UNIVERSITÀ
DI SIENA
1240

Alimentazione e Vitamina D

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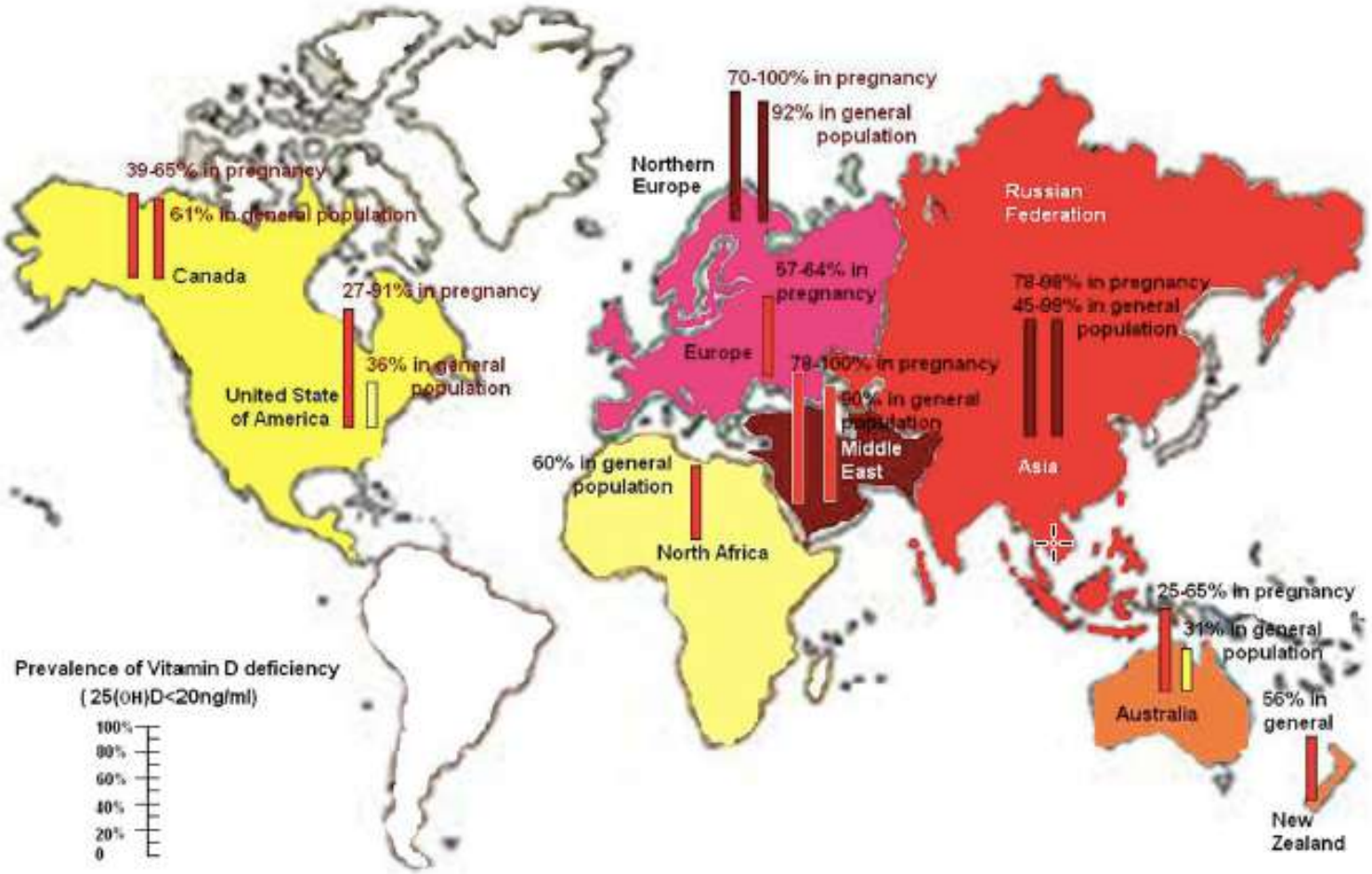
Università di Siena

