



GOZA O DIA  
COM A TUA  
CIDADE



# Mobilidade Ativa: Implicações na Saúde

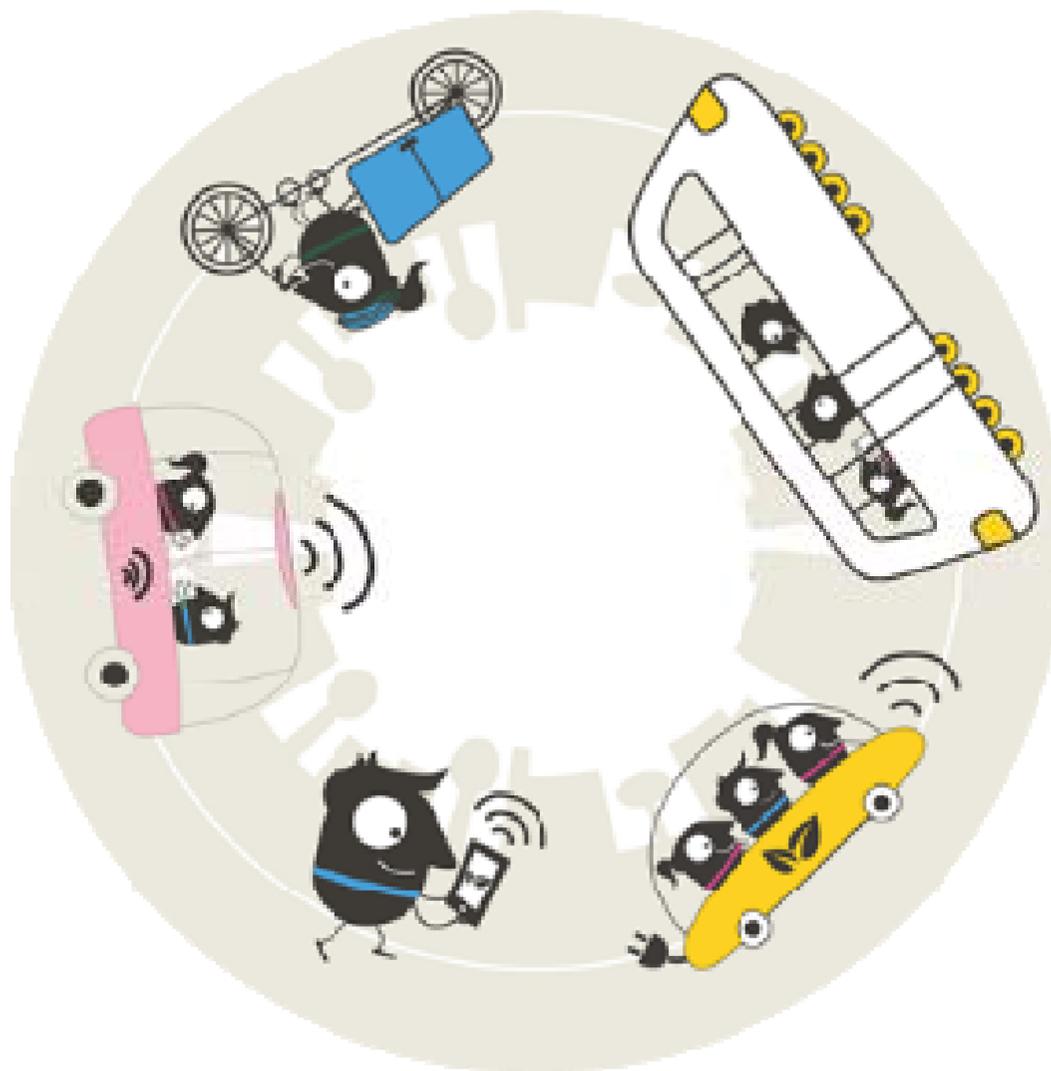
Romeu Mendes, MD PhD

*rmendes@arsnorte.min-saude.pt*



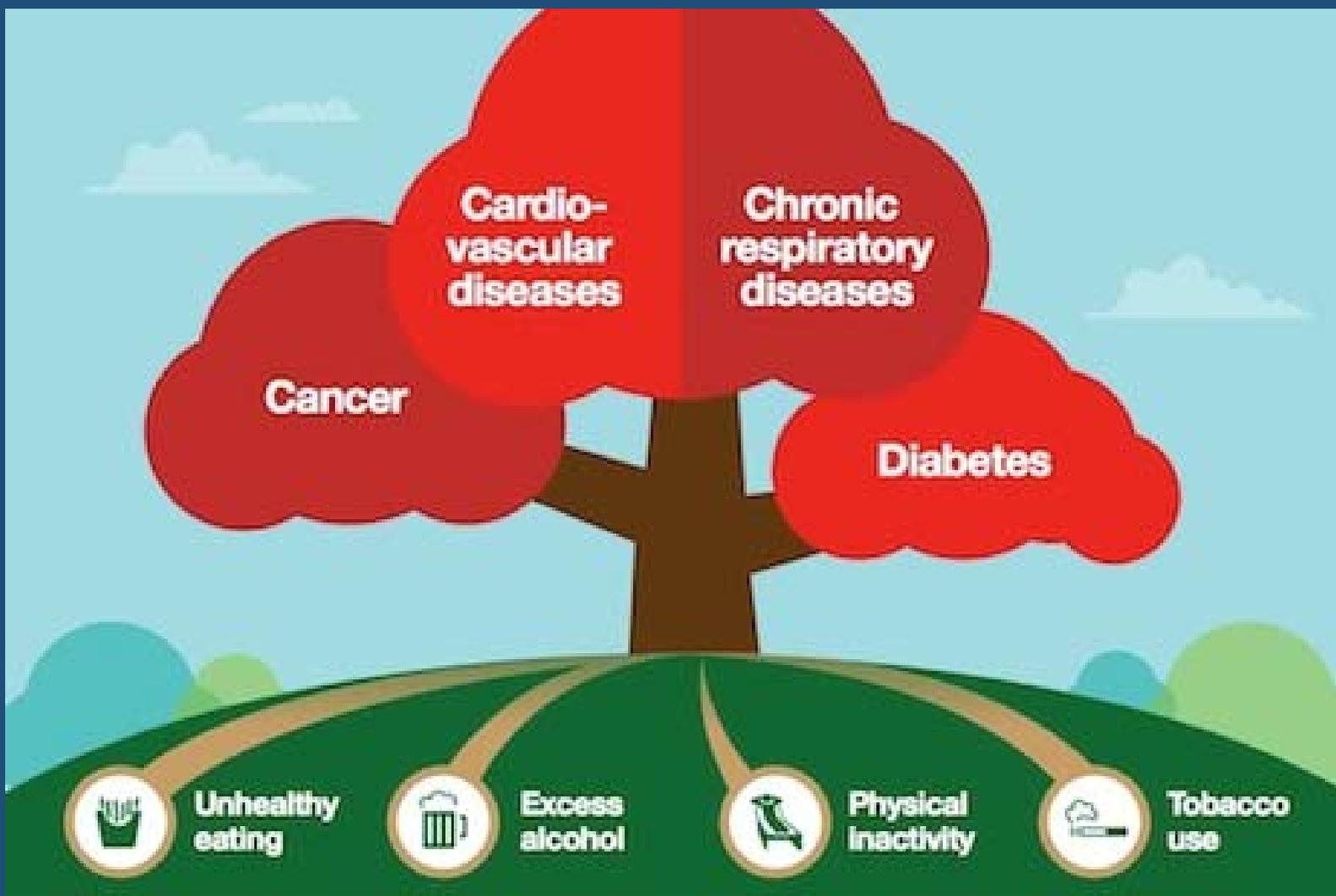
**utad**













Cardiovascular  
Diseases



Diabetes



Chronic Respiratory  
Diseases

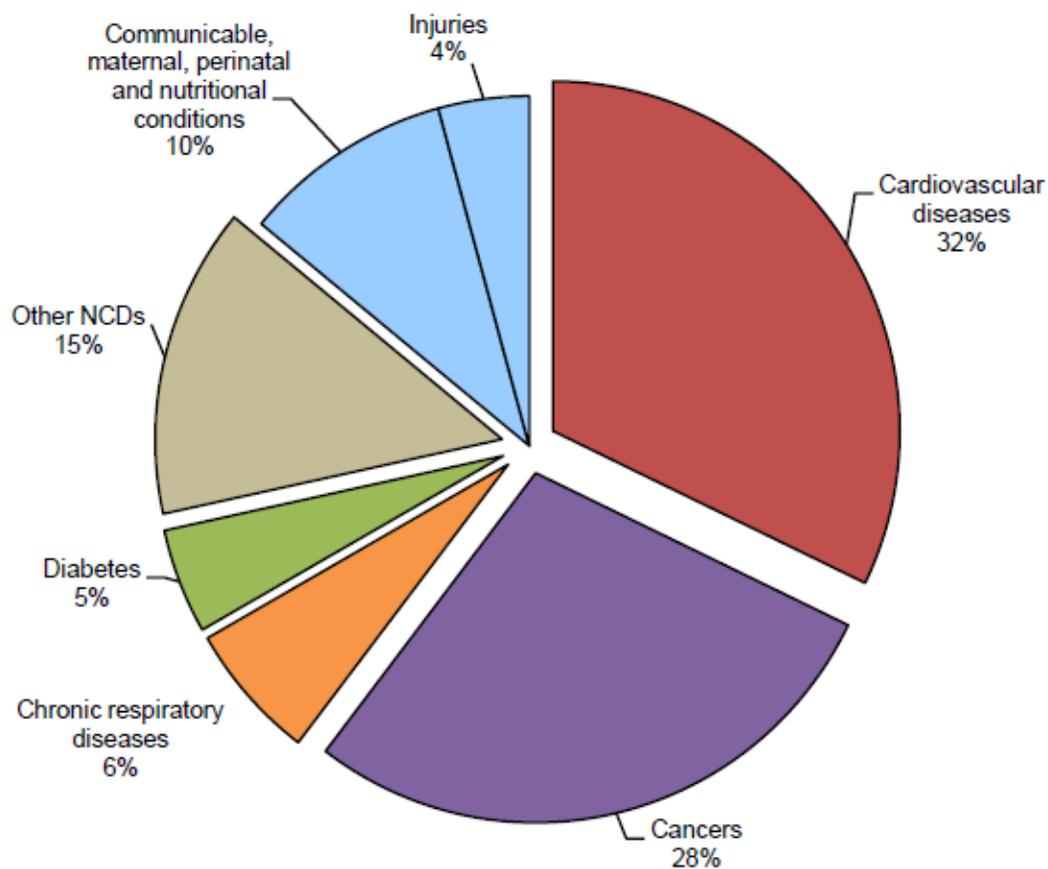


Cancer

Non-communicable diseases  
are the leading cause of death  
worldwide, accounting for  
68% of total deaths (2012, WHO)

