

## The IEA-EEF European Congress of Epidemiology 2012: Epidemiology for a Fair and Healthy Society

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### Epidemiology for a fair and healthy society: Euroepi 2012

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Epidemiology is an exciting science that provides the way to formulate intelligent questions and often responses to understand the dynamics of health and disease in the communities. Bridging different methods and fields of enquire the ultimate interest of epidemiology is the ability to make the well known distance from the bench side to the bed side even shorter if it also takes the way to the population side and back.

As times are changing also epidemiology seems to follow: from communicable diseases to non-communicable diseases, from biological determinants to social capital, from cross-sectional thinking to life course approaches, from the reductionist strategy of single agents or single genes to systems biology and systems public health. Thus an extraordinary diverse world of opportunities is born and many different approaches can be tested giving epidemiology new chances.

Any simple descriptive exercise in epidemiology can show us that iniquities in health are a main challenge faced by human societies. In the 1990 the median age at death was five years for those living in sub-Saharan Africa and seventy-five for those living in what was then called the established market societies. This is an essential hallmark of what can be a claim for a universal human right to health or, as Jonathan Wolff put it, the beginning of an “exercise in cautious idealism” (1), and probably the most interesting confront that epidemiologists have ahead of them: working for a fair and healthy society, especially in societies and at times of crisis. And all societies and times face crisis!

The European Epidemiology Conference that takes place in Porto, Portugal, from 5 to 8 September 2012 brings together research findings, scientists, clinicians and public health practitioners from 45 countries addressing, from multiple perspectives, the most important methodological and substantive findings that build up the health debate through the eyes of epidemiology.

On behalf of the Organizing Committee we sincerely hope that this meeting, and all these presented and published abstracts, might be a privileged moment to share knowledge and an opportunity to make

the epidemiological contribute even sounder, particularly regarding the making of evidence to inform action.

1. Wolff J. The human right to health. W.W. Norton & Company, Inc. 2012

### Abstract submission and evaluation

#### Abstracts by country

Country	Submitted abstracts		Accepted abstracts		Accepted oral communication	Accepted as poster
	n	%	n	%		
Albania	3	0.4	2	66.7	1	1
Argentina	2	0.3	0	0.0	0	0
Australia	3	0.4	2	66.7	1	1
Austria	2	0.3	2	100.0	0	2
Belgium	3	0.4	2	66.7	1	1
Bosnia and Herzegovina	2	0.2	2	100.0	1	1
Brazil	152	23.0	99	65.1	13	86
Bulgaria	1	0.2	0	0.0	0	0
Canada	4	0.6	4	100.0	1	3
Croatia	5	0.8	5	100.0	0	5
Cyprus	3	0.4	3	100.0	1	2
Denmark	16	2.4	14	87.5	10	4
Egypt	1	0.2	1	100.0	1	0
Estonia	2	0.3	2	100.0	0	2
Finland	4	0.6	4	100.0	3	1
France	13	2.0	11	84.6	3	8
Germany	28	4.1	25	89.3	18	7
Greece	5	0.8	5	100.0	1	4
Iran	10	1.1	7	70.0	0	7
Ireland	3	0.4	2	66.7	1	1