Presidente GISMO

Agenda

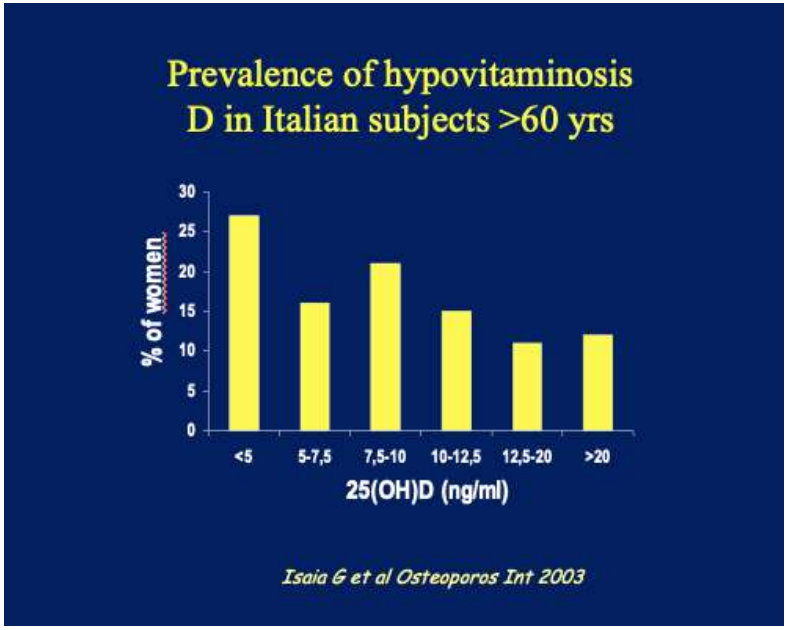
- **Hypovitaminosis D: a global health issue**
- **Validation of a Frequency Food Questionnaire (FFQ)**
- **Dietary Vitamin D Intake in Italian Subjects**
- **SAD: preliminary results**
  (Studio sull'introito Alimentare di Vitamina D)

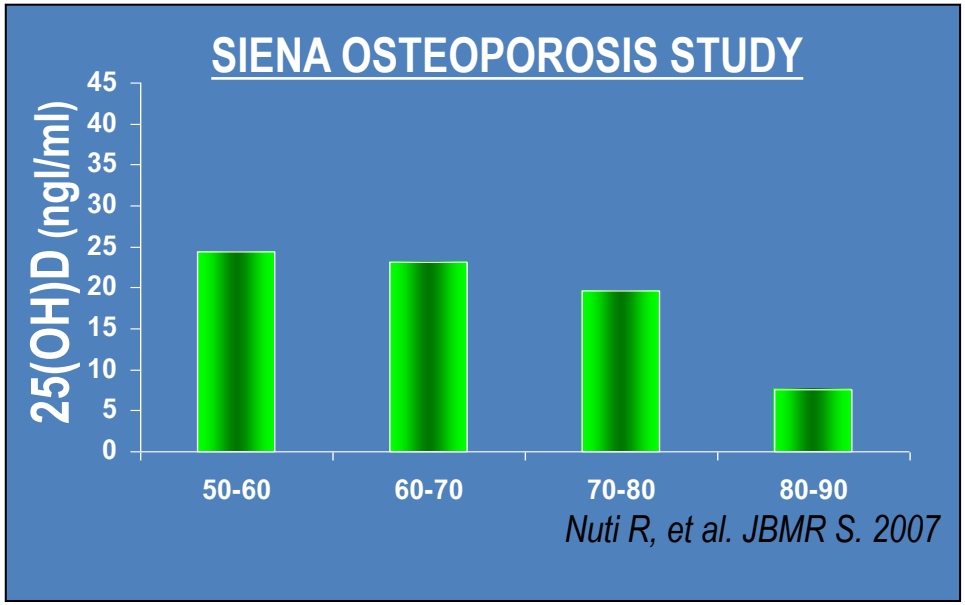
Reported incidence of vitamin D deficiency defined as a 25-hydroxyvitamin D level below 20 ng/ml around the globe in pregnant women and general population.

