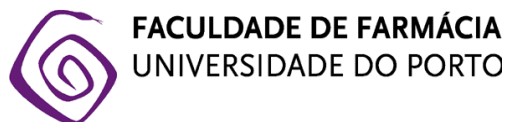


Dairy products intake in older adults across Europe based on SHARE database

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9th International Congress on **Nutrition & Health**
February 20-21, 2017 Berlin, Germany

Dairy consumption and health

Is Dairy Bad For You, or Good? The Milky, Cheesy Truth

Scientific studies show that milk increases fracture risk

Women who drink three or more glasses of milk per day have a **60% increased risk** for developing a hip fracture.

Drinking three or more glasses of milk also **increases mortality risk by 93%.**

For each glass of milk, risk of dying from all causes increases by 15%.



PCRM.org/Dairy
PhysiciansCommittee
for Responsible Medicine

BMJ 2014;349:g8015

Is it "Natural" to Eat Dairy?

Dairy food consumption is associated with lower risk for cardiovascular disease

Dairy and Greenhouse Gas Emissions

While calcium and dairy can lower the risk of osteoporosis and colon cancer, high intake can increase the risk of prostate cancer and possibly ovarian cancer.

Dairy Consumption Linked to Better Brain Health

About 3/4 of The World is Intolerant to Lactose

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Dairy consumption and health

Possible implications of Dairies on Health

- *Source of macro and micronutrients*
- *Bone health*
- *Weight gain and obesity development*
- *Metabolic syndrome and type 2 diabetes*
- *Cardiovascular disease*
- *Cancer*
- *Milk hypersensitivity*



- Benefits / Risks
- Type of dairy
- Type of population
- Life stage
- Pattern of consumption
- Role on the whole diet

- ✓ Dairy is not an essential constituent of a healthy diet
- ✓ Still recommended among the European countries:
 - Milk → 125g – 1000ml, in general 500-600ml
 - Yogurt → 125g - 800g, in general 400-600g
 - Cheese → 50 – 200g, in general 40-100g
- ✓ Higher recommendations for the elderly
- ✓ Preference for low fat dairies

Objectives

The aim of this study is to evaluate the dairy intake pattern among older adults across Europe.



- ✓ 20% of the world population aged 65+ by 2050 (30% in Europe)
- ✓ Demand of more and better health care
- ✓ Specific food and nutrition requirements
- ✓ Promotion of active and healthy ageing
- ✓ Economic benefits

Materials & Methods

- Cross-sectional analysis using data from **SHARE - Survey of Health, Aging and Retirement in Europe** - database, WAVE 4 (2012)

Börsch-Supan, A. (2016). *Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 4*. Release version: 5.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w4.500

- Community-based populations
- 16 European Countries: Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, Netherlands, Poland, Portugal, Slovenia, Spain, Sweden and Switzerland
- Aged ≥ 50 years old, non-institutionalized
- Population: 56,223 individuals, 55.97% (n=31,467) women

Materials & Methods

The screenshot shows the SHARE project website homepage. At the top, there is a navigation bar with a "Select Country" dropdown menu. Below this, the main header features the SHARE logo (a circle of stars) and the text "Survey of Health, Ageing and Retirement in Europe 50+ in Europe" on the left, a map of Europe in the center, and the full name "Survey of Health, Ageing and Retirement in Europe" on the right. A left sidebar contains a menu with items: Home, Overview, Wave 1, Wave 2, Wave 3 (SHARELIFE), Wave 4, Wave 5, Data Access & Documentation, Methodological Research, Press Information & News, and Contact & Organisation. The main content area starts with "You are here: Home" and a heading "SHARE - Survey of Health, Ageing and Retirement in Europe". Below the heading is a paragraph describing SHARE as a multidisciplinary and cross-national panel database of micro data on health, socio-economic status and social and family networks of approximately 123,000 individuals aged 50 or older (more than 293,000 interviews). SHARE covers 27 European countries and Israel. A photo of a group of people is shown with the caption "SHARE Wave 7 Post-Pretest Meeting Vilnius, Lithuania 16-18 March, 2016". On the right, there is a search bar and a "News" section. The news section includes a "Memorandum of Understanding between CERIC and SHARE strengthens research" dated 25th October 2016, and a "SHARE Newsletter No. 19" with the text "We are very happy to integrate eight".

<http://www.share-project.org/>

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Materials & Methods

“In a regular base week, how often do you have a serving of dairy products such as a glass of milk, cheese in a sandwich, a cup of yogurt or a can of high protein supplement?”.