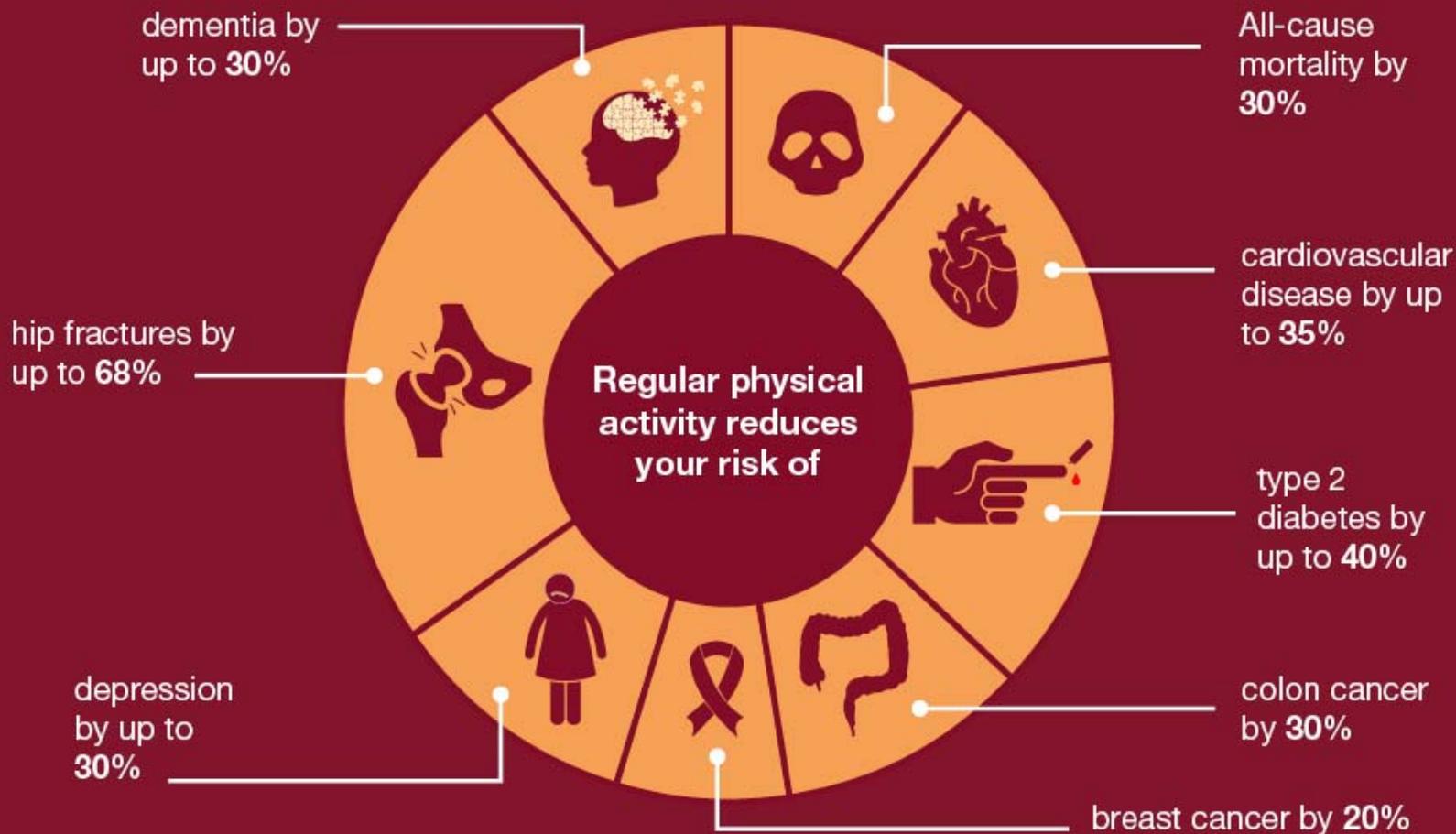


**Proportional mortality (% of total deaths, all ages, both sexes)**



**Total deaths: 97,000**  
**NCDs are estimated to account for 86% of total deaths.**

## What are the health benefits of physical activity?



*Scand J Med Sci Sports* 2015; (Suppl. 3) 25: 1–72  
doi: 10.1111/sms.12581

© 2015 The Author. Scandinavian Journal of Medicine &  
Science in Sports published by John Wiley & Sons Ltd

SCANDINAVIAN JOURNAL OF  
MEDICINE & SCIENCE  
IN SPORTS

## Exercise as medicine – evidence for prescribing exercise as therapy in 26 different chronic diseases

B. K. Pedersen<sup>1</sup>, B. Saltin<sup>2</sup>

<sup>1</sup>The Centre of Inflammation and Metabolism and The Center for Physical Activity Research, Rigshospitalet, University of Copenhagen, Copenhagen, Denmark, <sup>2</sup>The Copenhagen Muscle Research Centre, Rigshospitalet, University of Copenhagen, Copenhagen, Denmark

Corresponding author: Bente Klarlund Pedersen, Rigshospitalet Section 7641, Blegdamsvej 9, DK-2100, Copenhagen, Denmark.  
Tel.: +45 35 45 77 97, Fax: +45 35 45 76 44, E-mail: bkp@rh.dk

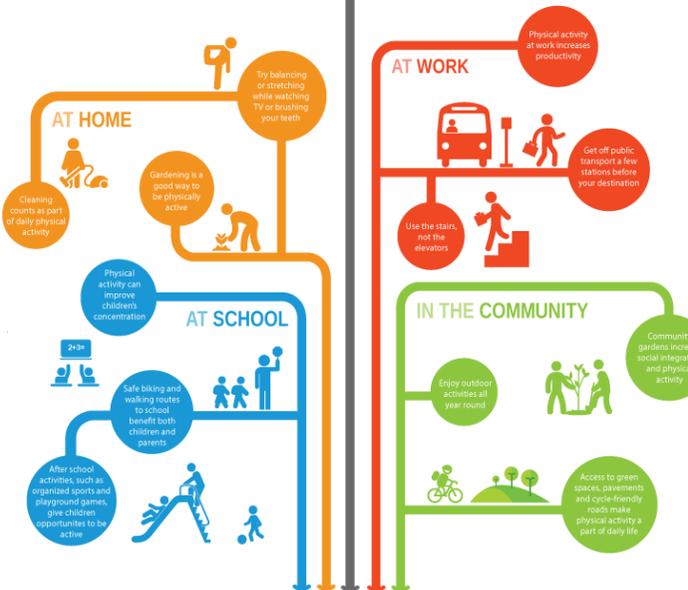
Accepted for publication 16 September 2015



## Make physical activity a part of daily life during all stages of life



<p><b>6 OUT OF 10</b></p> <p>people in the European Union over the age of 15 never or seldom exercise or play sports</p>	<p>Every year in the WHO European Region, physical inactivity causes an estimated</p> <p><b>1 MILLION DEATHS</b></p>	<p>WHO recommendations for moderate- to vigorous-intensity physical activity:</p> <p><b>150</b> minutes per week (adults)</p> <p><b>60</b> minutes per day (children)</p>
--	--	---

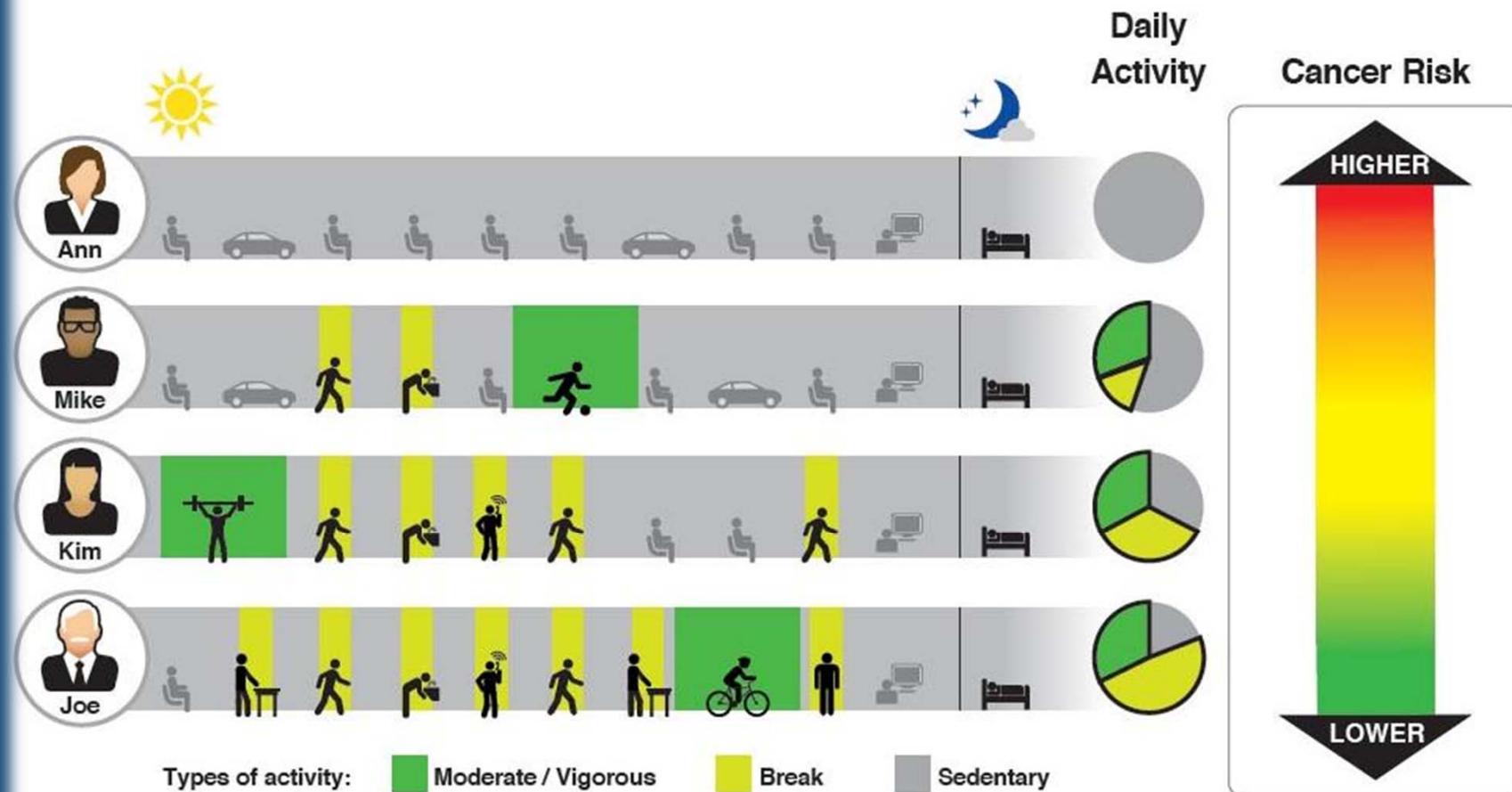


REGULAR PHYSICAL ACTIVITY THROUGHOUT THE LIFE-COURSE ENABLES PEOPLE TO LIVE BETTER AND LONGER LIVES

[www.euro.who.int/physicalactivity](http://www.euro.who.int/physicalactivity)  
09/2015



# Make Time for Break Time



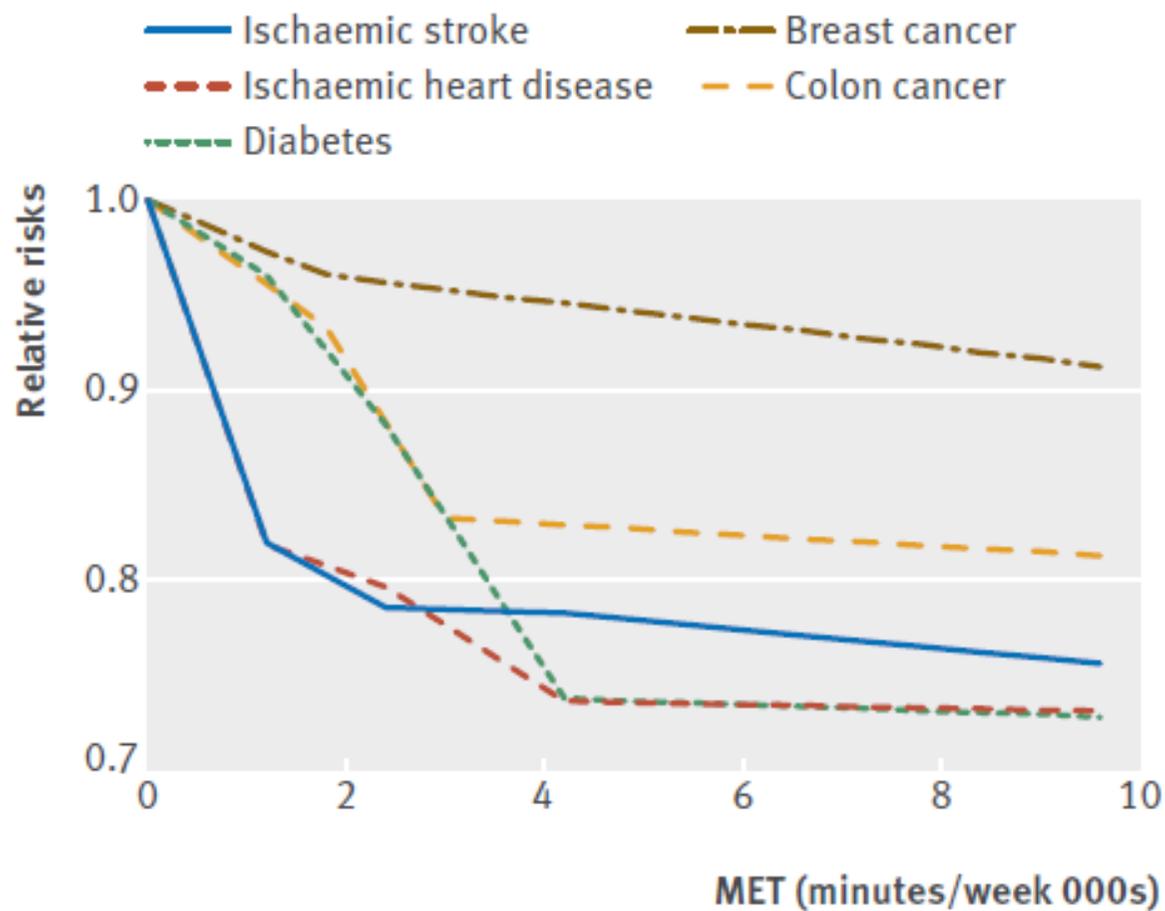


Fig 7 | Continuous risk curves for association between physical activity and breast cancer, colon cancer, diabetes, ischemic heart disease, and ischemic stroke