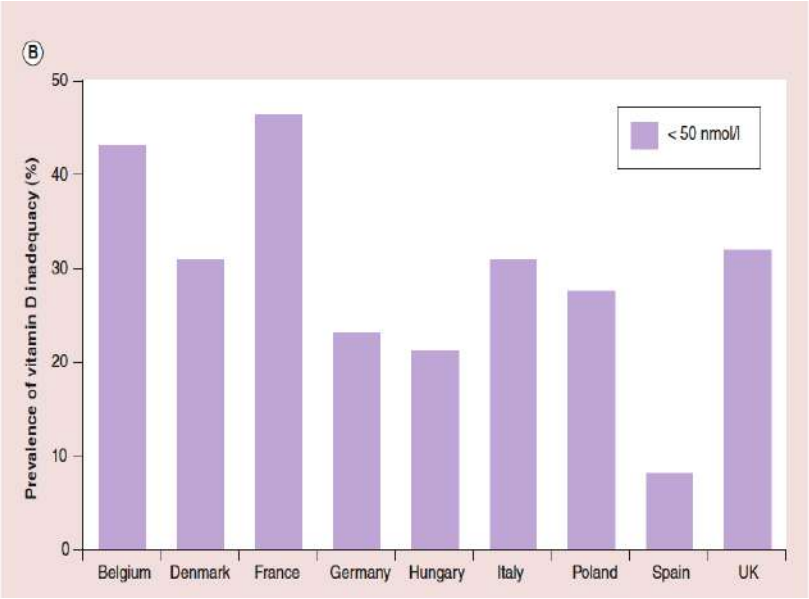


Holick M. 2017

Prevalence hypovitaminosis D in Italy





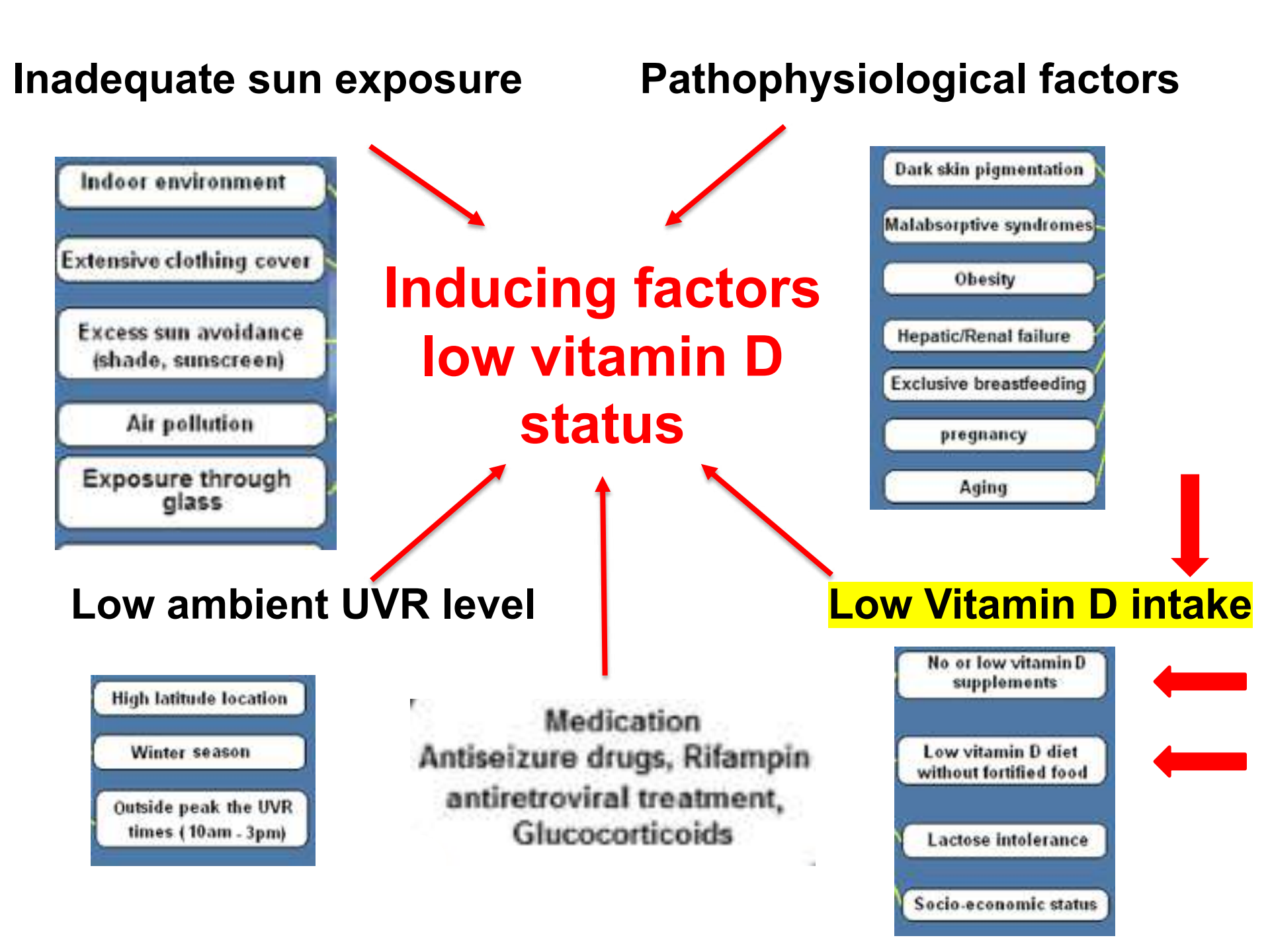


René Rizzoli et al 2014,

about 20%

about 80%

Dietary Vitamin D_2 and D_3 assumption


Inadequate sun exposure
Pathophysiological factors
Indoor environment
Extensive clothing cover
Excess sun avoidance (shade, sunscreen)
Air pollution
Exposure through glass
Dark skin pigmentation
Malabsorptive syndromes
Obesity
Hepatic/Renal failure
Exclusive breastfeeding
pregnancy
Aging
Inducing factors low vitamin D status
Low ambient UVR level
Low Vitamin D intake
High latitude location
Winter season
Outside peak the UVR times (10am - 3pm)
Medication
Antiseizure drugs, Rifampin antiretroviral treatment, Glucocorticoids
No or low vitamin D supplements
Low vitamin D diet without fortified food
Lactose intolerance
Socio-economic status

Photochemical & Photobiological Sciences

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www.rsc.org/pps

PERSPECTIVE

Vitamin D content of food and its contribution to vitamin D status: a brief overview and Australian focus†

Jerry Liu*

Table 1 Vitamin D content of various foods expressed as μg/100 g fresh weight

Food	Vitamin D_3	$25OHD_3$	Total vitamin D equivalents[a]	Country of origin and reference
Pork tenderloin (whole)	0.18	0.14	0.88	Canada[29]
Chicken	0.29	0.25	1.54	Finland[11]
Beef roast	<0.04	0.10	up to 0.44	Canada[29]
Lamb	0.10	0.20	1.10	Australia[30]
Salmon (canned)	7.6	0.14	8.30	Canada[29]
Margarine	7.25	0	7.25	Australia[17]
Milk (whole)	0.01	0.007	0.045	Denmark[31]
Butter	0.20	0.10	0.70	Denmark[31]
Egg yolk	6.70	1.20	12.70	Finland[32]
Mushroom (various species)	—	—	0.21–29.82[b]	Finland[33]

Mushrooms, eggs, and oily fish may potentially contain high concentrations of vitamin D. However, these foods may provide an unreliable source of vitamin D, or are not eaten in large enough quantities to have a significant impact vitamin D status.