1. Every Day

2. 3-6 Times a Week

3. Twice a week

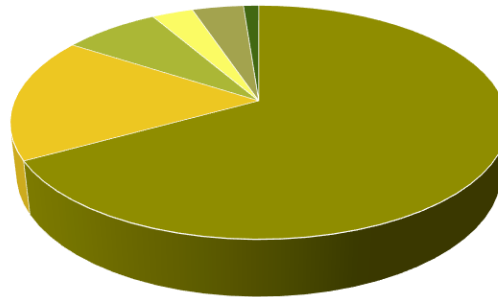
4. Once a week

5. Less than once a week

- Overall and by gender crude prevalence rates
- By gender direct age-standardized (5-years age groups) prevalence rates - revised European Standard Population of 2013
- Informatic tools: IBM SPSS Statistics 24 and ArcGIS 10.2.1

Results

Weekly servings of Dairy - overall prevalence

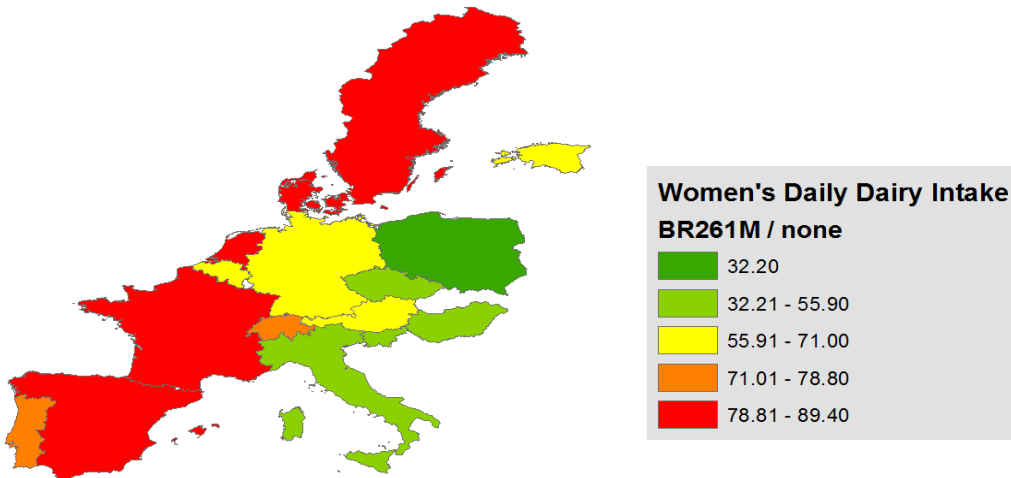
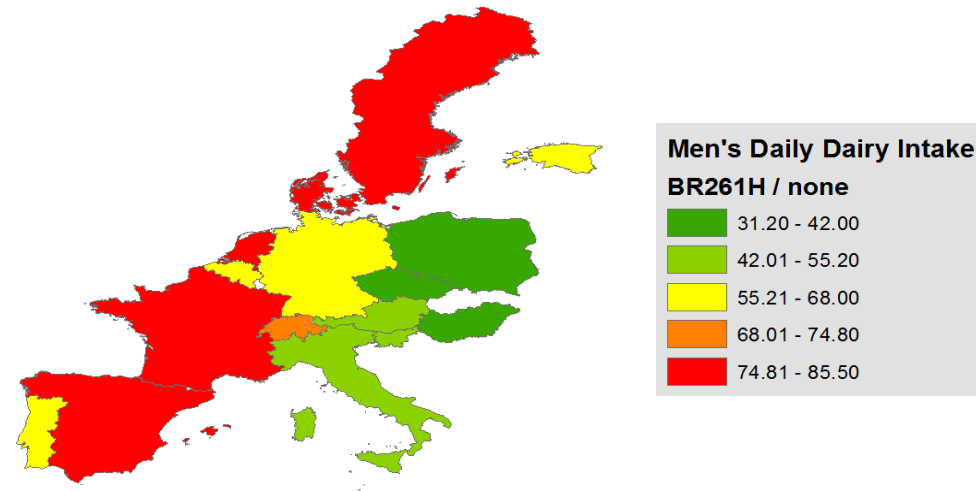


- Every day
- 3-6 times a week
- Twice a week
- Once a week
- Less than once a week
- Missings

How often serving of dairy products

	n	%	CI95 Lower	CI95 Upper
Every day	37643	66.95	66.28	67.63
Less than once a week	2243	3.99	3.83	4.16

Results



Spatial distribution of “daily intake of dairies” rates by country in men (above) and women (bottom).