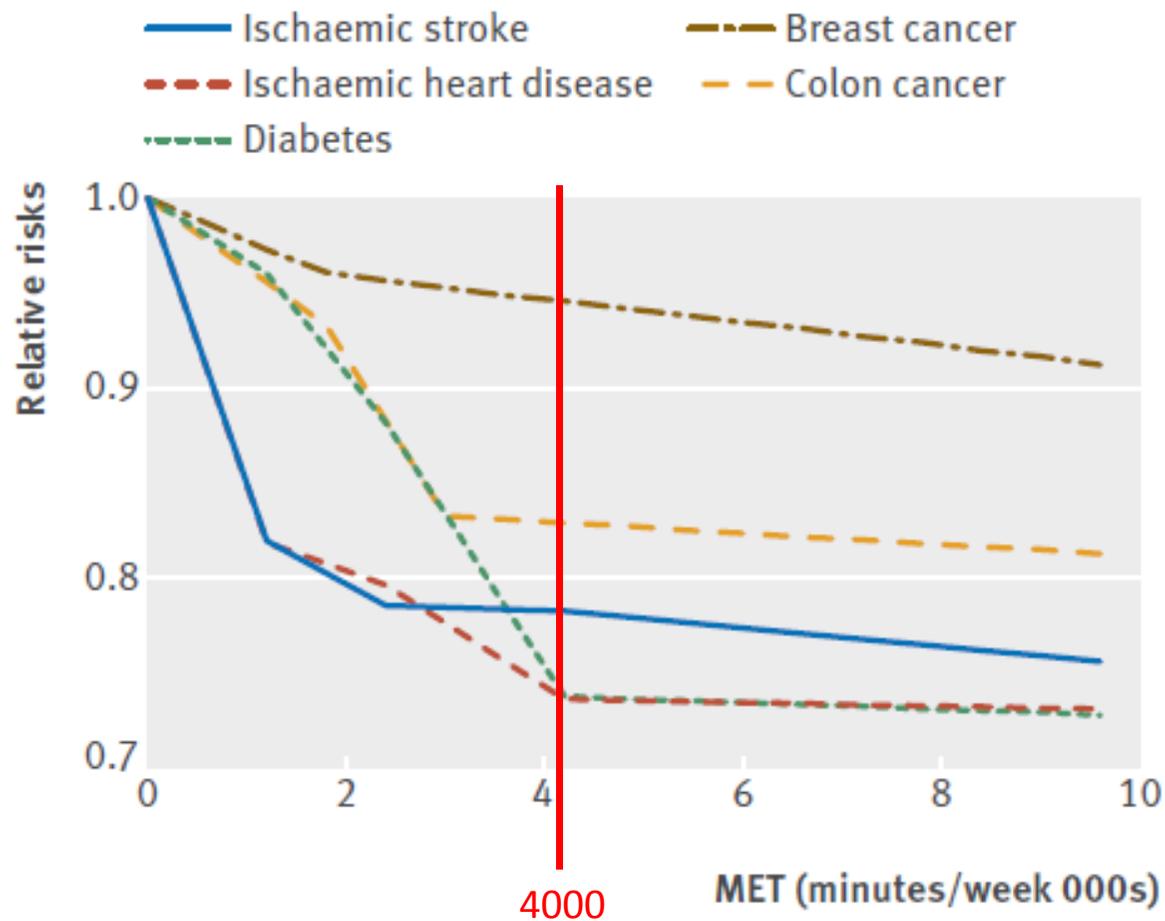
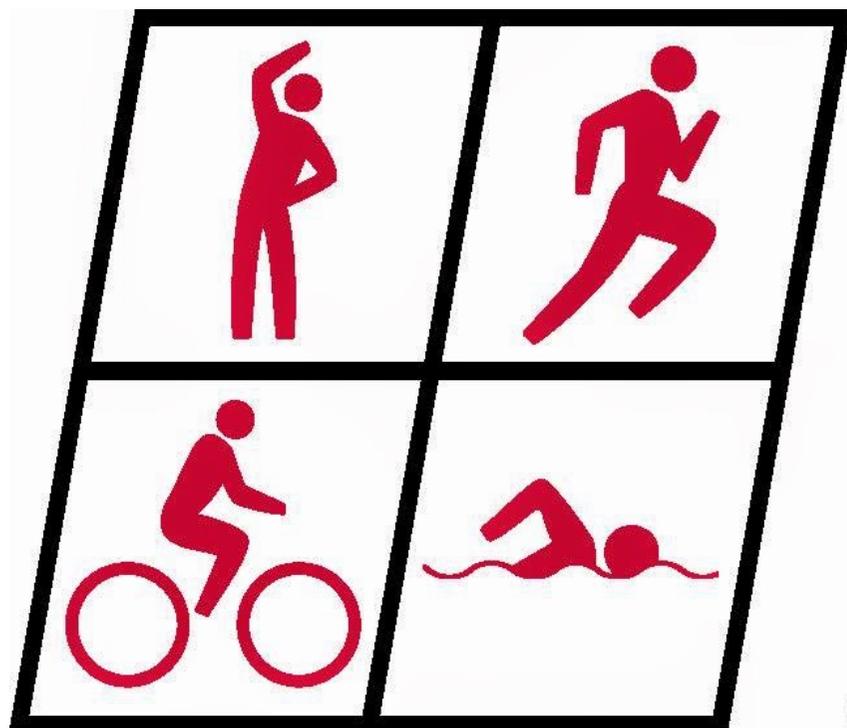


Fig 7 | Continuous risk curves for association between physical activity and breast cancer, colon cancer, diabetes, ischemic heart disease, and ischemic stroke





# GET YOUR

---

# 150

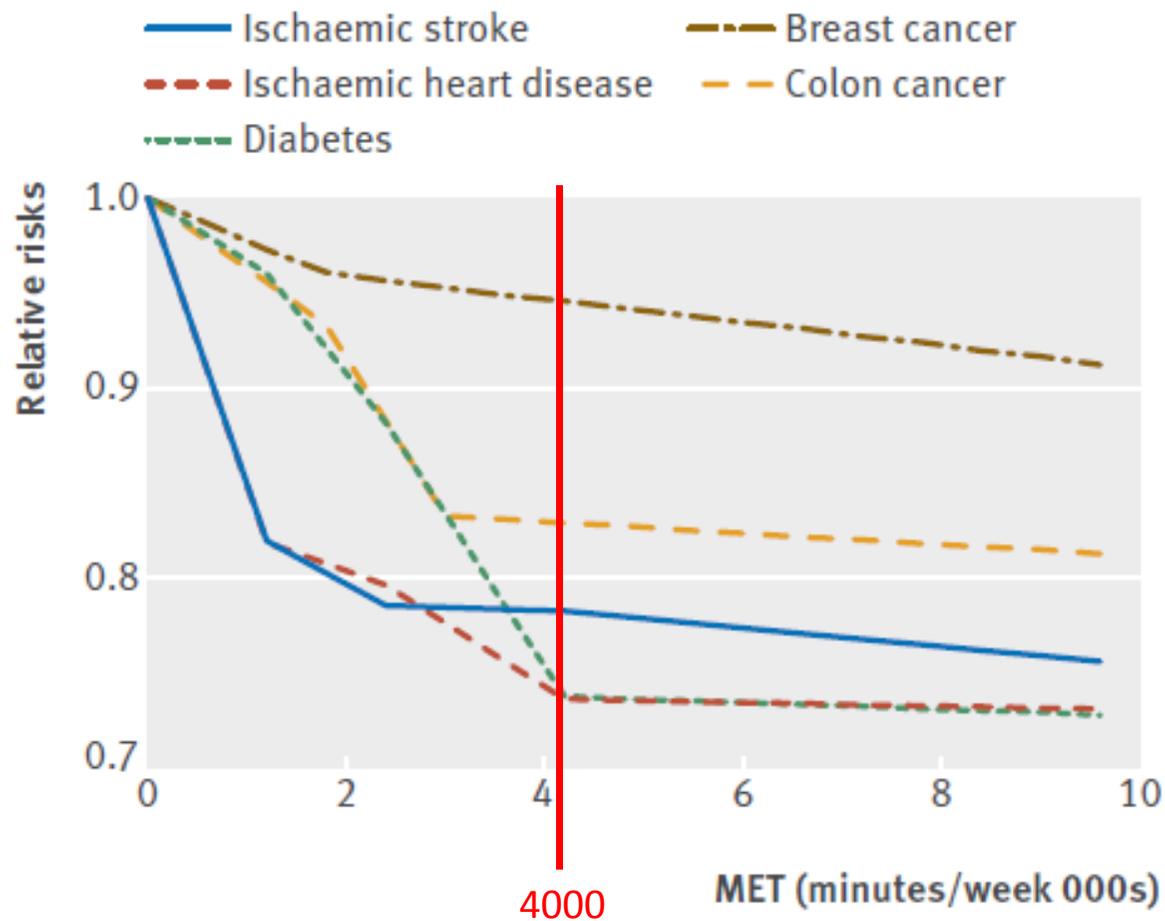


Fig 7 | Continuous risk curves for association between physical activity and breast cancer, colon cancer, diabetes, ischemic heart disease, and ischemic stroke

