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Joint Research Centre

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Recent developments and publications

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Meeting of the EU Platform on Diet,
Physical Activity and Health

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2015 update from "The Global Burden of Disease Study" (GBD)

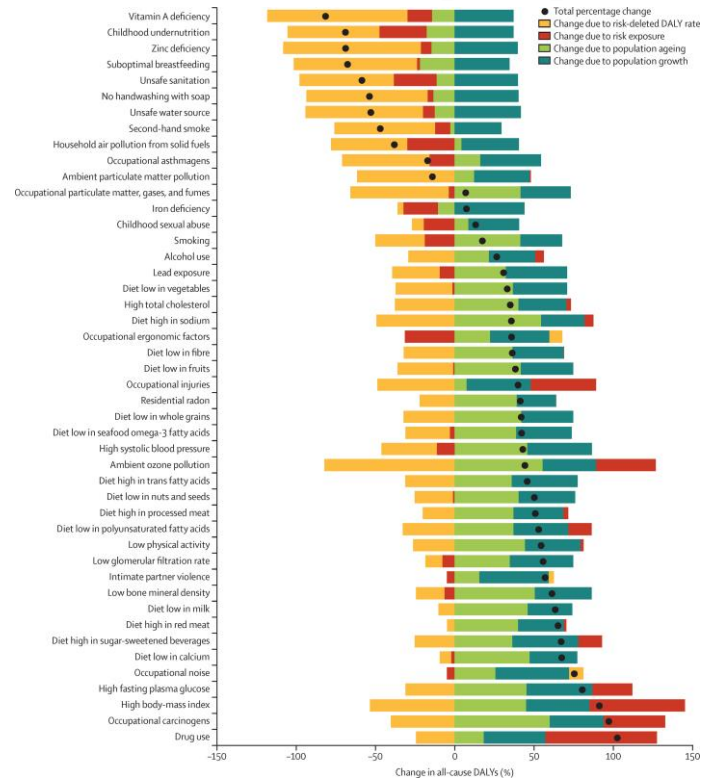
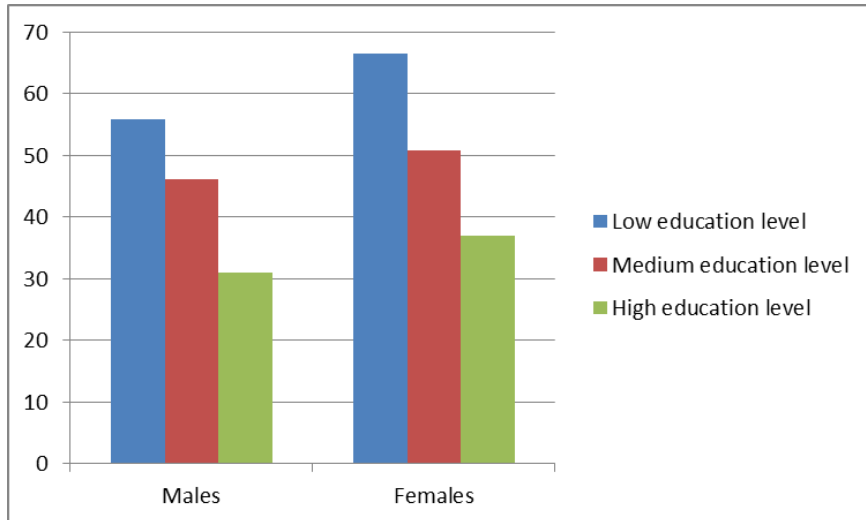


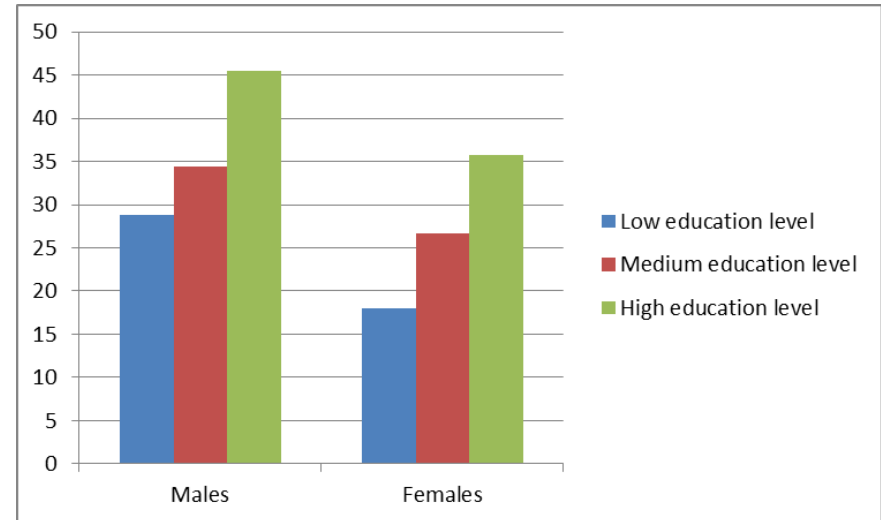
Figure 5. Global decomposition of changes in all-cause DALYs attributable to Level 3 risk factors from 1990 to 2015. [Lancet 2016; 388: 1659–724]