Country	Submitted abstracts		Accepted abstracts		Accepted as oral communication	Accepted as poster	Abstracts by topic		
	n	%	n	%			n	n	%
Israel	3	0.4	3	100.0	0	3	Aging	32	4.8
Italy	44	6.7	40	90.9	13	27	Birth Cohorts	17	2.6
Japan	2	0.3	2	100.0	1	1	Cancer	39	5.9
Latvia	1	0.2	0	0.0	0	0	Cardiovascular diseases	37	5.6
Lithuania	8	1.2	6	75.0	1	5	Child's Health	56	8.5
Luxembourg	1	0.2	1	100.0	0	1	Clinical epidemiology	17	2.6
Macedonia FYR	2	0.2	1	50.0	0	1	Communicable diseases	20	3.0
Mali	1	0.2	1	100.0	0	1	Communication in health	3	0.5
Morocco	3	0.4	1	33.3	0	1	Environmental epidemiology	24	3.6
Netherlands	4	0.6	3	75.0	3	0	Ethics	1	0.2
New Zealand	1	0.2	1	100.0	0	1	Gender and health	6	0.9
Norway	14	2.1	13	92.9	4	9	Health education	15	2.3
Poland	13	2.0	13	100.0	5	8	Health Services	28	4.2
Portugal	228	34.6	196	86.0	39	157	Health surveys	13	2.0
Republic of Korea	2	0.3	2	100.0	0	2	HIV/AIDS	14	2.1
Romania	2	0.3	2	100.0	0	2	Immigration	6	0.9
Russian Federation	1	0.2	1	100.0	1	0	International health	9	1.4
Serbia and Montenegro	6	0.9	5	83.3	0	5	Mental health	21	3.2
Spain	28	4.2	25	89.3	8	17	Methods in Epidemiology and statistical analysis	21	3.2
Sweden	13	2.0	11	84.6	7	4	Molecular and genetic epidemiology	6	0.9
Switzerland	2	0.3	2	100.0	1	1	Mortality	19	2.9
Thailand	2	0.3	2	100.0	0	2	Nutrition and Lifestyles	73	11.0
Turkey	2	0.3	2	100.0	0	2	Occupational Health	19	2.9
United Kingdom	14	2.1	11	78.6	5	6	Other chronic diseases	19	2.9
United States of America	2	0.3	2	100.0	2	0	Outbreaks and Alerts	5	0.8
<b>Total</b>	<b>661</b>	<b>100.0</b>	<b>538</b>	<b>81.4</b>	<b>146</b>	<b>392</b>	Pharmacoepidemiology	9	1.4
							Quality of life	8	1.2
							Reproductive health	24	3.6
							Social inequalities / Vulnerable groups	34	5.1
							Spatial Epidemiology	14	2.1
							Surveillance	14	2.1
							Teaching and training	5	0.8
							Translational epidemiology	1	0.2
							Tuberculosis	15	2.3
							Vaccines	8	1.2
							Violence	9	1.4
							<b>Total</b>	<b>661</b>	<b>100.0</b>

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**Programme overview**

Time	Wednesday, 5	Time	Thursday, 6	Friday, 7	Saturday, 8
8.30–16.30	Pre-congress courses and meeting	8.30–10.00	Oral Communications	Oral Communications	Oral Communications
		10.00–10.45	<b>Coffee and Poster Session</b>	<b>Coffee and Poster Session</b>	<b>Coffee and Poster Session</b>
		10.45–11.30	<b>Keynote Lecture</b>	<b>Keynote Lecture</b>	<b>Keynote Lecture</b>
		11.30–13.00	Oral Communications	Oral Communications	<b>Closing Ceremony</b> Plenary Session
		13.00–14.00	<b>Lunch</b>	<b>Lunch</b>	
		14.00–16.00	Thematic Sessions	Thematic Sessions	
		16.00–16.30	Coffee	Coffee	
17.00–19.00	<b>Opening Ceremony</b> Plenary Session	16.30–17.15	<b>Keynote Lecture</b>	<b>Keynote Lecture</b>	
		17.15–18.15	Oral Communications	Oral Communications	
		18.30–19.30	General Assembly of The Portuguese Association of Epidemiology	Young Epidemiologists Meeting	
	<b>Welcome reception</b> 19.00 h		<b>Concert</b> 21.00 h	<b>Congress Dinner</b> 20.00 h	

## Detailed scientific programme

## Wednesday, 5th September

Time	Hall 2 PRÉ-CONGRESS COURSE Ethics, solidarity and public health 8.30–16.30 h	Hall 3 PRÉ-CONGRESS COURSE Pharmacoepidemiology and Risk Management 12.00–16.30 h	Hall 4 PRÉ-CONGRESS COURSE New epidemiological perspectives for health workforce planning 12.00–16.30 h
17.00–19.00	<b>OPENING CEREMONY—Plenary session Auditorium</b> <b>THE MILLENNIUM DEVELOPMENT GOALS AND BEYOND: CHALLENGES FOR EPIDEMIOLOGISTS</b> Cesar Victora, President of the International Epidemiological Association, Universidade Federal de Pelotas, Brazil <b>WHAT EPIDEMIOLOGY'S PAST CAN TELL US ABOUT ITS FUTURE?</b> Alfredo Morabia, Professor of Epidemiology, Columbia Mailman School of Public Health, New York, and City University of New York, USA Jorge Sampaio, High Representative for the United Nations Alliance of Civilizations and U.N. secretary general's special envoy to halt TB, Portugal		