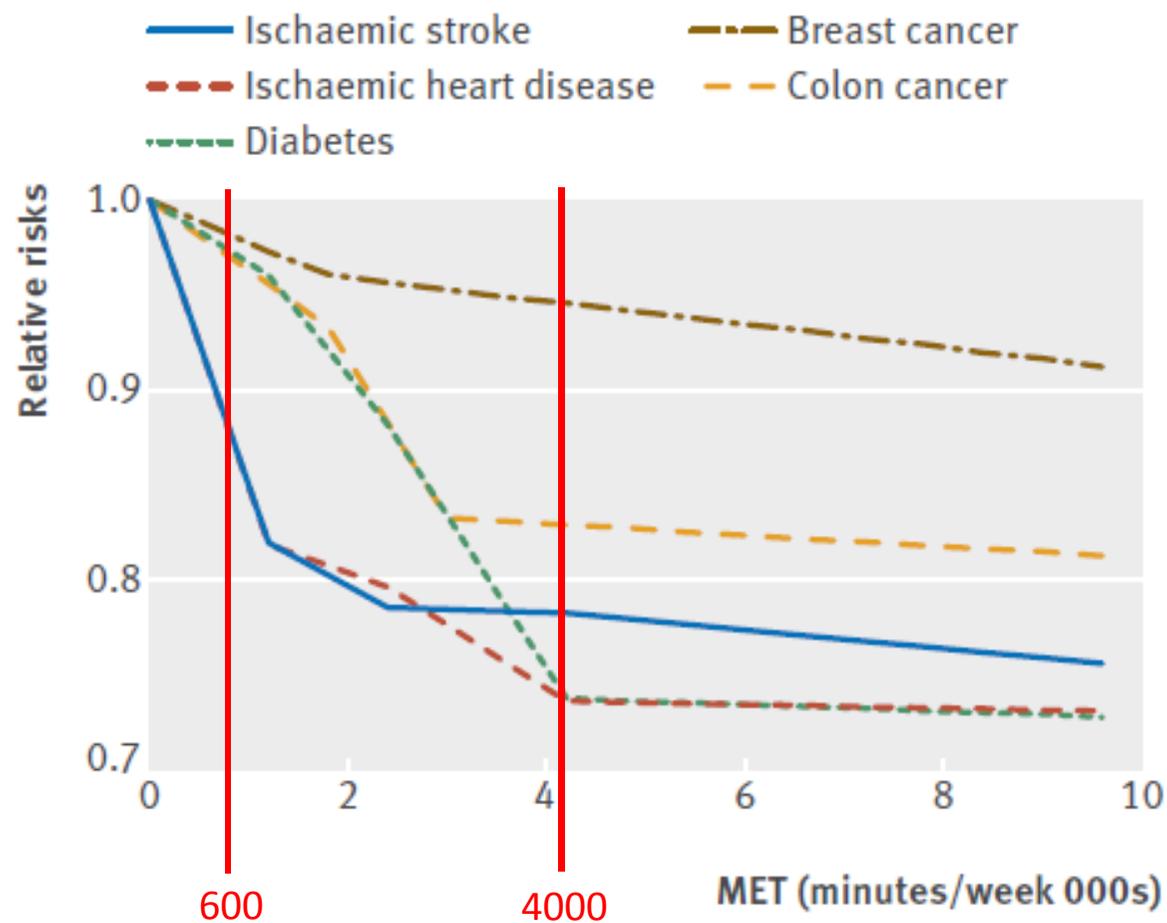


Fig 7 | Continuous risk curves for association between physical activity and breast cancer, colon cancer, diabetes, ischemic heart disease, and ischemic stroke



American Journal of  
Preventive Medicine

RESEARCH ARTICLE

Walking in Relation to Mortality in a Large Prospective  
Cohort of Older U.S. Adults

Alpa V. Patel, PhD,<sup>1</sup> Janet S. Hildebrand, MPH,<sup>2</sup> Corinne R. Leach, PhD,<sup>1</sup> Peter T. Campbell, PhD,<sup>1</sup>  
Colleen Doyle, MS,<sup>3</sup> Kerem Shuval, PhD,<sup>1</sup> Ying Wang, PhD,<sup>1</sup> Susan M. Gapstur, PhD<sup>1</sup>

**Introduction:** Engaging in >150 minutes of moderate-intensity or 75 minutes of vigorous-intensity physical activity weekly is recommended for optimal health. The relationship between walking, the most common activity especially for older adults, and total mortality is not well documented.

**Methods:** Data from a large U.S. prospective cohort study including 62,178 men (mean age 70.7 years) and 77,077 women (mean age 68.9 years), among whom 24,688 men and 18,933 women died during 13 years of follow-up (1999–2012), were used to compute multivariable-adjusted hazard rate ratios and 95% CIs for walking as the sole form of activity or adjusted for other moderate- or vigorous-intensity physical activity in relation to total and cause-specific mortality (data analysis 2015–2016).

**Results:** Inactivity compared with walking only at less than recommended levels was associated with higher all-cause mortality (hazard rate ratio=1.26, 95% CI=1.21, 1.31). Meeting one to two times the recommendations through walking only was associated with lower all-cause mortality (hazard rate ratio=0.80, 95% CI=0.78, 0.83). Associations with walking adjusted for other moderate- or vigorous-intensity physical activity were similar to walking only. Walking was most strongly associated with respiratory disease mortality followed by cardiovascular disease mortality and then cancer mortality.

**Conclusions:** In older adults, walking below minimum recommended levels is associated with lower all-cause mortality compared with inactivity. Walking at or above physical activity recommendations is associated with even greater decreased risk. Walking is simple, free, and does not require any training, and thus is an ideal activity for most Americans, especially as they age.

*Am J Prev Med* 2017;**1(0)**:■■■–■■■. © 2017 American Journal of Preventive Medicine. Published by Elsevier Inc. All rights reserved.



## The American Heart Association Recommendations for Physical Activity in Kids

**At least 60 minutes** of *moderate- to vigorous-intensity* aerobic activity **Every day**



© 2014 Learn more at [heart.org/KidsActivityRecommendations](http://heart.org/KidsActivityRecommendations).

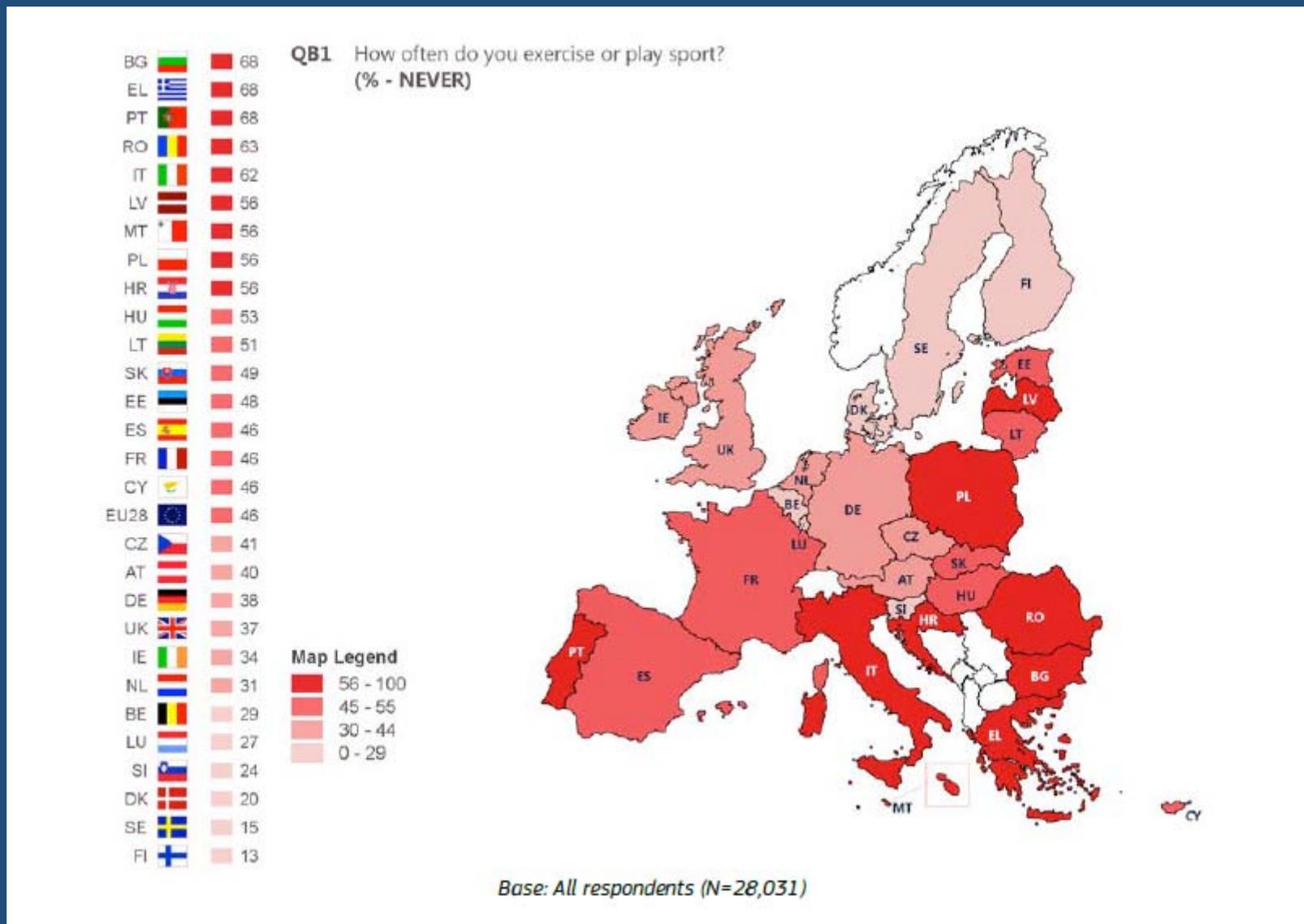




## Special Eurobarometer 472

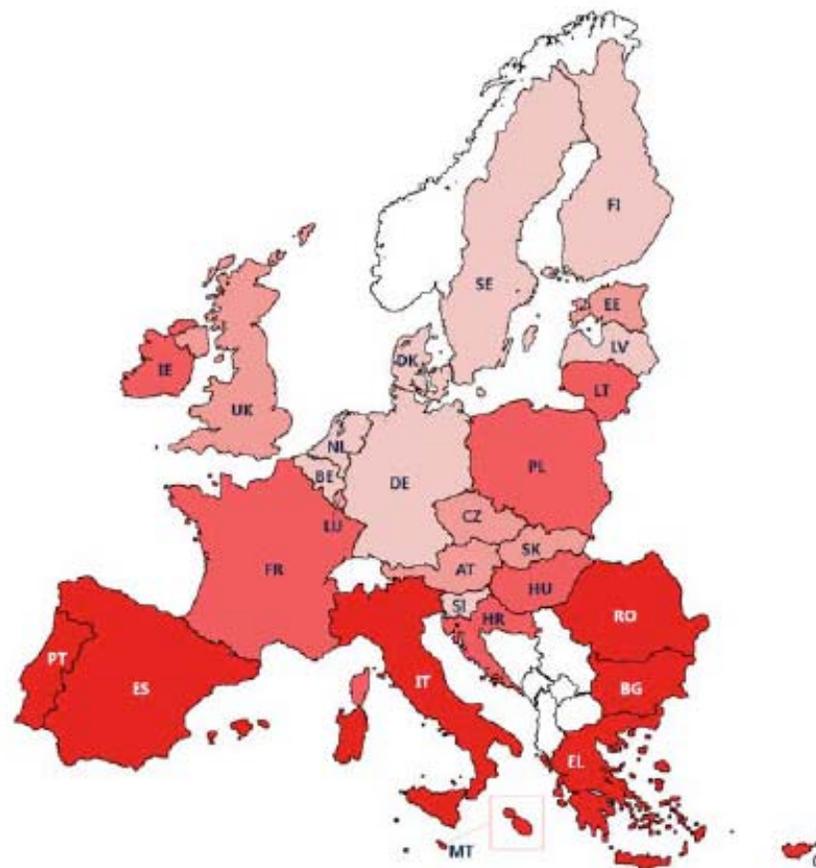
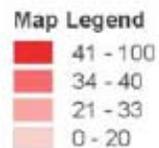
### Summary

### Sport and physical activity



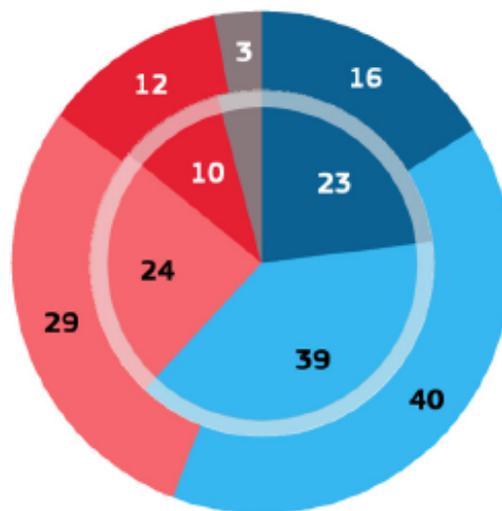
MT		68
PT		64
IT		57
CY		52
RO		51
ES		51
BG		45
EL		45
PL		39
HR		37
IE		37
HU		36
LT		35
EU28		35
FR		34
UK		32
CZ		29
AT		27
SK		27
EE		23
LU		21
SI		20
DE		20
LV		19
BE		18
FI		11
DK		10
SE		8
NL		7