Overall Prevalence

Country	%	CI95	
		Lower	Upper
Poland	31.75	29.14	34.48
Czech Republic	46.04	44.23	47.88
Hungary	48.06	45.61	50.58
Italy	50.74	48.41	53.12
Slovenia	51.44	48.77	54.18
Austria	61.76	59.61	63.94
Germany	65.94	61.95	70.04
Belgium	66.47	64.26	68.72
Estonia	68.51	66.54	70.50
Portugal	73.25	69.49	77.11
Switzerland	76.98	74.16	79.86
Sweden	83.74	79.71	87.86
France	84.37	81.98	86.79
Denmark	86.95	83.11	90.88
Netherlands	87.05	83.58	90.60
Spain	87.22	84.14	90.36

“daily intake of dairies”

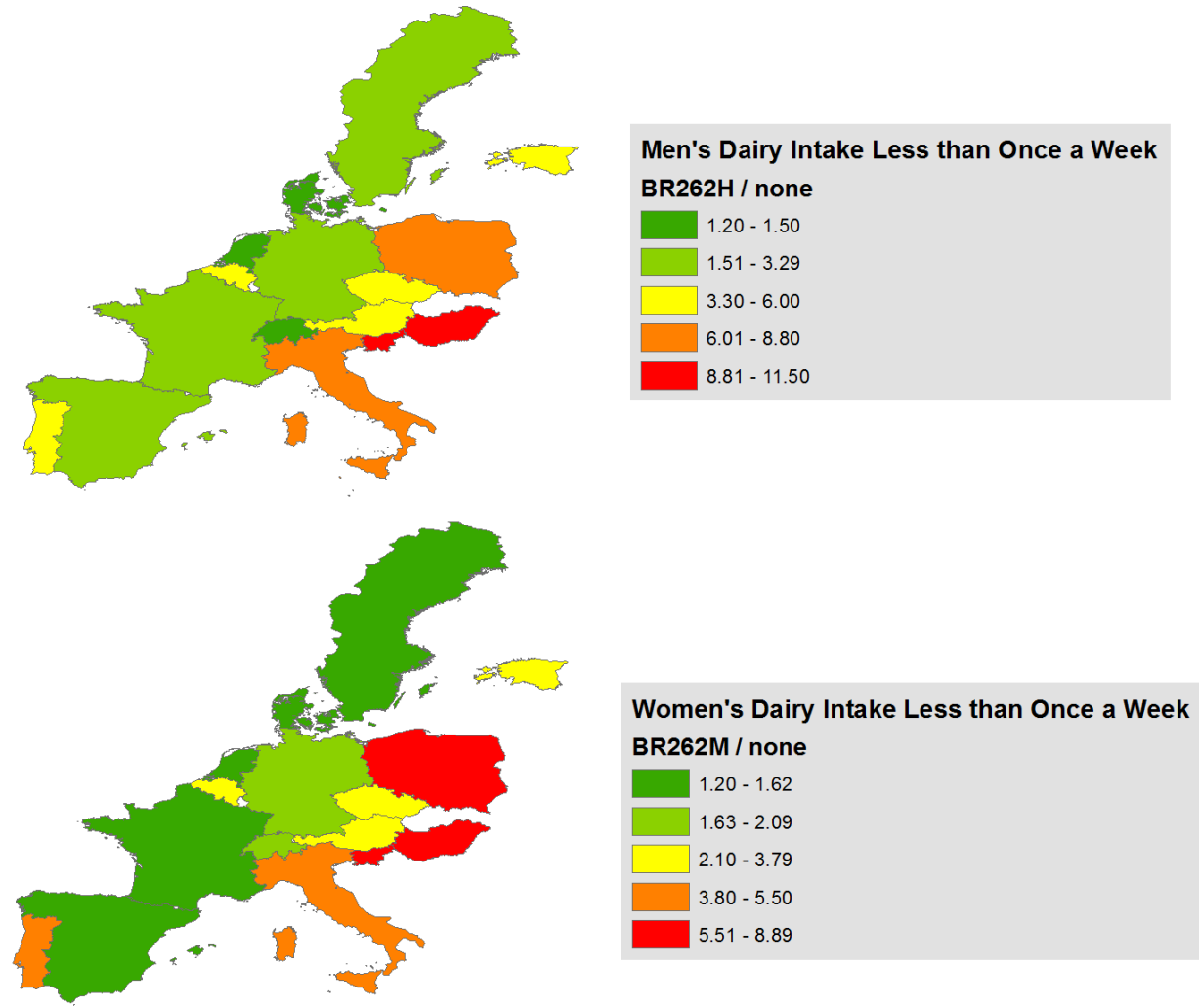
Results

Direct age-standardized - Men				Direct age-standardized - Women			
Country	%	CI95		Country	%	CI95	
		Lower	Upper			Lower	Upper
Poland	26.15	22.71	29.58	Poland	31.33	27.05	35.61
Czech Republic	39.06	36.32	41.79	Czech Republic	51.02	48.42	53.62
Hungary	42.64	38.65	46.64	Hungary	52.80	49.23	56.37
Slovenia	46.45	42.33	50.57	Italy	53.16	49.81	56.51
Italy	46.84	43.22	50.47	Slovenia	55.92	52.08	59.75
Austria	54.23	51.02	57.43	Austria	66.17	63.17	69.17
Germany	59.54	48.57	70.50	Germany	68.59	61.46	75.72
Belgium	60.89	57.66	64.13	Estonia	69.72	67.08	72.36
Estonia	64.48	61.32	67.64	Belgium	70.19	67.07	73.31
Portugal	67.77	61.79	73.75	Portugal	76.85	71.55	82.16
Switzerland	73.56	69.30	77.82	Switzerland	78.80	74.84	82.75
Sweden	79.42	63.36	95.48	Sweden	83.27	75.50	91.04
France	82.44	78.77	86.11	France	85.07	81.81	88.32
Netherlands	82.88	77.44	88.32	Denmark	88.47	83.03	93.91
Spain	83.61	78.95	88.27	Netherlands	89.05	84.15	93.94
Denmark	84.89	79.11	90.66	Spain	89.51	85.16	93.86

Men Overall Prevalence: 63.35%, CI95%: 62.37-64.35%

