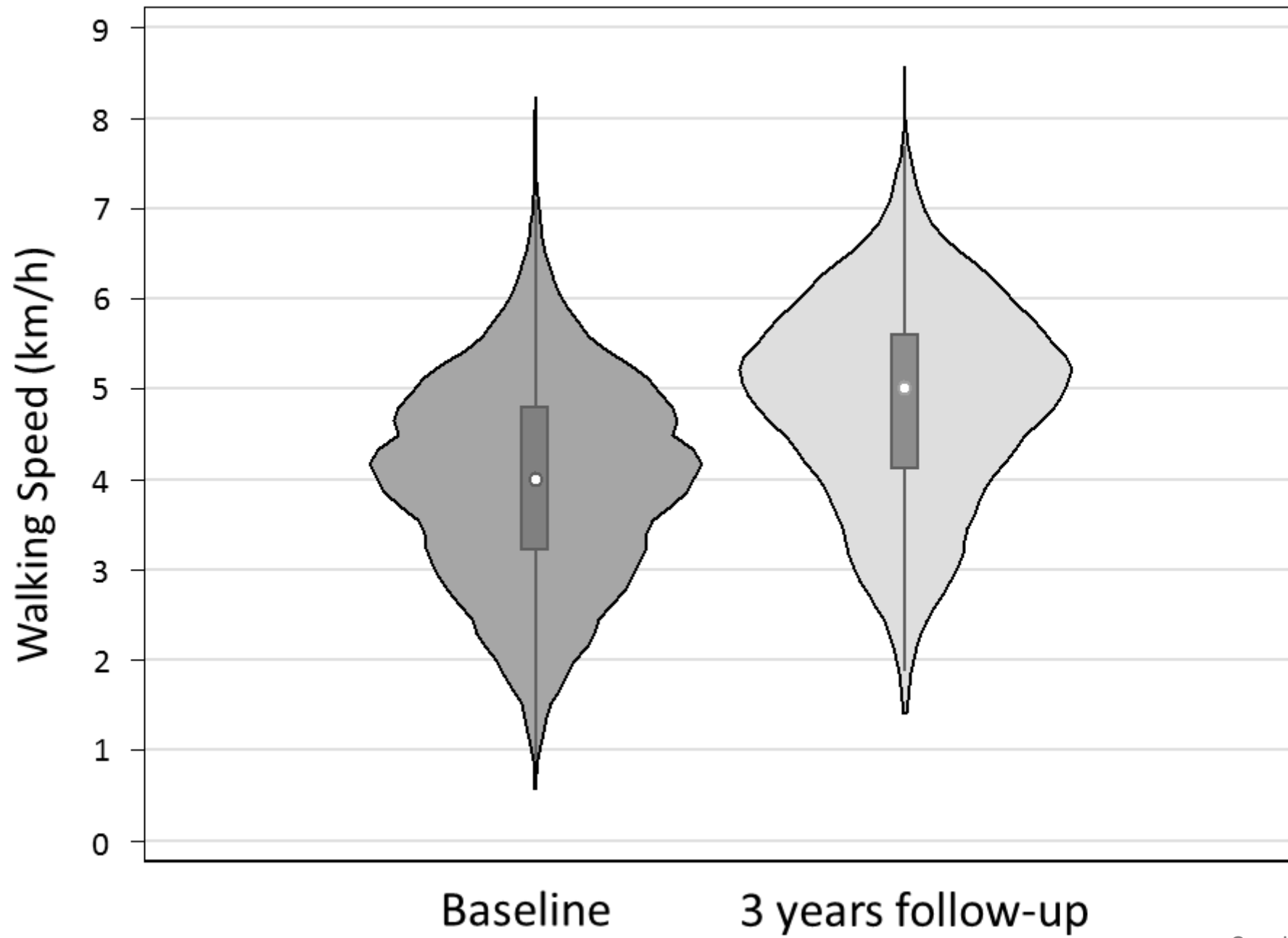
— ITALIA* — Nord* — Centro — Sud e Isole* (* p-value < 0.05)