## Thursday, 6th September

Time	Auditorium	Hall 2	Hall 3	Hall 4
8.30–10.00	Oral <i>Communications</i> <b>OC 1.1: Perinatal and child health I</b>	Oral <i>Communications</i> <b>OC 1.2: Environmental epidemiology</b>	Oral <i>Communications</i> <b>OC 1.3: Time trends in health outcomes and risk factors</b>	Oral <i>Communications</i> <b>OC 1.4: Pharmacoepidemiology I</b>
10.00–10.45	Coffee and Poster Session			
10.45–11.30	<b>EPIDEMIOLOGY AND BIG SCIENCE: COHORTS IN EPIDEMIOLOGICAL RESEARCH</b> Albert Hofman, Professor and chair of epidemiology, Erasmus Medical Center, Rotterdam, The Netherlands			
11.30–13.00	Oral <i>Communications</i> <b>OC 2.1: Cancer I</b>	Oral <i>Communications</i> <b>OC 2.2: HIV/AIDS</b>	Oral <i>Communications</i> <b>OC 2.3: Aging</b>	Oral <i>Communications</i> <b>OC 2.4: Pharmacoepidemiology II</b>
13.00–14.00	Lunch			
14.00–16.00	<i>Thematic Sessions</i> <b>TS 1.1: ACHIEVING MORE EFFECTIVE TRANSLATION OF EPIDEMIOLOGIC FINDINGS INTO POLICY WHEN THE FACTS ARE NOT THE WHOLE STORY</b>	<i>Thematic Sessions</i> <b>TS 1.2: NEW FRONTIERS OF EPIDEMIOLOGY</b>	<i>Thematic Sessions</i> <b>TS 1.3: ARE BIRTH COHORTS REALLY INCREASING EPIDEMIOLOGICAL KNOWLEDGE?</b>	<i>Thematic Sessions</i> <b>TS 1.4: ENVIRONMENTAL AND MOLECULAR EPIDEMIOLOGY</b>
16.00–16.30	Coffee			
16.30–17.15	<b>PHARMACOEPIDEMIOLOGY: ENSURING PUBLIC HEALTH BENEFITS OF MEDICINES</b> Hubert G. Leufkens, Utrecht Institute for Pharmaceutical Sciences (UIPS) and Dutch Medicines Evaluation Board (MEB), The Netherlands			
17.15–18.15	Oral <i>Communications</i> <b>OC 3.1: Child and adolescent health</b>	Oral <i>Communications</i> <b>OC 3.2: Tobacco</b>	Oral <i>Communications</i> <b>OC 3.3: Cancer II</b>	Oral <i>Communications</i> <b>OC 3.4: Maternal health</b>
18.30–19.30	<b>General Assembly of The Portuguese Association of Epidemiology</b>			

**Friday, 7th September**

<b>Time</b>	<b>Auditorium</b>	<b>Hall 2</b>	<b>Hall 3</b>	<b>Hall 4</b>
8.30–10.00	<i>Oral Communications</i> <b>OC 4.1: Inequalities and health</b>	<i>Oral Communications</i> <b>OC 4.2: Occupational health</b>	<i>Oral Communications</i> <b>OC 4.3: Nutrition and health promotion</b>	<i>Oral Communications</i> <b>OC 4.4: Cardiovascular diseases</b>
10.00–10.45	Coffee and Poster Session			
10.45–11.30	<b>LEARNING FROM OUR NEIGHBORS: CROSS-NATIONAL COMPARISONS OF PERINATAL HEALTH</b> <u>Jennifer Zeitlin</u> , Epidemiological Research Unit on Perinatal Health and Women's and Children's Health and INSERM (Institut national de la santé et de la recherche médicale), France			
11.30–13.00	<i>Oral Communications</i> <b>OC 5.1: Young Epidemiologists Session</b>	<i>Oral Communications</i> <b>OC 5.2: Respiratory diseases</b>	<i>Oral Communications</i> <b>OC 5.3: Lifestyles</b>	<i>Oral Communications</i> <b>OC 5.4: Perinatal and child health II</b>
13.00–14.00	Lunch			
14.00–16.00	<i>Thematic Sessions</i> <b>TS 2.1: NEW EU DATA PROTECTION REGULATION PROPOSAL AND THE IMPACT ON EPIDEMIOLOGICAL WORK</b>	<i>Thematic Sessions</i> <b>TS 2.2: BEYOND THE BASICS STATISTICS IN EPIDEMIOLOGY</b>	<i>Thematic Sessions</i> <b>TS 2.3: WHERE NEXT FOR PERINATAL EPIDEMIOLOGY IN EUROPE</b>	
16.00–16.30	Coffee			
16.30–17.15	<b>WHAT ARE THE MOST CITED BOOKS OF EPIDEMIOLOGY &amp; BIostatISTICS IN THE PAST 50 YEARS?</b> <u>Miquel Porta</u> , IMIM—Hospital del Mar Research Institute, Universitat Autònoma de Barcelona and Professor, IMIM—Hospital del Mar Research Institute and School of Medicine, Universitat Autònoma de Barcelona, Spain			
17.15–18.15	<i>Oral Communications</i> <b>OC 6.1: Methods in Epidemiology and statistical analysis</b>	<i>Oral Communications</i> <b>OC 6.2: Sleep and health</b>	<i>Oral Communications</i> <b>OC 6.3: Migration and health</b>	<i>Oral Communications</i> <b>OC 6.4: Health services</b>
18.30–19.30	<b>Young Epidemiologists Meeting</b>			