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Progress in Biophysics and Molecular Biology 92 (2006) 33–38
Progress in Biophysics & Molecular Biology
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Review

Vitamin D in foods and as supplements

Christel Lamberg-Allardt*

Calcium Research Unit, Department of Applied Chemistry and Microbiology, University of Helsinki, P.O. Box 66, FIN 00014 Helsinki, Finland

Table 1
Vitamin D content of some foods (Mattila, 1995; National Public Health Institute, 2004)

Food	Vitamin D (μg/100 g)
Eel	25.6
Pike-perch	24.6
Herring	15.4
Salmon	12.4
Egg yolk	7.8
Tuna	7.2
Cod	7.0
Egg	2.8
Liver, beef	0.8
Butter	0.3

Dietary vit. D intake is low in many countries, especially as the dietary sources are limited. Current dietary intake recommendations are too low to preserve/reach optimal S-25-OHD concentrations, when UVB radiation is not available.

We suggest that the recommendations should be increased to at least 10 mg per day in all age groups when solar UVB is scarce.

Dietary habits, nutrient intake and biomarkers for folate, vitamin D, iodine and iron status among women of childbearing age in Sweden

Dietary intake was assessed using a web-based **four-day** consecutive food record among adults aged 18–80 years

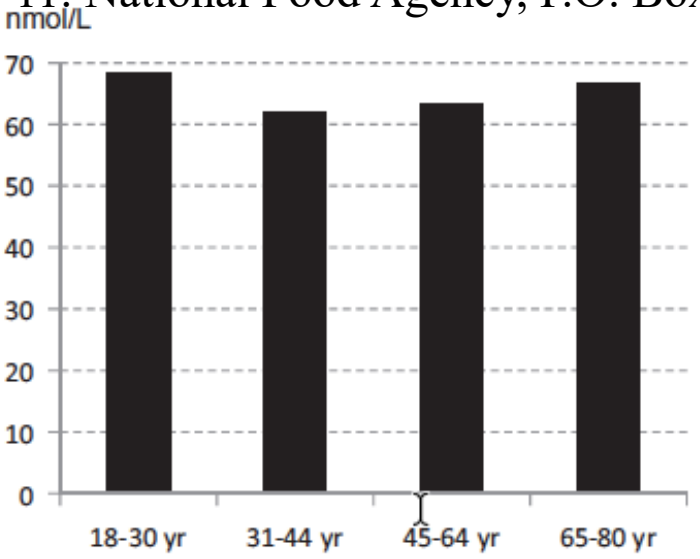
		Energy	Whole grains		Vitamin D		Folate		Iron		Heme-iron	
Age group	*n*	MJ/d	g/d	g/10 MJ	µg/d[a]	µg/ 10 MJ	µg/d[a]	µg/10 MJ	mg/d	mg/ 10 MJ	mg/d	mg/10 MJ
18–30 years	202	7.6	35	45	5.2	6.7	223	298	8.9	11.9	0.99	1.38
31–44 years	247	7.6	38	52	6.2	8.3	247	334	9.7	12.9	1.21	1.62
45–64 years	358	7.3	40	56	6.6	9.2	263	365	9.9	13.8	1.19	1.62
65–80 years	198	7.1	43	60	7.6	10.7	275	388	9.4	13.3	1.12	1.62
All	1005	7.4	39	54	6.4	8.8	253	349	9.5	13.1	1.14	1.57

[a]Excluding supplements.