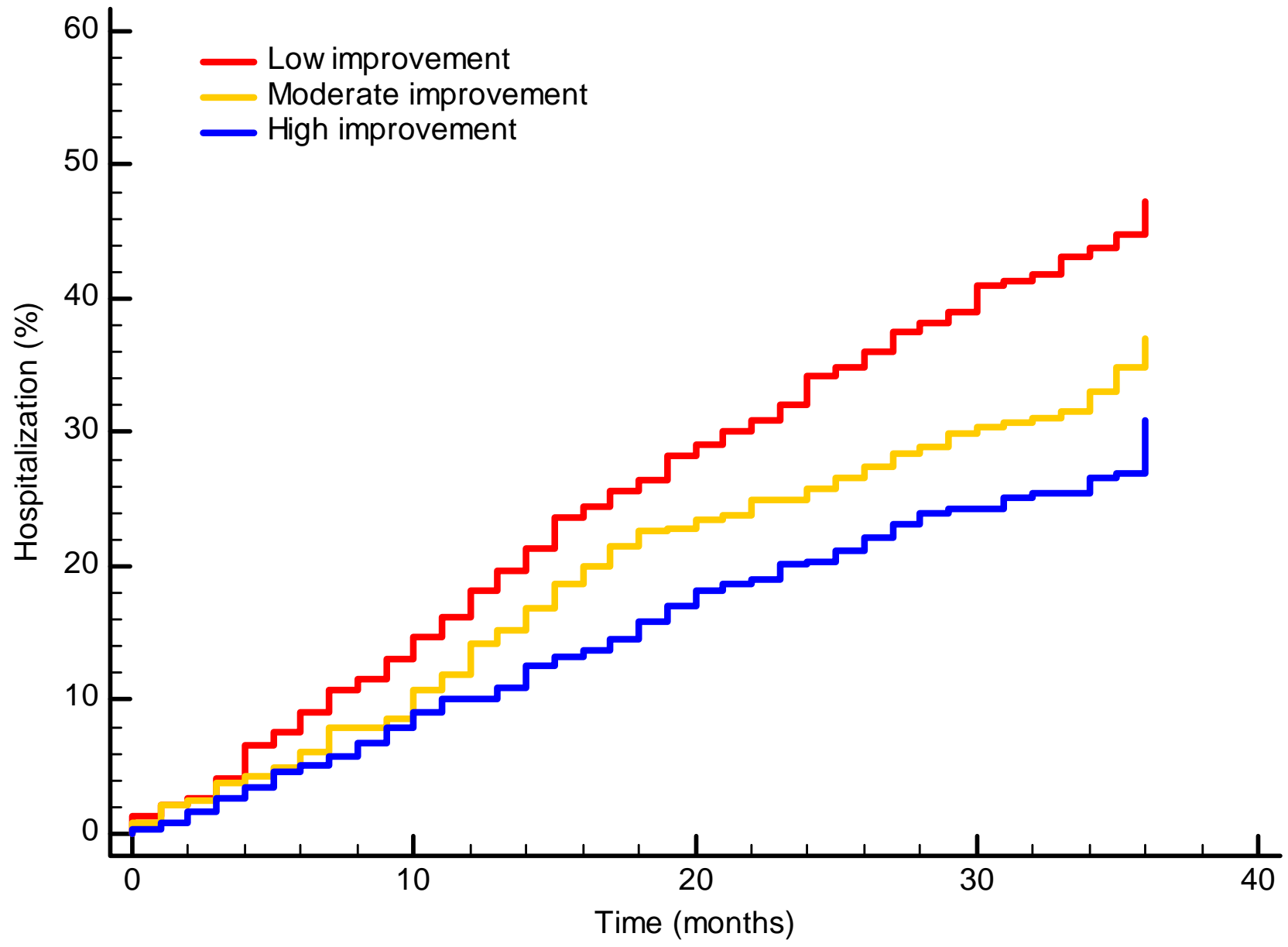


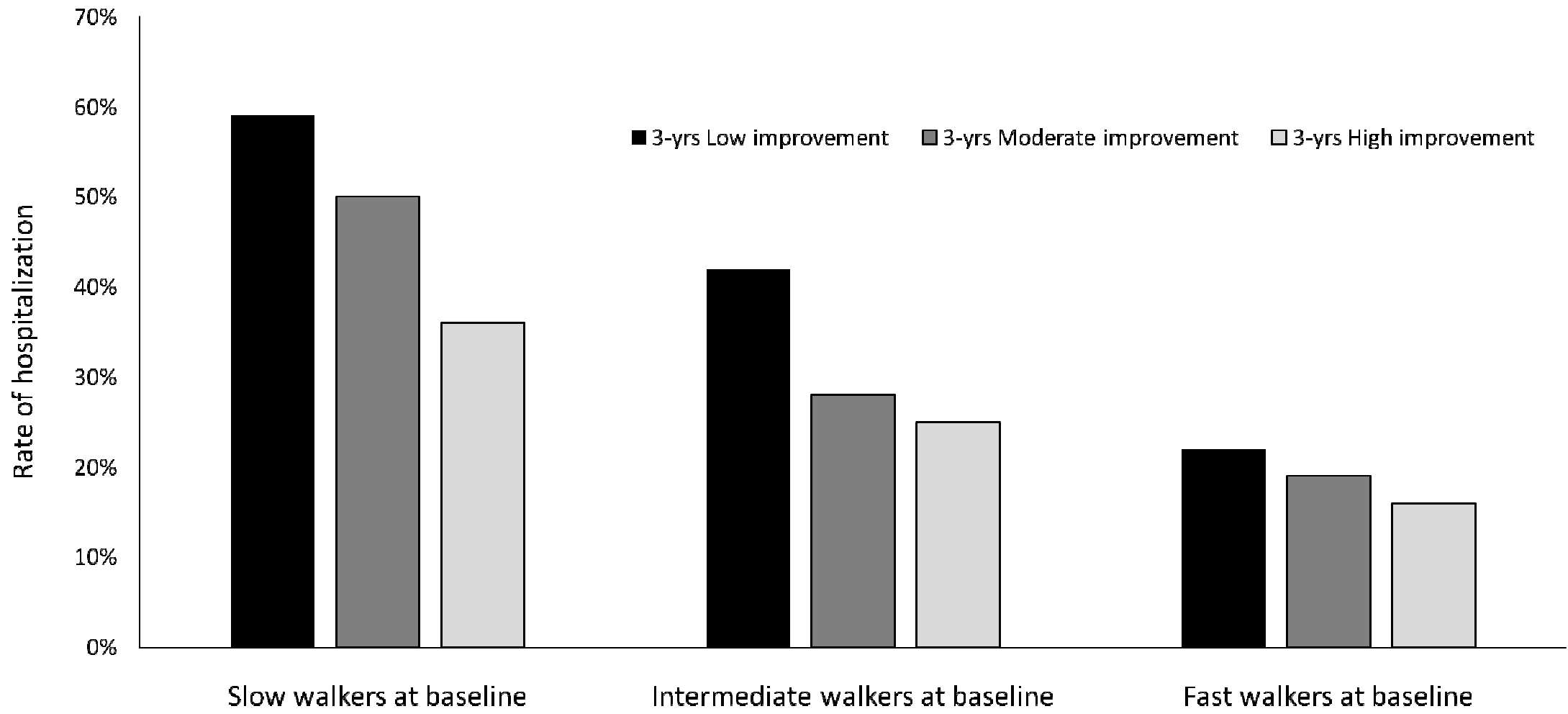