**Saturday, 8th September**

<b>Time</b>	<b>Auditorium</b>	<b>Hall 2</b>	<b>Hall 3</b>	<b>Hall 4</b>
8.30–10.00	<i>Oral Communications</i> <b>OC 7.1: Infectious diseases</b>	<i>Oral Communications</i> <b>OC 7.2: Mortality</b>	<i>Oral Communications</i> <b>OC 7.3: Obesity</b>	<i>Oral Communications</i> <b>OC 7.4: Cancer III</b>
10.00–10.45	Coffee and Poster Session			
10.45–11.30	<b>EXPERIENCES FROM THE PARADISE OF REGISTER-BASED STUDIES ON CANCER EPIDEMIOLOGY</b> <u>Eero Pukkala</u> , Professor in Public Health and Epidemiology, Director of Statistics, Finnish Cancer Registry, Institute for Statistical and Epidemiological Cancer Research, Finland			
11.30–12.15	<b>EVIDENCE AND INDEPENDENCE IN TACKLING DECISIONS ON PUBLIC HEALTH POLICIES</b> <u>Ildefonso Hernandez Aguado</u> , Professor of Preventive Medicine and Public Health, Head of the Department of Public Health, History of Science and Gynecology, Universidad Alicante, Spain			
12.15–13.30	<b>CLOSING CEREMONY</b> —Plenary session			

**Objectives** This cross-sectional study investigated whether independent mobility was related to active travel to school.

**Methods** six hundred and twenty-five 10–14 years old boys ( $n = 292$ ) and girls ( $n = 333$ ) from 10 schools in a large Portuguese city were included. The independent variable in logistic regression analysis was mode of travel home to school measured by a self-reported questionnaire, asking “How do you usually travel to school”. Options were walk, bicycle, car, bus or train; those travelling by car/motorcycle and bus/train were merged into a single “passive transport” group and those travelling by bicycle or walking were merged into an “active transport” group. Dependent variable was independent mobility assessed using the stem “How often are you allowed to go to the following places on your own or with friends (without an adult)”; from the eleven questions, which were part of the self-completed questionnaire, one dimension (scale) was derived using categorical principal components analysis (Cronbach alpha = 0.901). Minutes of moderate to vigorous physical activity (MVPA) were objectively measured using accelerometers. The analysis was adjusted for gender, age, and MVPA.

**Results** Independent mobility was significantly associated with active transport to school: i.e., children with high independent mobility were 1.44 times more likely to walk or cycle (95 % CI 1.12–1.86).

**Conclusions** Independent mobility appears to be an important independent correlate of active transport to school. Conversely, low level of independent mobility can negatively influence physical activity, which may lead to decreased levels of social, emotional, and cognitive development.

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## P2I18

### Body image and anthropometric data in adolescents

Carla Bonifácio, Claudia Caldeirita, Raquel Francisco, Alexandra Lemos, António Fernandes, Vera Ferro-Lebres

Diagnostic and Therapeutic Technologies Department, School of Health Sciences, Polytechnic Institute of Braganza; Mountain Research Centre, Polytechnic Institute of Braganza

**Background** Body Image reflects a person path, whose perceptions are part of its unit and are determinant for its existence, at each moment. Na individuals perception about his body is affected by others comments, that most of the times leads to dissatisfaction with owns body image. At the present moment, studies that correlate real measured anthropometric data, body image perception and satisfaction are not known.