Intake of energy, added sugar, whole grains, **vitamin D**, folate, iron, and heme-iron among women in Riksmaten 2010–11, National Food Agency, P.O. Box, 75126 Uppsala, Sweden

0,025 mcg = 1 UI

208 UI

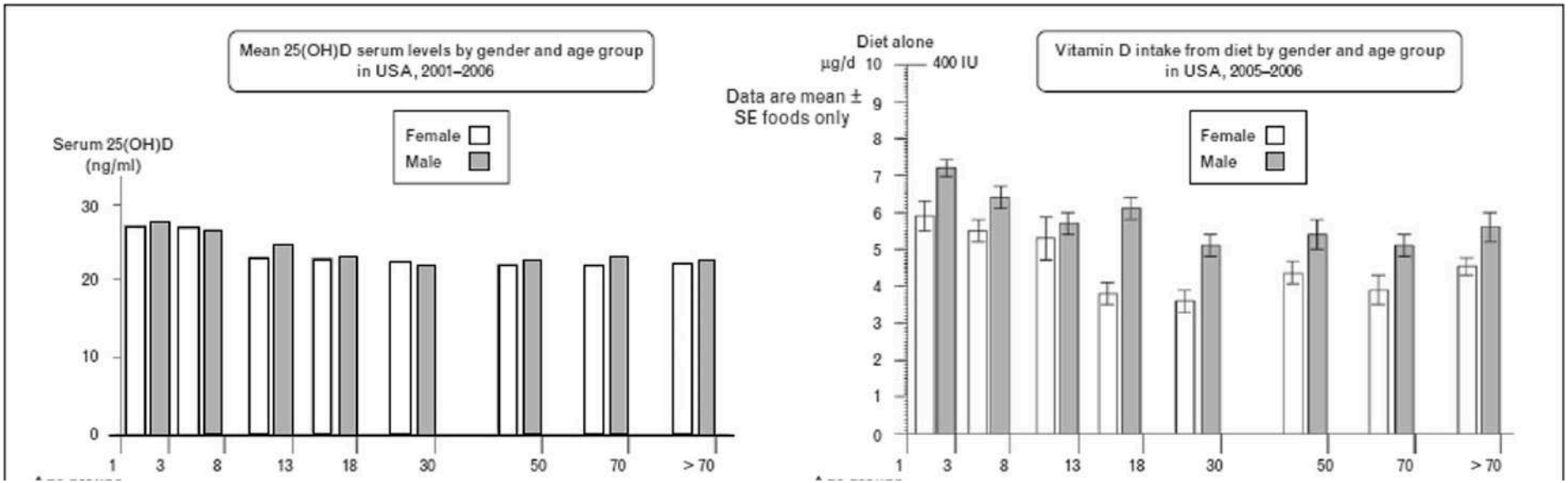


Insufficiency: 50-75 nmol/L

Means of plasma 25(OH)D (nmol/L) among women in the subsample.

Becker W. et al. 2016

25-OHD levels and vitamin D intakes in children and adults in USA



Holick M. 2017

Vitamin D intake in Italy

- **A review by Cashman et al. (2022) indicates that in the Mediterranean area the intake is always below 4 mcg/day and the the European combined median value is also quite low in both genders (3.3 mcg/day in males and 2.7 mcg/day in females, respectively).**

- **The data regarding vitamin D intake in Italian people are limited: the information about the vitamin D intake in Italy derived from «The third Italian National Food Consumption Survey, INRAN-SCAI 2005-06»**

Mean daily energy and nutrient intakes from food in adults (18-64.9 yrs) according to sex e Italian National Food Consumption - INRAN-SCAI 2005-06.

	Males (n. 1068)					Females (n. 1245)				
	Mean	SD[a]	Median	5th[b]	95th[b]	Mean	SD[a]	Median	5th[b]	95th[b]
Vitamin E (mg)	13.5	4.6	13.0	7.6	21.7	11.9	3.8	11.6	6.4	18.1
Vitamin D (µg)	2.6	2.3	1.9	0.7	7.7	2.3	2.2	1.5	0.4	7.3
Vitamin B_{12} (µg)	6.6	5.4	5.0	2.4	15.1	5.5	4.6	4.3	1.9	13.1

Mean daily energy and nutrient intakes from food elderly (65 yrs and above) according to sex e Italian National Food Consumption Survey - INRAN-SCAI 2005-06.