Women Overall Prevalence: 69.80%, CI95%: 68.86-70.71%

Results



Overall Prevalence

Country	%	CI95	
		Lower	Upper
Denmark	1.31	0.88	1.88
Netherlands	1.33	0.93	1.84
Switzerland	1.57	1.19	2.03
Spain	1.90	1.47	2.42
France	1.95	1.60	2.33
Sweden	2.01	1.43	2.75
Germany	2.65	1.90	3.59
Czech Republic	3.37	2.90	3.88
Estonia	3.56	3.12	4.03
Belgium	4.22	3.68	4.80
Austria	4.32	3.76	4.91
Portugal	5.05	4.10	6.16
Italy	6.77	5.94	7.66
Poland	8.54	7.21	9.98
Hungria	9.10	8.05	10.21
Slovenia	9.55	8.42	10.75

Spatial distribution of “less than once a week intake of dairies” rates by country in men (above) and women (bottom).

“less than once a week intake of dairies”

Results

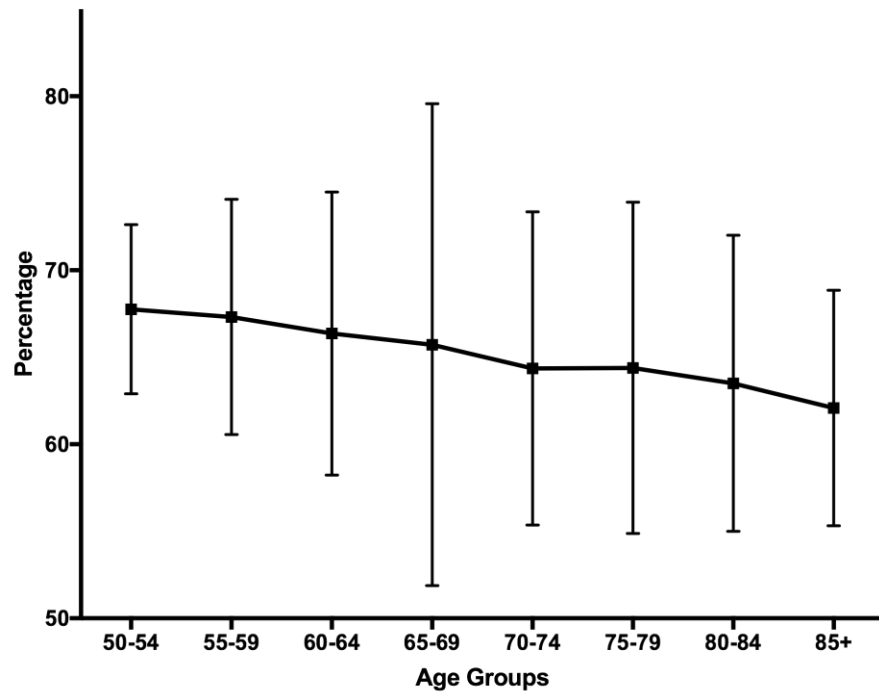
Direct age-standardized - Men				Direct age-standardized - Women			
Country	%	CI95		Country	%	CI95	
		Lower	Upper			Lower	Upper
Switzerland	1.43	0.74	2.11	Denmark	1.15	0.54	1.76
Denmark	1.45	0.69	2.21	Netherlands	1.15	0.61	1.69
Netherlands	1.49	0.74	2.24	Spain	1.26	0.73	1.78
Sweden	1.91	1.09	2.72	Sweden	1.47	0.74	2.20
France	2.47	1.83	3.10	France	1.54	1.10	1.98
Germany	2.58	1.52	3.64	Switzerland	1.84	1.25	2.44
Spain	2.79	1.92	3.67	Germany	2.39	0.80	3.99
Czech Republic	4.08	3.20	4.95	Czech Republic	2.61	2.04	3.19
Estonia	4.33	3.54	5.13	Estonia	3.04	2.47	3.61
Belgium	4.66	3.76	5.55	Austria	3.49	2.80	4.19
Austria	5.33	4.34	6.33	Belgium	3.84	3.11	4.57
Portugal	5.72	4.10	7.34	Portugal	4.38	3.11	5.66
Poland	6.87	5.19	8.56	Italy	5.80	4.66	6.93
Italy	8.51	6.93	10.10	Hungary	7.14	5.84	8.44
Slovenia	9.98	8.14	11.81	Poland	8.45	6.24	10.66
Hungary	11.02	9.16	12.89	Slovenia	8.76	7.26	10.25