Updated European Health Interview Survey (EHIS) data (2014)

Percentage of EU population with **no time** spent on **health-enhancing (non-work-related) aerobic physical activity** by sex, age and educational attainment level



Percentage of EU population **with ≥ 150 min/week** spent on **health-enhancing (non-work-related) aerobic physical activity** by sex, age and educational attainment level



<http://ec.europa.eu/eurostat/web/health/health-status-determinants/data/database>

Health at a glance: Launch 23 November 2016

-> Reports on the progress in health systems against 2014 baseline on the basis of transparent indicators in line with the 2014 Commission Communication:

- Effectiveness
- Accessibility
- Resilience

Further info: ec.europa.eu/health/state



Study on the implementation of the European physical activity guidelines

- EC (DG EAC) funded study to support the EU Physical Activity Focal Point Network in the collection of data for the Monitoring Framework of the EU “Council Recommendation on promoting health-enhancing physical activity across sectors”.
- Independent assessment of the monitoring framework
- Specific situation analysis in 6 MS to collect feedback, lessons learned and suggestions about the implementation of the HEPA monitoring framework
- Recommendations to the European Commission for future improvements of the Monitoring Framework and the support provided to Member States

<http://dx.doi.org/10.2766/42027>

German Recommendations for Physical Activity and Physical Activity Promotion

- Evidence based and systematic recommendations applying to: children and adolescents, adults, older persons; adults with chronic diseases.
- Target group: experts, decision makers, people acting as multipliers

Examples:

- Children (6-11 years) and adolescents (12-18 years) *"should be moderately-to-vigorously physically active for 90 minutes or more each day. 60 minutes of that time can be spent on everyday activities, e.g. at least 12,000 steps/day."*
- 6-11 year olds: *"large muscle groups should be subject to higher-intensity loading on two to three days a week in order to improve strength and endurance, taking into account respective developmental stages"*
- *"Avoidable sitting times should be reduced to a minimum."*
 - -> (motorized) transport, periods spent inside unnecessarily, consumption of screen media
 - -> as little as possible or max: infant & toddlers 0 min, 4-6 year olds 30 min, 6-11 year olds 60 min, 12-18 year olds 120 min

DE & EN versions: <http://www.bewegungsempfehlungen.de> or <http://www.physical-activity.de>

New Recommendations on Physical Activity and Exercise for People with Diabetes

- Issued by the American Diabetes Association
- Recommends inter alia:
 - Regular, structured physical exercise for everyone with diabetes
 - Less overall sedentary time every day.
 - Three or more minutes of light activity, such as walking, leg extensions or overhead arm stretches, every 30 minutes during prolonged sedentary activities for improved blood sugar management, particularly for people with type 2 diabetes.

Diabetes Care 2016;39:2065–2079; <http://dx.doi.org/10.2337/dc16-1728>

Recent recommendations on added sugars for children from the American Heart Association

- *"Strong evidence supports the association of added sugars with increased cardiovascular disease risk in children through increased energy intake, increased adiposity, and dyslipidemia."*
- Recommend that children consume **≤25 g/d** (100 kcal/d) **of added sugars**
- Recommend to **avoid added sugars for children <2 years of age.**
- *"Although added sugars most likely can be safely consumed in low amounts as part of a healthy diet, few children achieve such levels, making this an important public health target."*

Circulation. 2016; Epub ahead of print; <http://dx.doi.org/10.1161/CIR.0000000000000439>

Initiative to limit industrial *trans* fats intakes in the EU

- Inception Impact Assessment published (October 2016)
http://ec.europa.eu/smart-regulation/roadmaps/docs/2016_sante_143_trans_fats_en.pdf
- For feedback got to Roadmaps / Inception impact assessments
http://ec.europa.eu/smart-regulation/roadmaps/index_en.htm