**QB2** And how often do you engage in other physical activity such as cycling from one place to another, dancing, gardening, etc.?  
(% - NEVER)



Base: All respondents (N=28,031)

**QB6** How much time do you spend sitting on a usual day? This may include time spent at a desk, visiting friends, studying or watching television.  
(%)



EU28 Outer pie      PT Inner pie

	EU28		PT	
	EB88.4	EB88.4-EB80.2	EB88.4	EB88.4-EB80.2
● 2h30min or less	16	- 1	23	- 10
● 2h31min to 5h30min	40	- 3	39	+ 2
● 5h31min to 8h30min	29	+ 3	24	+ 6
● 8h31min or more	12	+ 1	10	+ 4
● Don't know	3	=	4	- 2

Evolution 12/2017 (EB88.4) - 11-12/2013 (EB80.2)

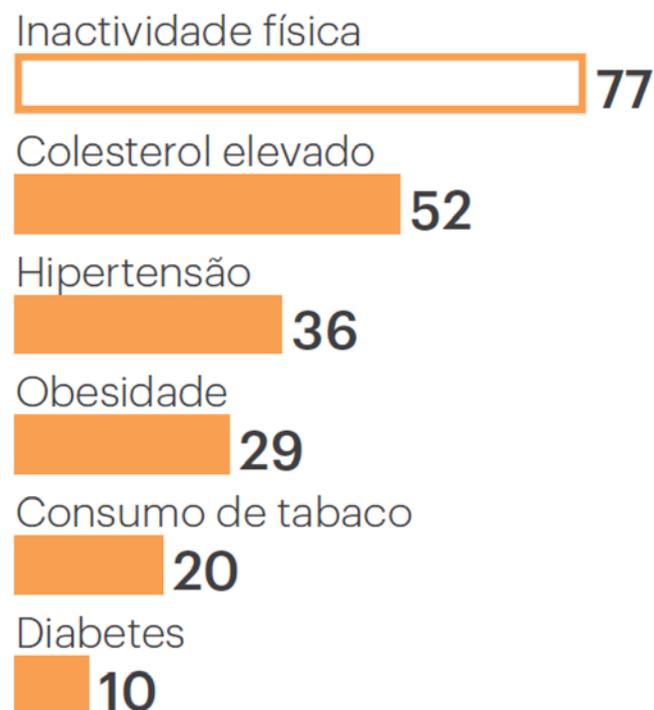
# Quanto custa a inactividade física em Portugal?

A Organização Mundial de Saúde (OMS) estima que, para um país de 10 milhões de habitantes onde metade da população é fisicamente inactiva, o custo anual da inactividade física é aproximadamente 900 milhões de euros. A aplicar-se a Portugal seria um valor considerável, equivalente a cerca de 9% do orçamento do Ministério da Saúde para 2017

Pedro Teixeira



## Prevalência de factores de risco Em % na população adulta



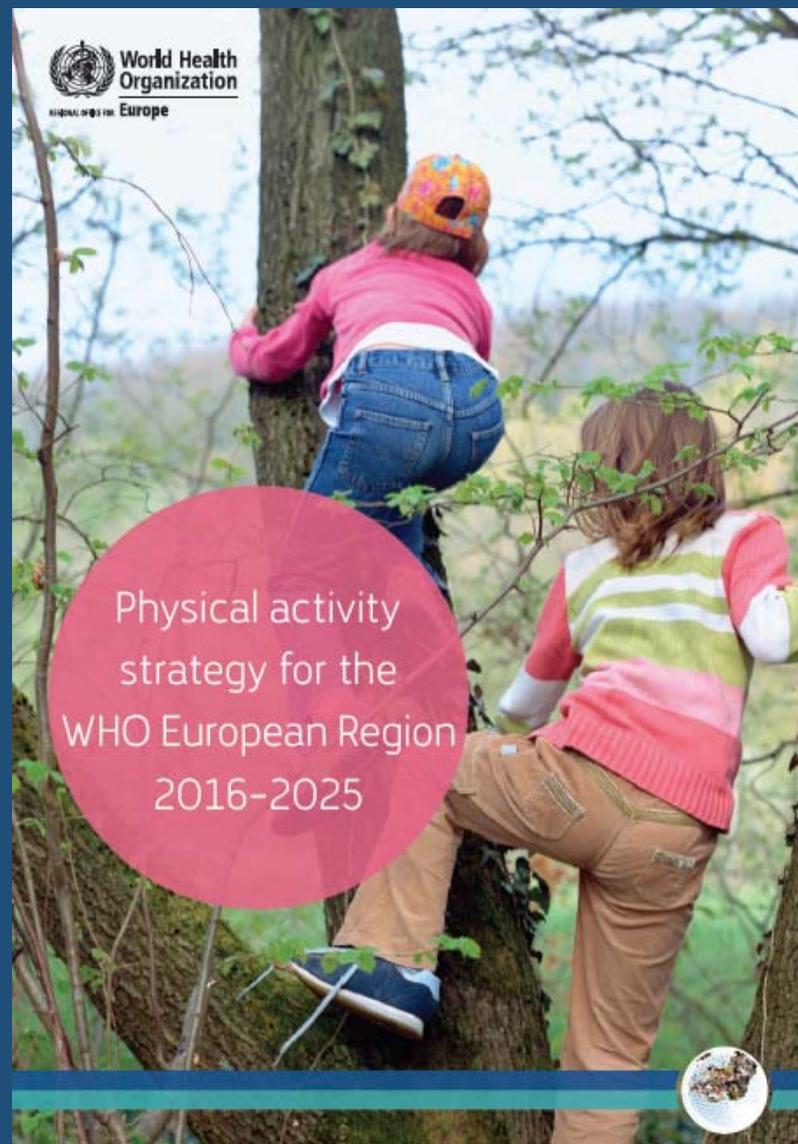
Fonte: INE-INS 2014; INSA-INSEF 2015; OMS 2015

Brussels, 10 October 2008

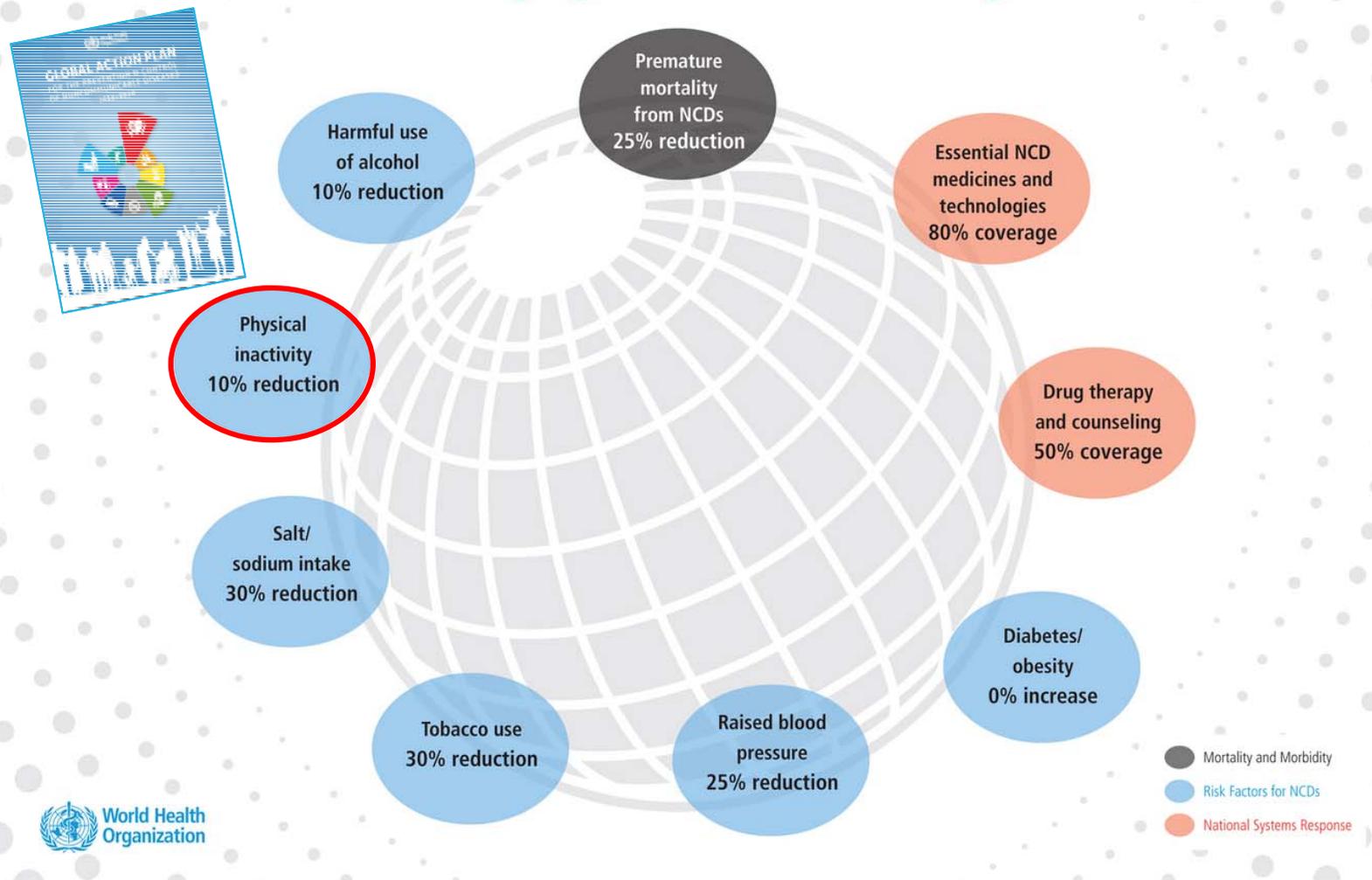
**EU Physical Activity Guidelines**  
**Recommended Policy Actions in Support**  
**of Health-Enhancing Physical Activity**

Approved by the EU Working Group "Sport & Health"  
at its meeting on 25 September 2008

Confirmed by EU Member State Sport Ministers  
at their meeting in Biarritz on 27-28 November 2008



