# FOOD & NUTRITION

#### FROM NUMBERS TO POLICIES





### WELCOME!

Milano 14 October 2015 Food & Nutrition Section, EUPHA

Please, put yourself comfortable. Feel free to bring in your coffee, and stop me anytime!



## HELLO!

#### Alberto Donzelli

ASL Milano Fondazione Allineare Sanità e Salute

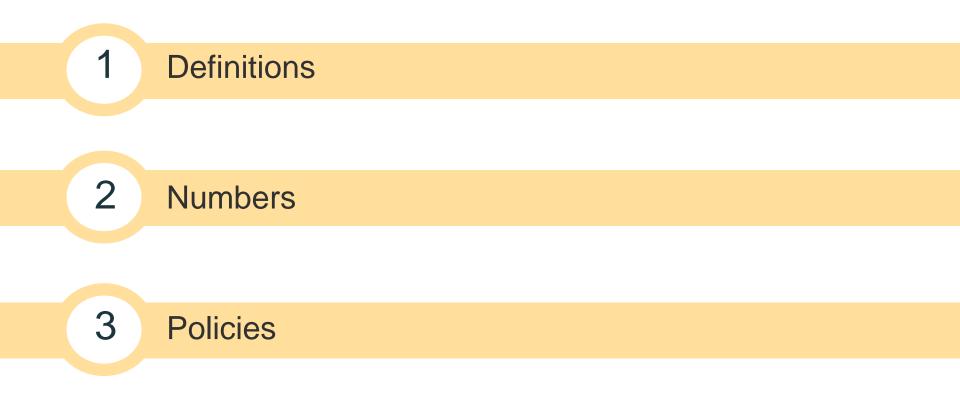
#### People call me



energizer bunny

visionary

#### OUR AGENDA FOR TODAY





# The EU aims to ensure the provision of safe, nutritious, sufficient and sustainable food

THE EU in occasion of public consultation for Expo Milan 2015



# SUFficient

# SUstainable

## NUtricious

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1.00

#### Nutrition security:

- WHO considers nutrition security a basic human right
- Nutrition security is rarely on the agenda of decision makers
- What is nutrition security?

The obese are living in a food-insecure environment

Food insecurity exists in developing countries, where the population is simultaneously suffering from undernutrition and dying of cardiovascular diseases at the highest rate worldwide

Joao Breda - WHO programme manager nutrition, physical activity and obesity





#### Meat:

- Meat consumption might be linked to mortality
- But it helps in weight control!

True or false?



#### Adventist Health Study 2

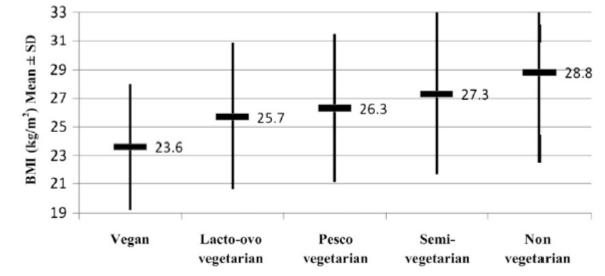


FIGURE 1. BMI according to vegetarian status for participants enrolled in the Adventist Health Study-2. Data from reference 19.

#### Vergnaud AC et al.



#### Abstract

BACKGROUND: Meat intake may be related to weight gain because of its high energy and fat content. Some observational studies have shown that meat consumption is positively associated with weight gain, but intervention studies have shown mixed results.

**OBJECTIVE:** Our objective was to assess the association between consumption of total meat, red meat, poultry, and processed meat and weight gain after 5 y of follow-up, on average, in the large European population who participated in the European Prospective Investigation into Cancer and Nutrition-Physical Activity, Nutrition, Alcohol, Cessation of Smoking, Eating Out of Home and Obesity (EPIC-PANACEA) project.

**DESIGN:** A total of 103,455 men and 270,348 women aged 25-70 y were recruited between 1992 and 2000 in 10 European countries. Diet was assessed at baseline with the use of country-specific validated questionnaires. A dietary calibration study was conducted in a representative subsample of the cohort. Weight and height were measured at baseline and self-reported at follow-up in most centers. Associations between energy from meat (kcal/d) and annual weight change (g/y) were assessed with the use of linear mixed models, controlled for age, sex, total energy intake, physical activity, dietary patterns, and other potential confounders.