Men Overall Prevalence: 4.73%, CI95%: 4.46-5.00%

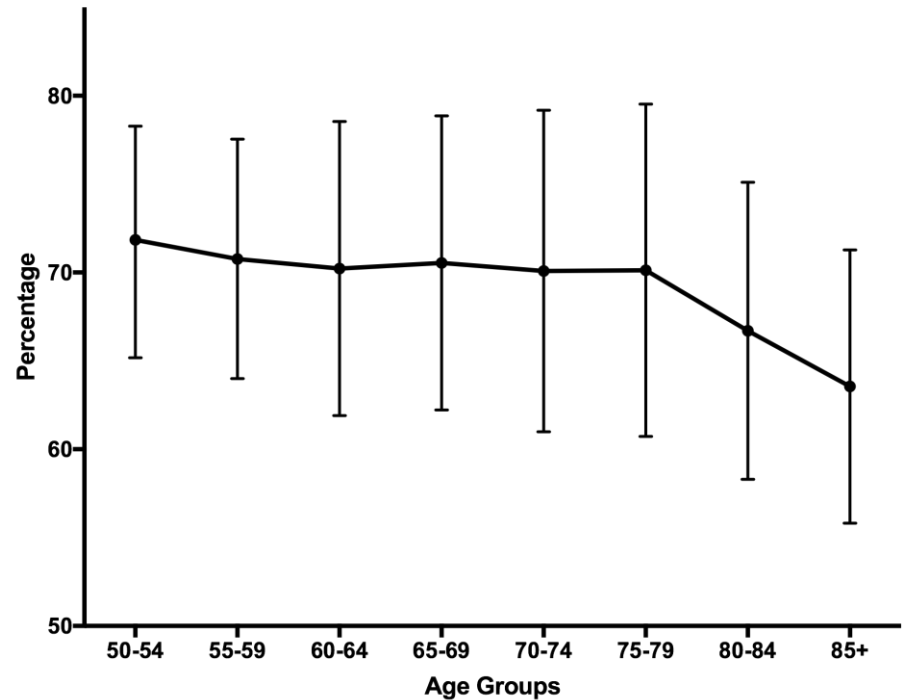
Women Overall Prevalence: 3.40%, CI95%: 3.21-3.61%

Results

Age distribution of daily intake of dairies in men



Age distribution of daily intake of dairies in women



Discussion

Overall, less than recommended levels of dairy intake

- Source of Calcium and vitamin D
- Nutrient dense food
- Cheap and accessible
- Intolerance and hypersensitivity
- Taste
- Source of fats in diet

Different intakes between countries

- Different ability to digest lactose
- Health literacy
- Importance of livestock and milk production on the country's economy
- Levels of diversity and innovation of dairy products commercially available

Women have a higher intake of dairies

- More awareness of dairies benefits for health
- Higher prevalence of osteoporosis – protective role of calcium

Diary intake decreases with age

- Higher rates of lactose intolerance and maldigestion
- Less care with diet and health
- Dairies may be seen as a dispensable source of calories and fat
- Changes in taste

Conclusion

What next? ...

- ✓ Access dairies role on the diet of elders and overall health and nutritional status
- ✓ Effect of the different type of dairies, including low-fat and full-fat
- ✓ How dairy consupction relates to meat consupction and overall eating patterns