	Males (n. 202)					Females (n. 316)				
	Mean	SD[a]	Median	5th[b]	95th[b]	Mean	SD[a]	Median	5th[b]	95th[b]
Vitamin E (mg)	13.3	4.5	12.8	6.6	19.5	10.9	3.7	10.5	5.4	17.6
Vitamin D (µg)	2.5	2.4	1.9	0.5	7.5	1.8	1.7	1.4	0.3	6.2
Vitamin B_{12} (µg)	6.5	5.5	4.9	2.3	13.5	4.4	3.5	3.5	1.4	10.3

Cross-sectional food consumption survey was conducted using consecutive 3-day food records

0,025 mcg = 1 UI; 2.0 mcg = 80 UI

Sette S. et al. 2011

Vitamin D intake in Italy

- **Recently, indirect information regarding vitamin D intake in Italian adults has been achieved by means of multiple-choice questions concerning the factors affecting the production, intake, absorption, and metabolism of vitamin D: the prevalence of severe deficiency, deficiency, and insufficiency were determined in 22%, 35.3%, and 43.3% of the study population, respectively.**

nutrients

MDPI

Article

Development of a Short Questionnaire for the Screening for Vitamin D Deficiency in Italian Adults: The EVIDENCe-Q Project

Rachele De Giuseppe [1,†], Chiara Elena Tomasinelli [1,†], Hellas Cena [1,2,*], Valentina Braschi [1], Francesca Giampieri [3,4], Giorgia Preatoni [1], Domenico Centofanti [5], Maria Pilar Princis [1], Emanuele Bartoletti [5] and Ginevra Biino [6]

Progetto
"Studio sull'introito alimentare di Vitamina D"
Validazione di un questionario di nuova ideazione

- **38 females (mean age 62.6 yrs±8.3 SD) and 12 males (mean age 65.9 yrs±8.4 SD) in apparent good health were interviewed about the intake of foods containing vitamin D during the previous 7 days, with the use of a specifically developed FFQ questionnaire.**
- **The inclusions criteria were age from 50 to 80 years, absence of cancer or cardiovascular, pulmonary, gastrointestinal, neurological, and renal diseases, and no gastric or bariatric surgery.**
- **To determine the ability of the FFQ questionnaire to rapidly provide a correct estimate of the daily dietary vitamin D intake, we compared the FFQ results with the information derived from the use of an appropriate frequency food diary (FFD) that recorded the daily intake of food containing vitamin D along a period of 14 days.**

crea
Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria

AlimentiNUTrizione

Il gusto di scegliere consapevolmente

TABELLE DI COMPOSIZIONE DEGLI ALIMENTI

RICERCA DATI PER NUTRIENTE O COMPONENTE

- selezionare un nutriente o un componente. Il risultato sarà una lista di alimenti ordinata in base al valore decrescente del nutriente o componente selezionato.

Si evidenzia che il quadro dei risultati è relativo alla presenza dei nutrienti esistenti per quell'alimento selezionato.

Vitamina D (µg/100g)

Alimento	Vitamina D (µg/100g)
Grana Padano, DOP	0.5

National Institutes of Health
Office of Dietary Supplements

Vitamin D

Fact Sheet for Health Professionals

USDA National Nutrient Database for Standard ReferenceRelease 28

Nutrients: Vitamin D (IU)

Food Subset: All Foods
Ordered by: Nutrient Content
Measured by: Household
Report Run at: October 19, 2015 17:03 EDT