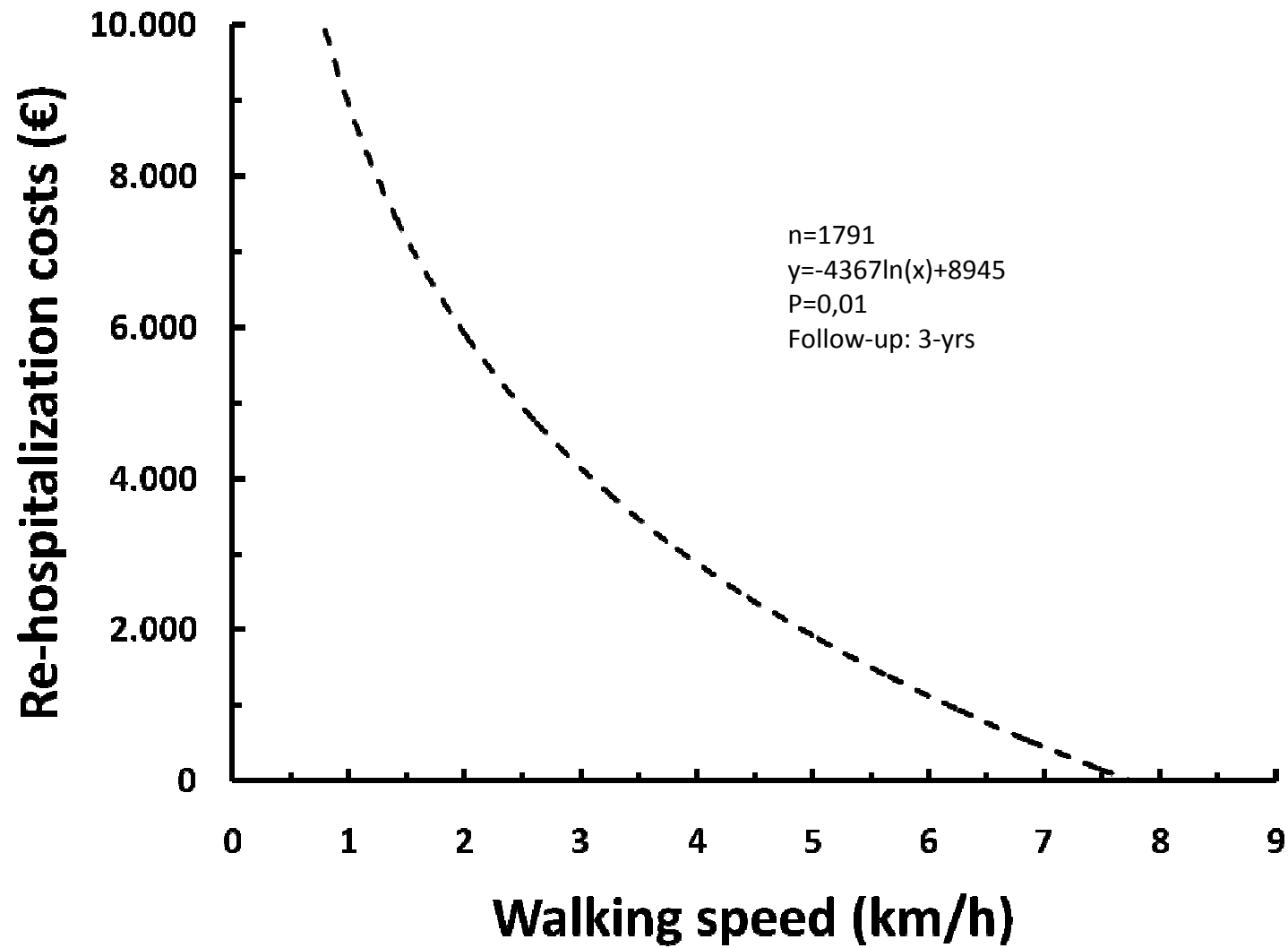
Effetto dell'aumento di attività fisica











Conclusioni

- ✓ Dose-risposta? **SI**
- ✓ Dose ideale? **SI**
- ✓ Dose minima? **SI**