# Set of 9 voluntary global NCD targets for 2025



# We can #beatNCDs



by promoting physical activity  
and healthy environments



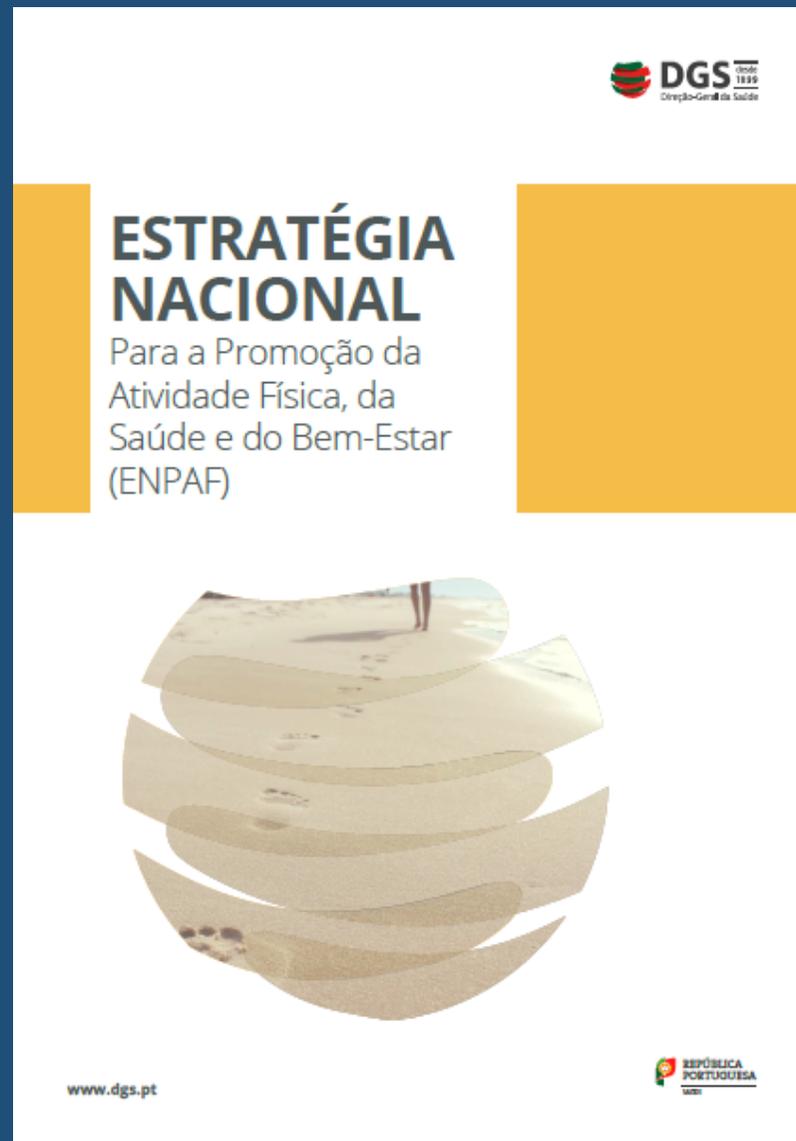




# OBJETIVOS DE DESENVOLVIMENTO SUSTENTÁVEL







*Diário da República, 2.ª série — N.º 94 — 16 de maio de 2016*

## SAÚDE

Gabinete do Secretário de Estado Adjunto  
e da Saúde

Despacho n.º 6401/2016

1 — A Direção-Geral da Saúde (DGS) desenvolve, no âmbito do Plano Nacional de Saúde, programas de saúde prioritários nas seguintes áreas:

- a) Prevenção e Controlo do Tabagismo;
- b) Promoção da Alimentação Saudável;
- c) Promoção da Atividade Física;
- d) Diabetes;
- e) Doenças Cérebro-cardiovasculares;
- f) Doenças Oncológicas;
- g) Doenças Respiratórias;
- h) Hepatites Virais;
- i) Infecção VIH/SIDA e Tuberculose;
- j) Prevenção e Controlo de Infeções e de Resistência aos Antimicrobianos;
- k) Saúde Mental.



**DGS** desde  
1899  
Direção-Geral da Saúde



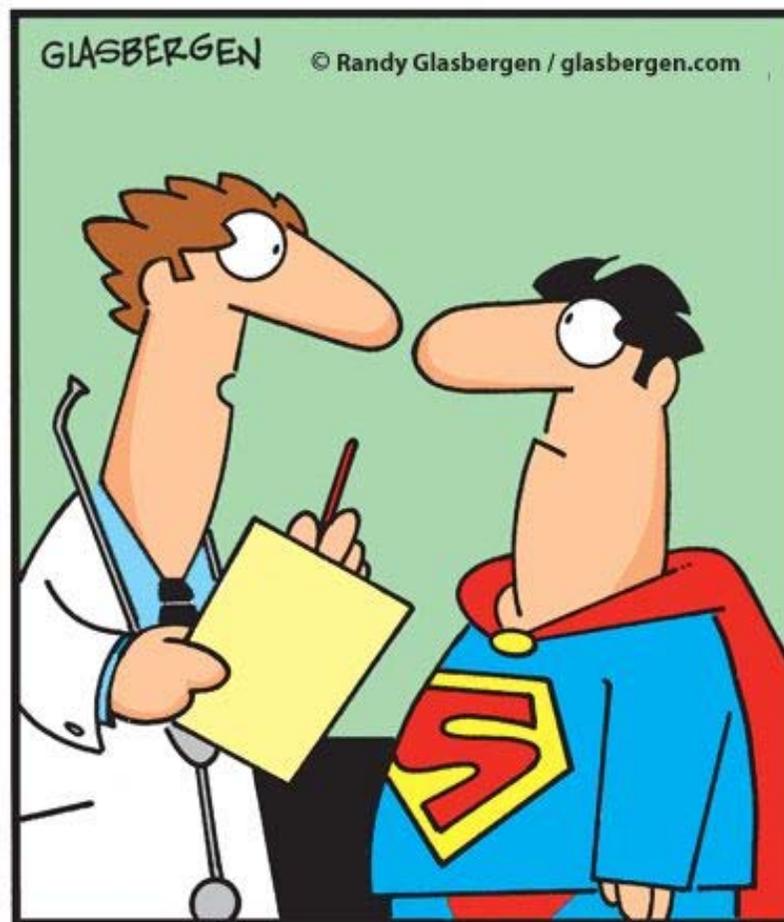
Programa Nacional  
para a Promoção  
da Atividade Física

# Boas Práticas

# Promote active travel

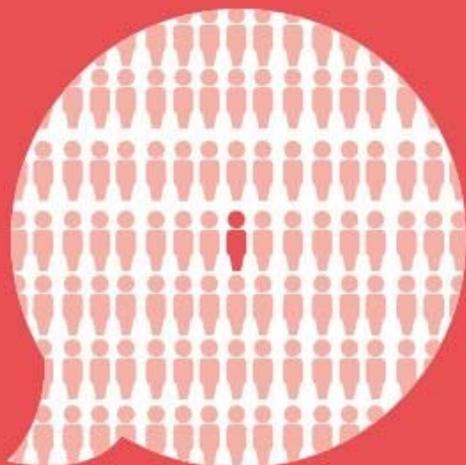


**Incorporate physical activity into everyday life, such as walking, cycling or combining with public transport instead of travelling by car**



**“Less flying...more walking.”**

TO GET ONE SMOKING PATIENT  
TO GIVE UP CIGARETTES<sup>1</sup>



DOCTORS NEED TO ADVISE  
**50-120**

TO GET ONE INACTIVE  
PATIENT TO MEET  
RECOMMENDED  
ACTIVITY LEVELS<sup>1</sup>



DOCTORS NEED TO ADVISE  
**12**

**BOTH HAVE  
COMPARABLE  
HEALTH BENEFITS<sup>1</sup>**



**“Let’s make every  
contact count,  
for physical  
activity!”<sup>2</sup>**

1. Thornton JS et al. Br J Sports Med 2016; doi:10.1136/bjsports-2016-096291.  
2. Gates AB. Br J Sports Med 2016; 50(6): 322-3.

CRISTINA GODINHO



PEDRO TEIXEIRA

## A primeira consulta de atividade física no SNS

Atividade física como terapêutica? A partir de agora sim, e no SNS. Projetos-piloto que dão resposta na prescrição de atividade física a pessoas com doença crónica arrancam em diversas unidades de saúde do país - e os resultados vão ser avaliados.

9 de Setembro de 2018, 7:55

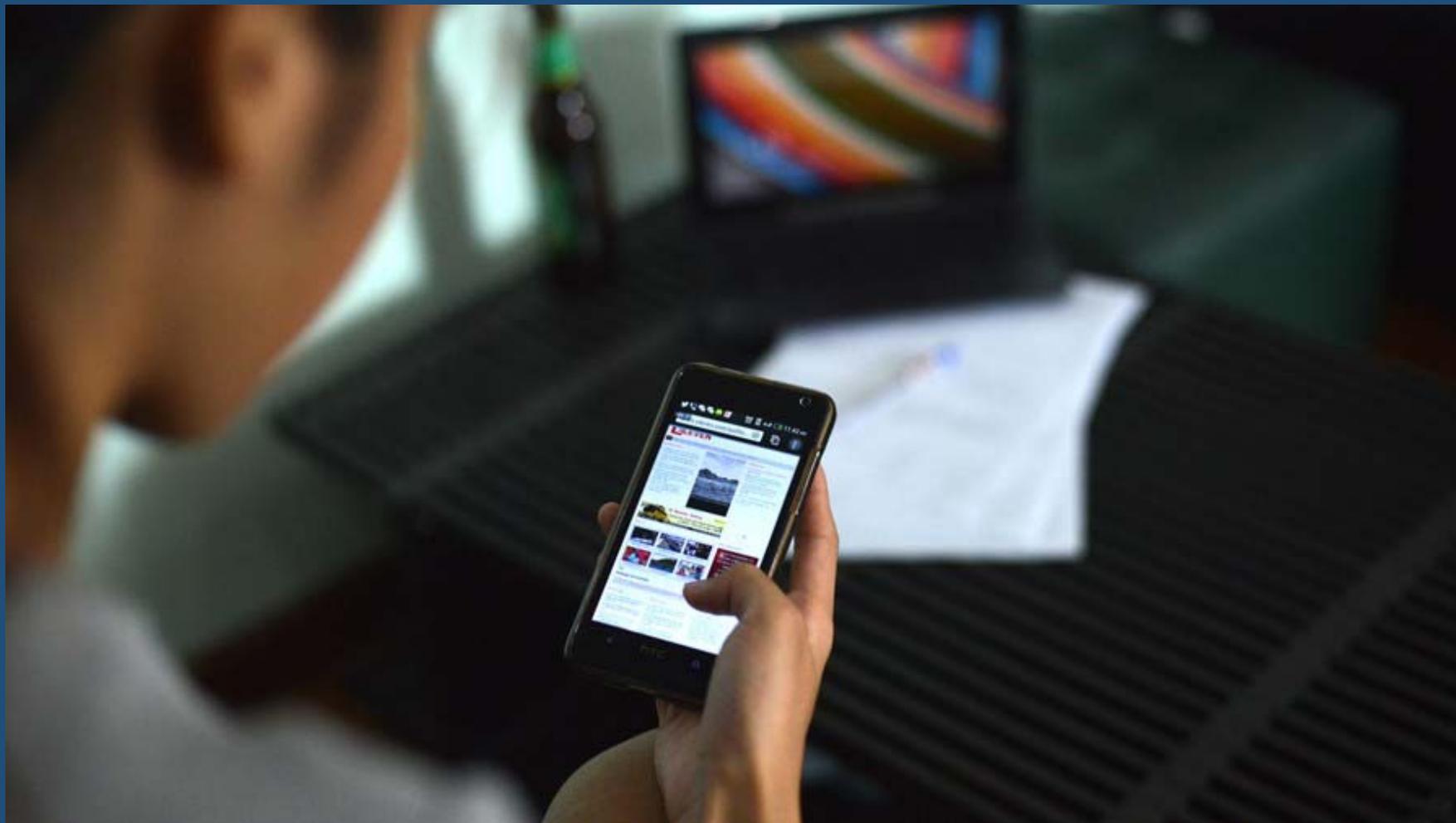
5939  
PARTILHAS



JOSÉ CARLOS  
CAIADO

Para além do seu papel preventivo, sabemos hoje que uma prática regular de atividade física pode desempenhar um papel crucial no tratamento de pelo menos 26 doenças crónicas, incluindo doenças oncológicas, cardiovasculares, metabólicas, pulmonares, psiquiátricas e também neurológicas. Existe atualmente **evidência científica sólida** que suporta que, em casos específicos, a prática de atividade física ou exercício físico estruturado, enquanto terapia ou coadjuvante terapêutico, pode ser tão eficaz quanto os tratamentos médicos. Em alguns casos, pode ser mesmo mais eficaz (e custo-eficaz) que os tratamentos habituais.

O reconhecimento atribuído à atividade física enquanto um dos mais importantes fatores de risco modificáveis, isto é, que está nas nossas mãos alterar, está patente em diversas recomendações internacionais. O recentemente lançado **Plano de Ação Global para a Atividade Física da OMS** destaca a implementação, ao nível dos cuidados de saúde, de sistemas que permitam a avaliação sistemática e o aconselhamento e prescrição de atividade física, sendo que tal é considerado como um dos melhores investimentos (*best buys*) em intervenções para a prevenção e controlo das doenças crónicas.