**RESULTS:** Total meat consumption was positively associated with weight gain in men and women, in normal-weight and overweight subjects, and in smokers and nonsmokers. With adjustment for estimated energy intake, an increase in meat intake of 250 g/d (eg, one steak at approximately 450 kcal) would lead to a 2-kg higher weight gain after 5 y (95% CI: 1.5, 2.7 kg). Positive associations were observed for red meat, poultry, and processed meat.

CONCLUSION: Our results suggest that a decrease in meat consumption may improve weight management.



Adventist Health Study 2

#### Vegetarian dietary patterns and mortality in Adventist Health Study 2.

Orlich MJ<sup>1</sup>, Singh PN, Sabaté J, Jaceldo-Siegl K, Fan J, Knutsen S, Beeson WL, Fraser GE.

**IMPORTANCE:** Some evidence suggests vegetarian dietary patterns may be associated with reduced mortality, but the relationship is not well established.

OBJECTIVE: To evaluate the association between vegetarian dietary patterns and mortality.

DESIGN: Prospective cohort study; mortality analysis by Cox proportional hazards regression, controlling for important demographic and lifestyle confounders.

SETTING: Adventist Health Study 2 (AHS-2), a large North American cohort.

CONCLUSIONS AND RELEVANCE: Vegetarian diets are associated with lower all-cause mortality and with some reductions in cause-specific mortality. Results appeared to be more robust in males. These favorable associations should be considered carefully by those offering dietary guidance.



Adventist Health Study 2

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#### Importance:

- Recent
- Absence of "sick-vegetarian effect"!

#### Rohrman S et al.



**BACKGROUND:** Recently, some US cohorts have shown a moderate association between red and processed meat consumption and mortality supporting the results of previous studies among vegetarians. The aim of this study was to examine the association of red meat, processed meat, and poultry consumption with the risk of early death in the European Prospective Investigation into Cancer and Nutrition (EPIC).

**METHODS:** Included in the analysis were 448,568 men and women without prevalent cancer, stroke, or myocardial infarction, and with complete information on diet, smoking, physical activity and body mass index, who were between 35 and 69 years old at baseline. Cox proportional hazards regression was used to examine the association of meat consumption with all-cause and cause-specific mortality.

**RESULTS:** As of June 2009, 26,344 deaths were observed. After multivariate adjustment, a high consumption of red meat was related to higher allcause mortality (hazard ratio (HR) = 1.14, 95% confidence interval (CI) 1.01 to 1.28, 160+ versus 10 to 19.9 g/day), and the association was stronger for processed meat (HR = 1.44, 95% CI 1.24 to 1.66, 160+ versus 10 to 19.9 g/day). After correction for measurement error, higher all-cause mortality remained significant only for processed meat (HR = 1.18, 95% CI 1.11 to 1.25, per 50 g/d). We estimated that 3.3% (95% CI 1.5% to 5.0%) of deaths could be prevented if all participants had a processed meat consumption of less than 20 g/day. Significant associations with processed meat intake were observed for cardiovascular diseases, cancer, and 'other causes of death'. The consumption of poultry was not related to all-cause mortality.

**CONCLUSIONS:** The results of our analysis support a moderate positive association between processed meat consumption and mortality, in particular due to cardiovascular diseases, but also to cancer.

#### Rohrman S et al.

International Agency for Research on Cancer



	CVD	Cancers	Resp. Diseases	Digestive Syst. D.	Other
100 g/d red meat	1.09	1.00	1.06	1.03	1.02
50 g/d transf. m.	1.30	1.11	1.22	1.09	1.22
50 g/d poultry	0.84	0.98	1.32	0.72	1.05

#### Meat:

- Meat consumption is linked to mortality
- Meat consumption doesn't help with weight control
- Meat consumption is environmentally unsustainable
- Meat consumption is socially unsustainable

The nuts PH. OLAHUNA.COM

#### Association of Nut Consumption with Total and Cause-Specific Mortality

Ying Bao, M.D., Sc.D., Jiali Han, Ph.D., Frank B. Hu, M.D., Ph.D., Edward L. Giovannucci, M.D., Sc.D., Meir J. Stampfer, M.D., Dr.P.H., Walter C. Willett, M.D., Dr.P.H., and Charles S. Fuchs, M.D., M.P.H. N Engl J Med 2013; 369:2001-2011 November 21, 2013 DOI: 10.1056/NEJMoa1307352