The ECOG Free Obesity eBook

56 chapters in 9 fields (as of November 2016):

- Epidemiology & Prevention Across Europe
- Society, Communication, Environment & Obesity
- Growth Charts & Body Composition
- Biology
- Nutrition, Food Choices & Eating Behavior
- Psychological Assessment & Disturbances
- Clinics & Complications
- Energy Expenditure & Physical Activity
- Treatment

<http://ebook.ecog-obesity.eu/content/>

**Articles in scientific
(peer-reviewed) journals**

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Focus on physical activity

Overweight and obesity (all grades) are associated with increased all-cause mortality

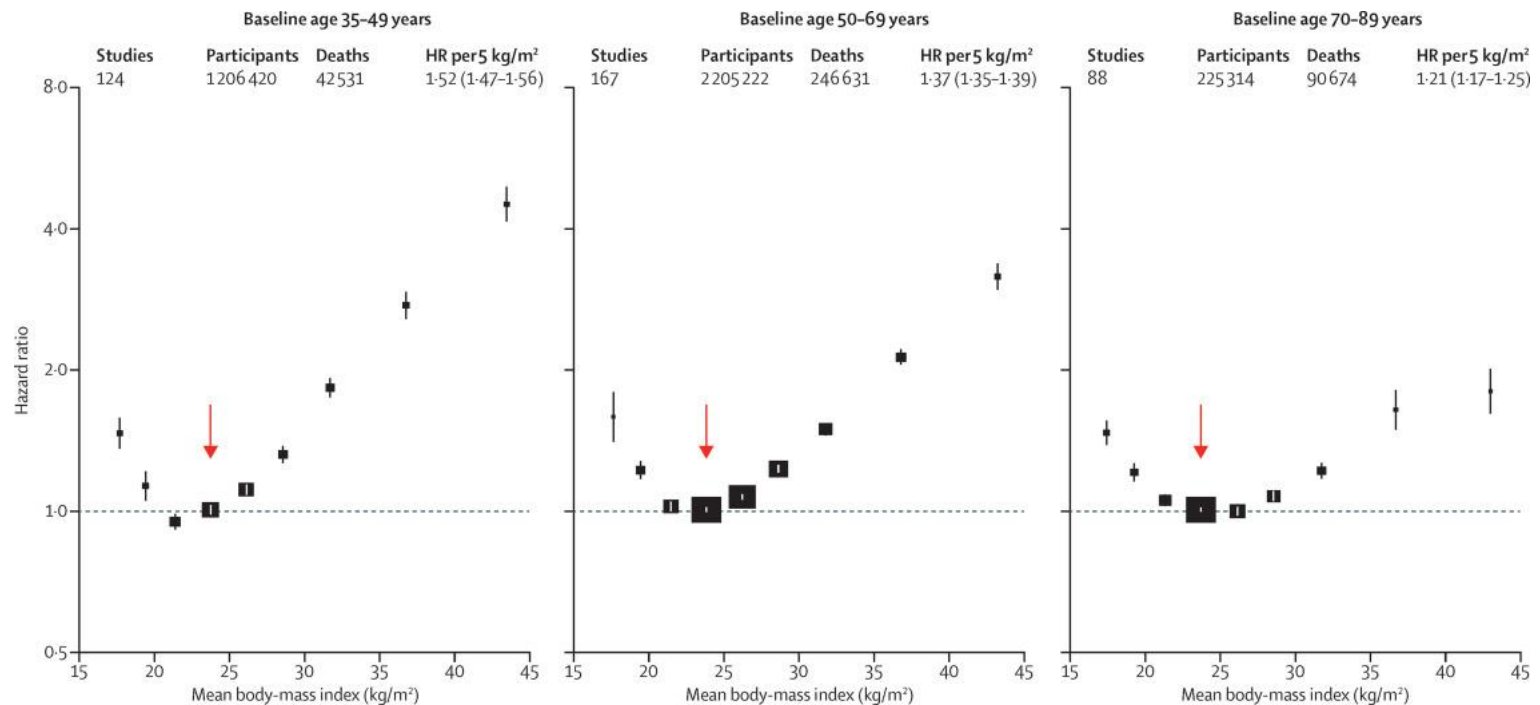


Figure 2. Association of body-mass index with all-cause mortality, by baseline age group

Lancet 2016; 388: 776–86; [http://dx.doi.org/10.1016/S0140-6736\(16\)30175-1](http://dx.doi.org/10.1016/S0140-6736(16)30175-1)