Sports Med  
DOI 10.1007/s40279-014-0142-5

SYSTEMATIC REVIEW

## Measuring and Influencing Physical Activity with Smartphone Technology: A Systematic Review

Judit Bort-Roig · Nicholas D. Gilson ·  
Anna Puig-Ribera · Ruth S. Contreras ·  
Stewart G. Trost

© Springer International Publishing Switzerland 2014

### Abstract

**Background** Rapid developments in technology have encouraged the use of smartphones in physical activity research, although little is known regarding their effectiveness as measurement and intervention tools.

**Objective** This study systematically reviewed evidence on smartphones and their viability for measuring and influencing physical activity.

**Data Sources** Research articles were identified in September 2013 by literature searches in Web of Knowledge, PubMed, PsycINFO, EBSCO, and ScienceDirect.

influencing people to be more active through smartphone applications.

**Study Appraisal and Synthesis Methods** Two reviewers independently performed the selection of articles and examined titles and abstracts to exclude those out of scope. Data on study characteristics, technologies used to objectively measure physical activity, strategies applied to influence activity; and the main study findings were extracted and reported.

**Results** A total of 26 articles (with the first published in 2007) met inclusion criteria. All studies were conducted in





# Mexa-se pela sua saúde!

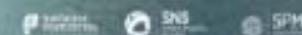
Descarregue a aplicação MySNS Carteira e guarde os seus passos no telemóvel

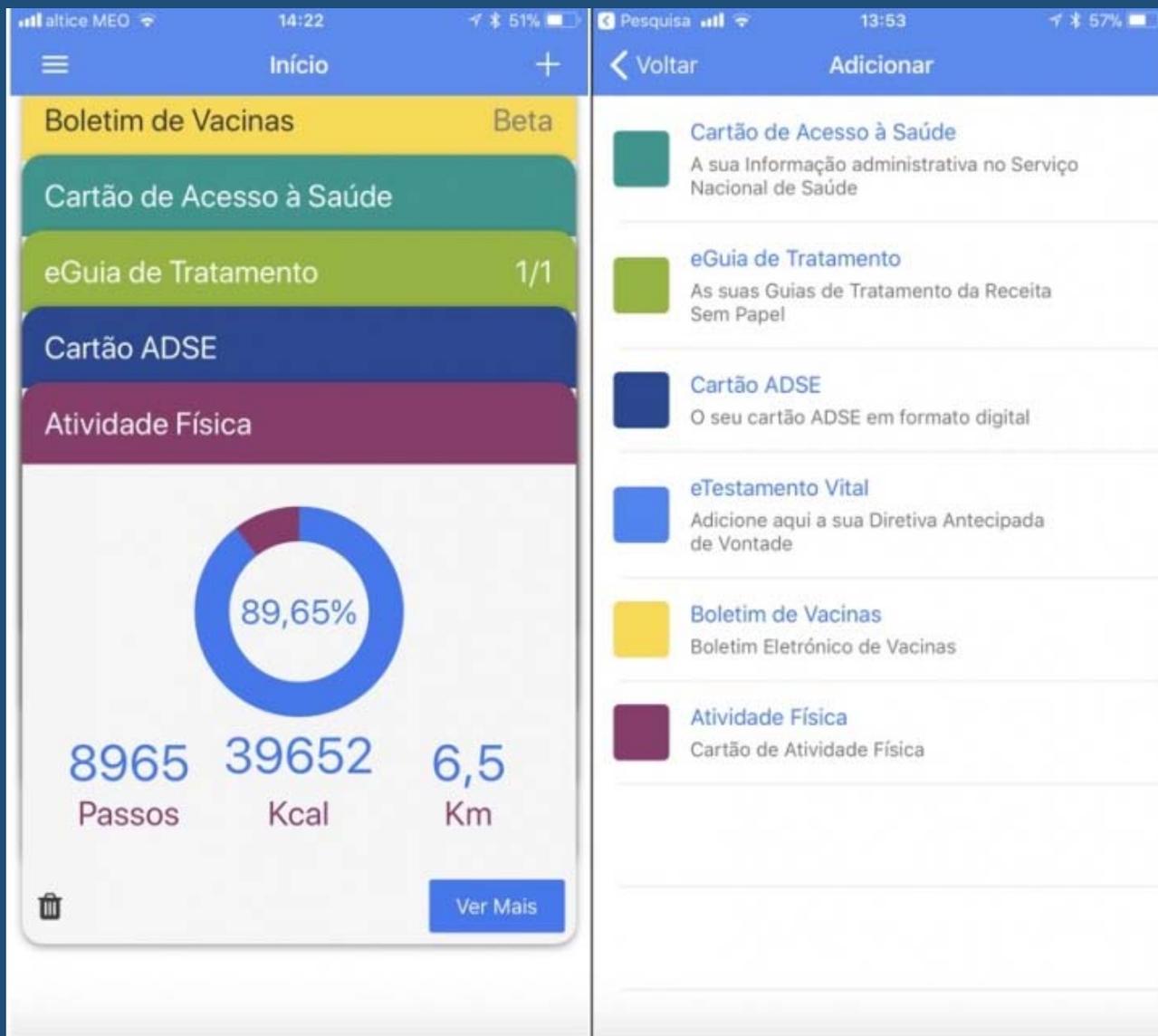


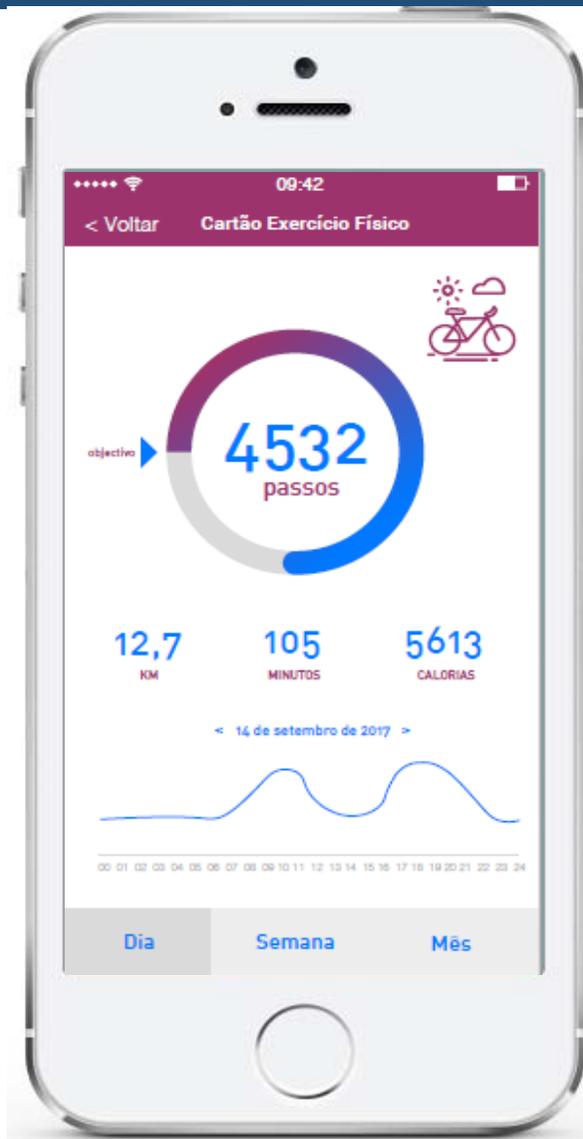
MySNS Carteira  
A Carteira eletrónica da Saúde.



[www.sns.gov.pt](http://www.sns.gov.pt)








**ARS NORTE**  
 Administração Regional  
 de Saúde do Norte, I.P.  
 Departamento de Saúde Pública

**Desafio de Atividade Física de Agosto**



Estacione o seu automóvel um pouco mais longe do que o habitual.

Seja mais ativo! Assinale no calendário os dias em que realizou este desafio.



**AGOSTO 2018**

Sem.	S	T	Q	Q	S	S	D
31			1	2	3	4	5
32	6	7	8	9	10	11	12
33	13	14	F	16	17	18	19
34	20	21	22	23	24	25	26
35	27	28	29	30	31		

Rua de Santa Catarina, 1288 | 4000-447 Porto | Tel 22 041 10 00 Fax 22 041 10 05  
 E-mail: arsn@arsnorte.min-saude.pt

ARS NORTE  
Administração Regional  
de Saúde do Norte, I.P.  
Departamento de Saúde Pública

### Desafio de Atividade Física de Setembro



Aproveite a hora de almoço para dar uma caminhada.  
Seja mais ativo! Assinale no calendário os dias em que realizou este desafio.

REPÚBLICA PORTUGUESA | SNS SERVIÇO NACIONAL DE SAÚDE | DGS DIREÇÃO-GERAL DE SAÚDE | Programa Nacional para a Promoção da Atividade Física | ARS NORTE

## SETEMBRO 2018

Sem.	S	T	Q	Q	S	S	D
35						1	2
36	3	4	5	6	7	8	9
37	10	11	12	13	14	15	16
38	17	18	19	20	21	22	23
39	24	25	26	27	28	29	30

Rua de Santa Catarina, 1288 | 4000-447 Porto | Tel 22 041 10 00 Fax 22 041 10 05  
E-mail: arsn@arsnorte.min-saude.pt





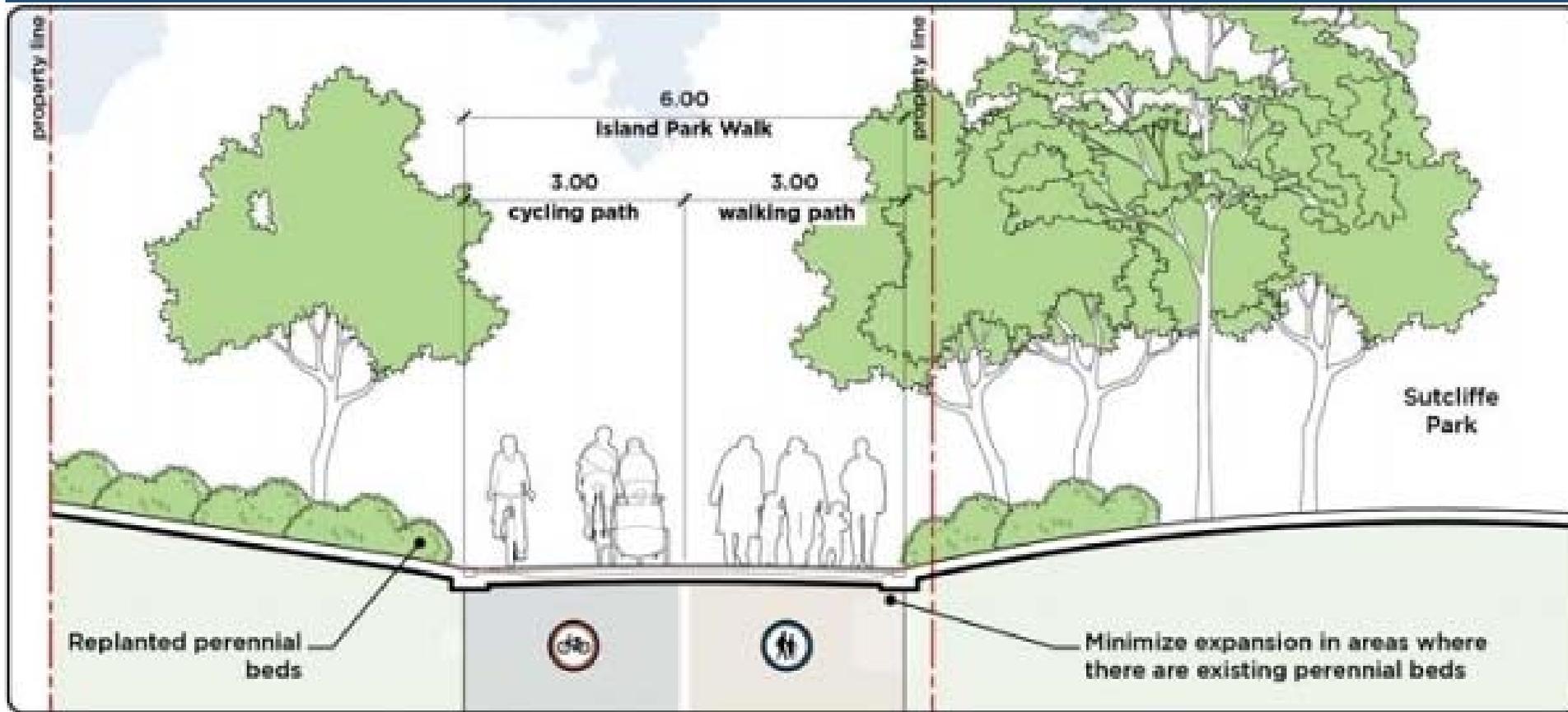












Support The Guardian

Subscribe Find a job Sign in Search

International edition

News

Opinion

Sport

Culture

Lifestyle

More

The Guardian

Money Property Pensions Savings Borrowing Careers

New Zealand

New Zealand company offers employees \$10 a day to cycle to work

Christchurch advertising firm says workers could feel energised by the exercise - and the money