**Objective** To evaluate the relation between real anthropometric data and body image perception and satisfaction, in Portuguese adolescents.

**Methods** A descriptive transversal and quantitative study was designed in na education institution located in the North of Portugal. There were evaluated 214 adolescents, with ages between 10 and 19 years. Each participants anthropometric data (weight and height) were assessed, aiming to determine BMI for age centile, according to *Centres of Disease and Control Prevention*. Body Image perception and satisfaction was determined using Gardner et al., 1999 body image scales, with  $\pm 30$  % distortion.

**Results** The 214 adolescents (124 female and 90 male) that participated in this study, were classified according to BMI for age centiles, and 1.4 % were underweight and 22.9 % overweight or obese. It was possible to verify, using Kruskal-Walis non Parametric Test, that there is a statistically significant association between body image satisfaction and academic level, revealing that adolescents body

image increases as academic level increases. The results show that there is no significant association between the remain variables: BMI, gender and body image perception).

**Conclusions** Although several studies, in other countries and/or age groups, show that females have lower body image satisfaction levels than males, this study failed to show coincident results. It was proved that as academic level increases, adolescents body image increases as well. It is evident that intervention projects to promote better body images perception and satisfaction are fundamental, especially in adolescents from younger age groups.

## P2I19

### Leptin and adiponectin effects on bone mineral density in Portuguese adolescent boys: a population-based study

Margarida Prata, Raquel Lucas, Teresa Monjardino, Sara Lourenço, Elisabete Ramos, Henrique Barros

Institute of Public Health of the University of Porto; Department of Clinical Epidemiology, Predictive Medicine and Public Health. University of Porto Medical School

**Background** There is a growing body of evidence suggesting that cytokines and hormones derived from white adipose tissue may play a role in the regulation of bone turnover but the magnitude of such effects remains controversial.

Understanding factors that alter bone mass during adolescence may help to inform strategies to improve peak bone mass accrual.

**Objective** To quantify the associations of serum leptin and adiponectin with bone mineral density and turnover in adolescent boys.

**Methods** We used data from 150 boys born in 1990 (75 normal-weight and 75 overweight or obese, classified according to the age-specific percentiles developed by the United States Centers for Disease Control and Prevention), recruited in public and private schools in Porto, Portugal, and evaluated at 17 years old as part of a cohort study (*EPITeen*). Anthropometrics were obtained at school with the subject in light indoor clothes and no shoes. Weight was measured using a digital Tanita scale in kilograms to the nearest tenth and height was measured in centimeters to the nearest tenth using a portable stadiometer. Body mass index (BMI) was calculated as weight in kilograms divided by height in meters squared. Bone mineral density (BMD) was measured at the non-dominant forearm by dual-energy X-ray absorptiometry. Serum concentrations of leptin, adiponectin, osteoprotegerin (OPG), receptor activator of nuclear factor kappa-B ligand (RANKL), collagen type I cross-linked C-telopeptide (CTX), and procollagen I N-terminal propeptide (PINP) were determined using commercially available enzyme-linked immunosorbent assays (ELISA). Appropriate transformations to create normal distributions were undertaken prior to analysis (log transformed: leptin, adiponectin, RANKL, OPG, OPG/RANKL and CTX/PINP ratios). Linear regression coefficients (95 % confidence intervals) were used to assess the effects of leptin and adiponectin, adjusted for BMI, on bone mineral density, bone turnover markers and bone osteoclastogenic markers.

**Results** Adjusted for BMI, an inverse association was found between leptin and adiponectin with BMD ( $\beta = -0.038$ ; 95 % CI:  $-0.055, -0.021$ ) and ( $\beta = -0.017$ ; 95 % CI:  $-0.035, 0.000$ ), respectively. Regarding bone turnover markers, adiponectin was positively, but not significantly, associated with PINP ( $\beta = 4.896$ ; 95 % CI:  $-0.494, 10.286$ ) and inversely associated to the CTX/PINP ratio ( $\beta = -0.132$ ; 95 % CI:  $-0.258, -0.006$ ). Leptin was directly associated with RANKL ( $\beta = 0.339$ ; 95 % CI:  $0.009, 0.669$ ) and inversely with OPG/RANKL ratio ( $\beta = -0.352$ ; 95 % CI:  $-0.695, -0.009$ ).