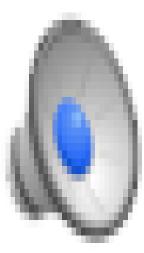
#### BACKGROUND

Increased nut consumption has been associated with a reduced risk of major chronic diseases, including cardiovascular disease and type 2 diabetes mellitus. However, the association between nut consumption and mortality remains unclear.



#### CONCLUSIONS

In two large, independent cohorts of nurses and other health professionals, the frequency of nut consumption was inversely associated with total and cause-specific mortality, independently of other predictors of death. (Funded by the National Institutes of Health and the International Tree Nut Council Nutrition Research and Education Foundation.)



<u>Clin Nutr.</u> 2015 Apr 7. pii: S0261-5614(15)00091-6. doi: 10.1016/j.clnu.2015.03.016. [Epub ahead of print] High dietary protein intake is associated with an increased body weight and total death risk.

<u>Hernández-Alonso P<sup>1</sup>, Salas-Salvadó J<sup>2</sup>, Ruiz-Canela M<sup>3</sup>, Corella D<sup>4</sup>, Estruch R<sup>5</sup>, Fitó M<sup>6</sup>, Arós F<sup>7</sup>, Gómez-Gracia E<sup>8</sup>, Fiol M<sup>9</sup>, Lapetra J<sup>10</sup>, Basora J<sup>11</sup>, Serra-Majem L<sup>12</sup>, Muñoz MÁ<sup>13</sup>, Buil-Cosiales P<sup>3</sup>, Saiz C<sup>4</sup>, Bulló M<sup>14</sup>.</u>



BACKGROUND: Observational cohort studies and a secondary prevention trial have shown an inverse association between adherence to the Mediterranean diet and cardiovascular risk. We conducted a randomized trial of this diet pattern for the primary prevention of cardiovascular events.

METHODS: In a multicenter trial in Spain, we randomly assigned participants who were at high cardiovascular risk, but with no cardiovascular disease at enrollment, to one of three diets: a Mediterranean diet supplemented with extra-virgin olive oil, a Mediterranean diet supplemented with mixed nuts, or a control diet (advice to reduce dietary fat). Participants received quarterly individual and group educational sessions and, depending on group assignment, free provision of extra-virgin olive oil, mixed nuts, or small nonfood gifts. The primary end point was the rate of major cardiovascular events (myocardial infarction, stroke, or death from cardiovascular causes). On the basis of the results of an interim analysis, the trial was stopped after a median follow-up of 4.8 years.

RESULTS: A total of 7447 persons were enrolled (age range, 55 to 80 years); 57% were women. The two Mediterranean-diet groups had good adherence to the intervention, according to self-reported intake and biomarker analyses. A primary end-point event occurred in 288 participants. The multivariable-adjusted hazard ratios were 0.70 (95% confidence interval [CI], 0.54 to 0.92) and 0.72 (95% CI, 0.54 to 0.96) for the group assigned to a Mediterranean diet with extra-virgin olive oil (96 events) and the group assigned to a Mediterranean diet with nuts (83 events), respectively, versus the control group (109 events). No diet-related adverse effects were reported.

CONCLUSIONS: Among persons at high cardiovascular risk, a Mediterranean diet supplemented with extra-virgin olive oil or nuts reduced the incidence of major cardiovascular events. (Funded by the Spanish government's Instituto de Salud Carlos III and others; Controlled-Trials.com number, ISRCTN35739639.).

#### Implications of numbers:

- At individual level
  - 5 tips for sustainable eating
- At population level
  - policy (soft law with health literacy, labelling, subsidies,... or hard law)

#### 5 tips for sustainable eating

- 1. Prioritize plants & whole grain foods HARVARD T.H. CHAN
- Minimize meat
- Select safe seafood
- 4. Look local
- 5. Eat mindfully



# Health Literacy Health

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iteracy



PH. MARTA POSEMUCKEL

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# Subsidies

# THANK YOU

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