Eleanor Ainge Roy in Dunedin

@EleanorAingeRoy Wed 7 Mar 2018 01:57 GMT



4,409 476



A New Zealand company is offering employees up to \$10 if they cycle to and from work. Photograph: Mark Baker/AP

most popular

'Pest from the west': snow forces schools to close in parts of UK

Live International Women's Day 2018: protests across the world as women push for progress - live

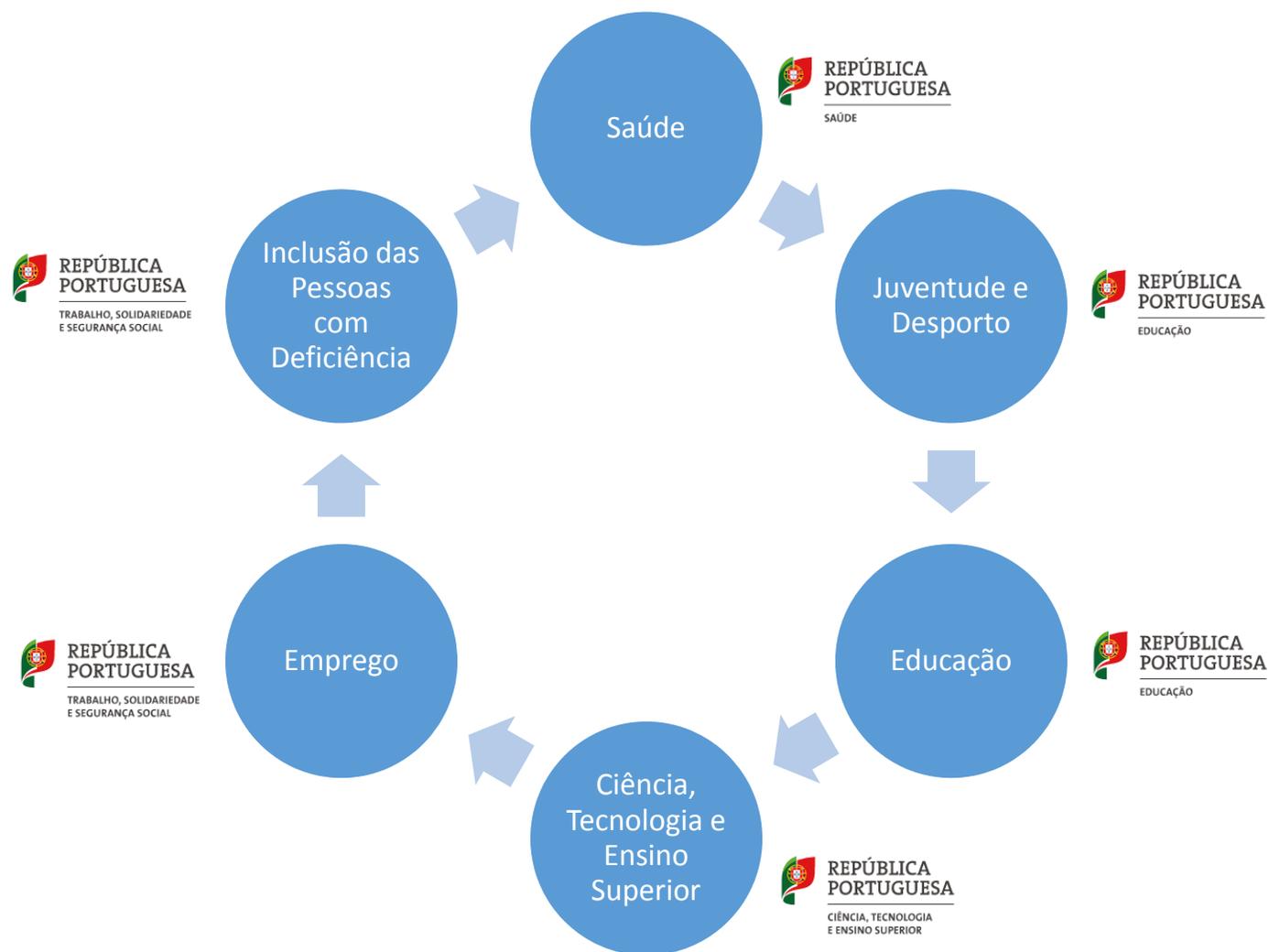
Samsung Galaxy S9+ review: the best big-screen phone by miles

Stormy Daniels: White House appears to confirm Trump contract with porn star

José Mourinho v Jürgen Klopp and the question of football aesthetics | Jonathan Wilson



PLANO DE AÇÃO NACIONAL PARA A  
ATIVIDADE FÍSICA





[www.panaf.gov.pt](http://www.panaf.gov.pt)



Saúde



Desporto



Educação em todo o Ciclo de Vida



Vigilância e Monitorização



Comunicação e Informação



Trabalho e Empresas



Comunidades e Sociedade Civil



Ambiente Construído e Mobilidade Ativa



Grupos Especiais



<https://www.u-bike.pt/>

# CicloExpresso do Oriente





<https://cicloexpressodooriente.wordpress.com/>



APROVEITA  
O DIA  
COM A TUA  
CIDADE

<http://sextadebicicleta.mubi.pt/>

# HEPA Indicators



European Commission



World Health  
Organization

REGIONAL OFFICE FOR

Europe



SPORT

Supporting fair play and cooperation in sport

European Commission > News > European Commission reports progress on health-enhancing physical activity

Home Policies ▾ Initiatives ▾ Updates ▾ Resources ▾ Contact

## European Commission reports progress on health-enhancing physical activity



Thematic areas	Indicators	
International PA recommendations and guidelines	Indicator 1	National recommendation on physical activity for health
	Indicator 2	Adults reaching the minimum WHO recommendation on physical activity for health
	Indicator 3	Children and adolescents reaching the minimum WHO recommendation on physical activity for health
Cross-sectoral approach	Indicator 4	National government coordination mechanism and leadership on HEPA promotion
	Indicator 5	Funding allocated specifically to HEPA promotion
Sport	Indicator 6	National Sport for All policy or action plan
	Indicator 7	Sport Clubs for Health Programme
	Indicator 8	Framework to support offers to increase access to exercise facilities for socially disadvantaged groups
	Indicator 9	Target groups addressed by the national HEPA policy
Health	Indicator 10	Monitoring and surveillance of physical activity
	Indicator 11	Counselling on physical activity
	Indicator 12	Training on physical activity in curriculum for health professionals

Education	Indicator 13	Physical education in primary and secondary schools
	Indicator 14	Schemes for school-related physical activity promotion
	Indicator 15	HEPA in training of physical education teachers
	Indicator 16	Schemes promoting active travel to school
Environment, urban planning, public safety	Indicator 17	Level of cycling and walking
	Indicator 18	European guidelines for improving infrastructures for leisure-time physical activity
Working environment	Indicator 19	Schemes to promote active travel to work
	Indicator 20	Schemes to promote physical activity at the workplace
Senior citizens	Indicator 21	Schemes for community interventions to promote physical activity in older adults
Indicators evaluation	Indicator 22	National HEPA policies that include a plan for evaluation
Public awareness	Indicator 23	National awareness raising campaign on physical activity

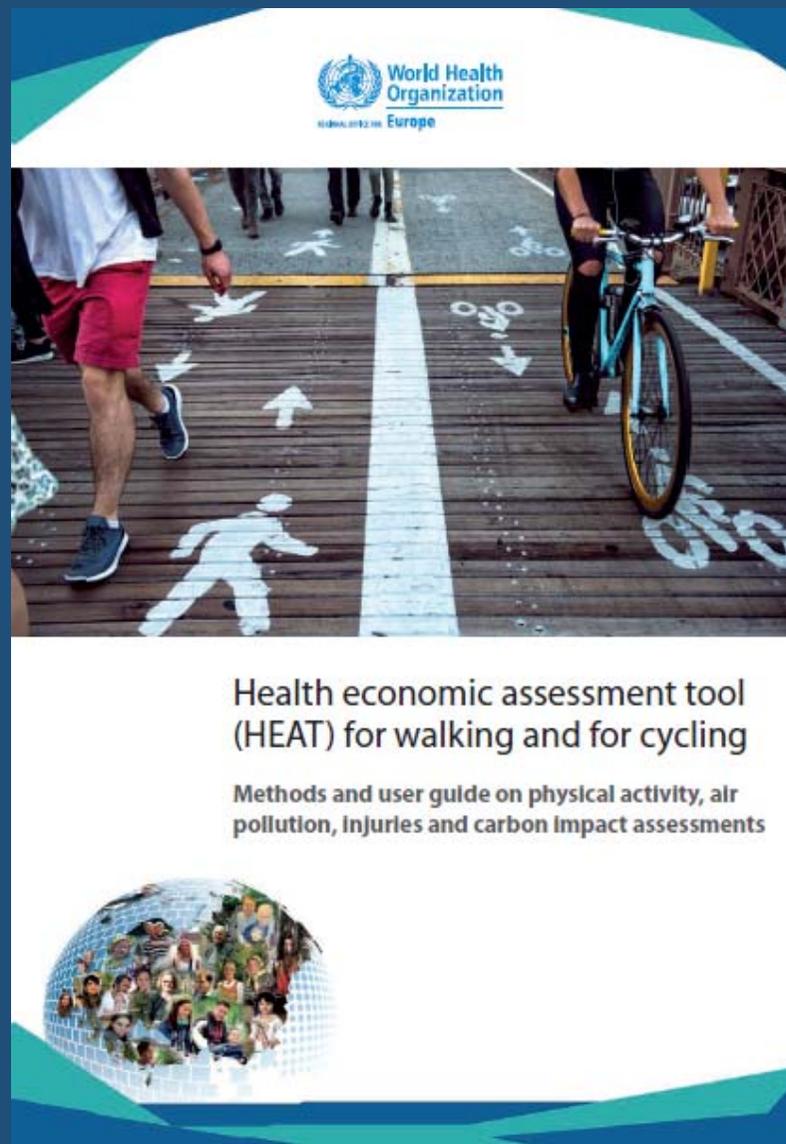
Education	Indicator 13	Physical education in primary and secondary schools
	Indicator 14	Schemes for school-related physical activity promotion
	Indicator 15	HEPA in training of physical education teachers
	Indicator 16	Schemes promoting active travel to school
Environment, urban planning, public safety	Indicator 17	Level of cycling and walking
	Indicator 18	European guidelines for improving infrastructures for leisure-time physical activity
Working environment	Indicator 19	Schemes to promote active travel to work
	Indicator 20	Schemes to promote physical activity at the workplace
Senior citizens	Indicator 21	Schemes for community interventions to promote physical activity in older adults
Indicators evaluation	Indicator 22	National HEPA policies that include a plan for evaluation
Public awareness	Indicator 23	National awareness raising campaign on physical activity



## Development of the health economic assessment tools (HEAT) for walking and cycling

Meeting report of the  
consensus workshop in Bonn,  
Germany, 1–2 October 2013

<http://www.heatwalkingcycling.org>







GOZA O DIA  
COM A TUA  
CIDADE



# Mobilidade Ativa: Implicações na Saúde

Romeu Mendes, MD PhD

*rmendes@arsnorte.min-saude.pt*



**utad**