Total, Free, and Added Sugar Consumption and Adherence to Guidelines in NL (2007-2010)

- 3817 Boys/men and girls/women (7-69 years) from the Dutch national food consumption survey were studied
- A food composition table was compiled with contents of added and free sugars
- Total sugar intake was 22% of total energy (%TE), free sugars intake 14 %TE, and added sugar intake 12 %TE.
- Intake in children was higher than in adults
- E.g., children had free sugars intake of 18-20 %TE, depending on gender and age group
- Children consumed 71-74% of total sugars in the form of free sugars
- Main food sources of sugars: sweets and candy, non-alcoholic beverages, dairy, cake and cookies
- 5% of boys and girls (7-18 years) had free sugars intake <10% TE
- 0% of boys and girls (7-18 years) had free sugars intake <5% TE

Nutrients 2016, 8, 70; <http://dx.doi.org/10.3390/nu8020070>

Public health economic evaluation of different European Union–level policy options aimed at reducing population dietary *trans* fat intake

- To assess the added value of EU-level action by estimating the cost-effectiveness of 3 possible EU-level policy measures to reduce population dietary TFA intake.
- This was calculated against a reference situation of not implementing any EU-level policy (i.e., by assuming only national or self-regulatory measures).
- Either a legal limit or voluntary agreements may provide added value by providing health benefits and savings to the public.
- The legal limit option is projected to provide the greatest health benefits.
- Mandatory TFA labelling may also provide some additional health benefits; however, this would likely not be a cost-effective strategy.

Am J Clin Nutr 2016;104:1218–26; <http://dx.doi.org/10.3945/ajcn.116.136911>

Benefits of different physical activity levels on the detrimental association of sedentarity with mortality

- Harmonised meta-analysis of data from more than 1 million men and women
- High levels of moderate intensity physical activity (ie, about 60–75 min per day) seem to eliminate the increased risk of death associated with high sitting time.
- Such high activity level attenuates, but does not eliminate the increased risk associated with high TV-viewing time.
- Examining the joint effects of physical activity and sedentarity is important, because most people engage in both behaviours

Lancet 2016; 388: 1302–10; [http://dx.doi.org/10.1016/S0140-6736\(16\)30370-1](http://dx.doi.org/10.1016/S0140-6736(16)30370-1)

The economic burden of physical inactivity: a global analysis of major non-communicable diseases

- Physical inactivity cost health-care systems international \$ (INT\$) 53·8 billion worldwide in 2013,
- \$31·2 billion of which was paid by the public sector, \$12·9 billion by the private sector, and \$9·7 billion by households.
- In addition, physical inactivity related deaths contribute to \$13·7 billion in productivity losses.
- This study helps to make the economic case for a global response to promote physical activity.

Lancet 2016; 388: 1311–24; [http://dx.doi.org/10.1016/S0140-6736\(16\)30383-X](http://dx.doi.org/10.1016/S0140-6736(16)30383-X)

School-Based Interventions to Improve Cardiorespiratory Fitness in Adolescents

- Systematic review and meta-analysis of school-based intervention studies aimed at increasing cardiorespiratory fitness (CRF) in adolescents (10–19 yrs)
- *"Interventions in the school environment seem to have a positive effect on CRF among adolescents, but there is high heterogeneity between studies."*
- Better effects on CRF through: exercise sessions in addition to physical education classes; primary focus on this outcome; combination of aerobic and resistance exercises; classes lasting ≥ 60 min; frequency of three times weekly; and intensity control
- *Review Quality Rating (Health evidenceTM): 8 out of 10 (strong)*

Sports Med (2016) 46: 1273; <http://dx.doi.org/10.1007/s40279-016-0480-6>

Changes in physical activity and sedentary time in the Finnish Schools on the Move program

- Quasi-experimental study design
- Children 7-15 years old (grades 1-9)
- Intervention increased school day moderate-to-vigorous-intensity physical activity (MVPA) and decreased sedentary time (ST) between 2010 and 2012 more in the intervention than in a comparator group
- However, small effect sizes and no differences in leisure-time or whole-day MVPA and ST during 1.5 years follow-up
- *"More effective and longer promotion actions are needed for positive changes in PA and ST, especially in lower secondary schools and for all daily segments."*

Scand J Med Sci Sports 2016 [E-pub ahead of print]; <http://dx.doi.org/10.1111/sms.12790>

Nutrition in JRC F.1: Health in Society



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