NDB_No	Description	Weight(g)	Measure	Vitamin D(IU) Per Measure
11936	Mushrooms, brown, italian, or crimini, exposed to ultraviolet light, raw	87.0	1.0 cup whole	1110
11998	Mushrooms, portabella, exposed to ultraviolet light, raw	86.0	1.0 cup diced	976
15038	Fish, halibut, Greenland, raw	85.0	3.0 oz	932
15008	Fish, carp, raw	85.0	3.0 oz	840
83110	Fish, mackerel, salted	80.0	1.0 piece (5-1/2" x 1-1/2" x 1/2")	805
15025	Fish, eel, mixed species, raw	85.0	3.0 oz	792
11993	Mushrooms, maitake, raw	70.0	1.0 cup diced	786
11938	Mushroom, white, exposed to ultraviolet light, raw	70.0	1.0 cup pieces or slices	732
15264	Salmon, sockeye, canned, drained solids, without skin and bones	85.0	3.0 oz	730
15046	Fish, mackerel, Atlantic, raw	112.0	1.0 fillet	720
15087	Fish, salmon, sockeye, canned, drained solids	85.0	3.0 oz	715

VITAMIN D DIETARY INTAKE QUESTIONNAIRE

PERSONAL DATA

Initials ..... Age ..... Gender: M ☐ F ☐

Certificate ..... Profession .....

PARTICULAR DIETARY HABITS Yes ☐ No ☐

If Yes: Vegetarian ☐ Vegan ☐

MILK Yes ☐ No ☐

If Yes: 1 glass (200cc) ☐ 1 cup (250cc) ☐ Other (100cc) ☐

Whole ☐ Skimmed ☐ Semi-Skimmed ☐ +Vit.D ☐

Times in a week: Daily ☐ 1day ☐ 2-days ☐ 3-4days ☐ 5-6days ☐

YOGURT Yes ☐ No ☐

If Yes: 1 cup ☐(125g ☐ 150g ☐) 2 cups ☐ (125g ☐ 150g ☐) Oth ☐

Times in a week: Daily ☐ 1day ☐ 2days ☐ 3-4days ☐ 5-6days ☐

CEREALS FORTIFIED WITH VIT.D Yes ☐ No ☐

If Yes: 100g ☐ 150g ☐

Times in a week: Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐

CHEESE Yes ☐ No ☐

If Yes: 50g ☐ 70g ☐ 100g ☐

Indicate the type of cheese and how many times per week:

- Fontina cheese ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Pecorino cheese ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Provolone cheese ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Gruyere ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Parmesan/Grana cheese ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Ricotta cheese ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Camembert ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Mozzarella cheese ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Gorgonzola cheese ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Other cheese ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐

MEAT

Yes ☐ No ☐

If Yes: 50g ☐ 70g ☐ 100g ☐

Indicate the type of meat and how many times per week:

- Beef ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Chicken ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Turkey ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Pork ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Other ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐

EGG

Yes ☐ No ☐

If Yes: 1 egg ☐ 2 eggs ☐

Indicate the preparation and how many times per week:

- Raw ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Hard-Boiled ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days
- Fried ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐

FISH

Yes ☐ No ☐

If Yes: 50g ☐ 70g ☐ 100g ☐

Indicate the type of fish and how many times per week

Indicate also if: 1. Fresh – 2. Frozen – 3. Stored – 4. Canned

- Salmon 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Trout 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Hake 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Dogfish 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Bluefish 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Sea bass 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Codfish 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Sea bream 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Swordfish 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Flounder 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Cod 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Stockfish 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Tuna 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Mackerel 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Sardine 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Anchovies 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐
- Other fish 1-2-3-4 ☐ Daily ☐ 1day ☐ 2 days ☐ 3-4days ☐ 5-6days ☐

Diario Alimentare
14 giorni

Dati Anagrafici

Iniziali nome e cognome: _____

Età: _____

Sesso: _____

Data inizio: _____

ALIMENTI

Latte - Yogurt - Cereali con Vit.D
Formaggi - Carne - Pesce - Uova
Salumi - Dolci - Funghi

LATTE - YOUGURT- CEREALI CON VIT. D

Indicare la quantità giornalmente assunta per quattordici giorni consecutivi, di latte in millilitri (ml), di yougurt e di cereali con vitamina D in grammi (gr), come nell'esempio sotto riportato

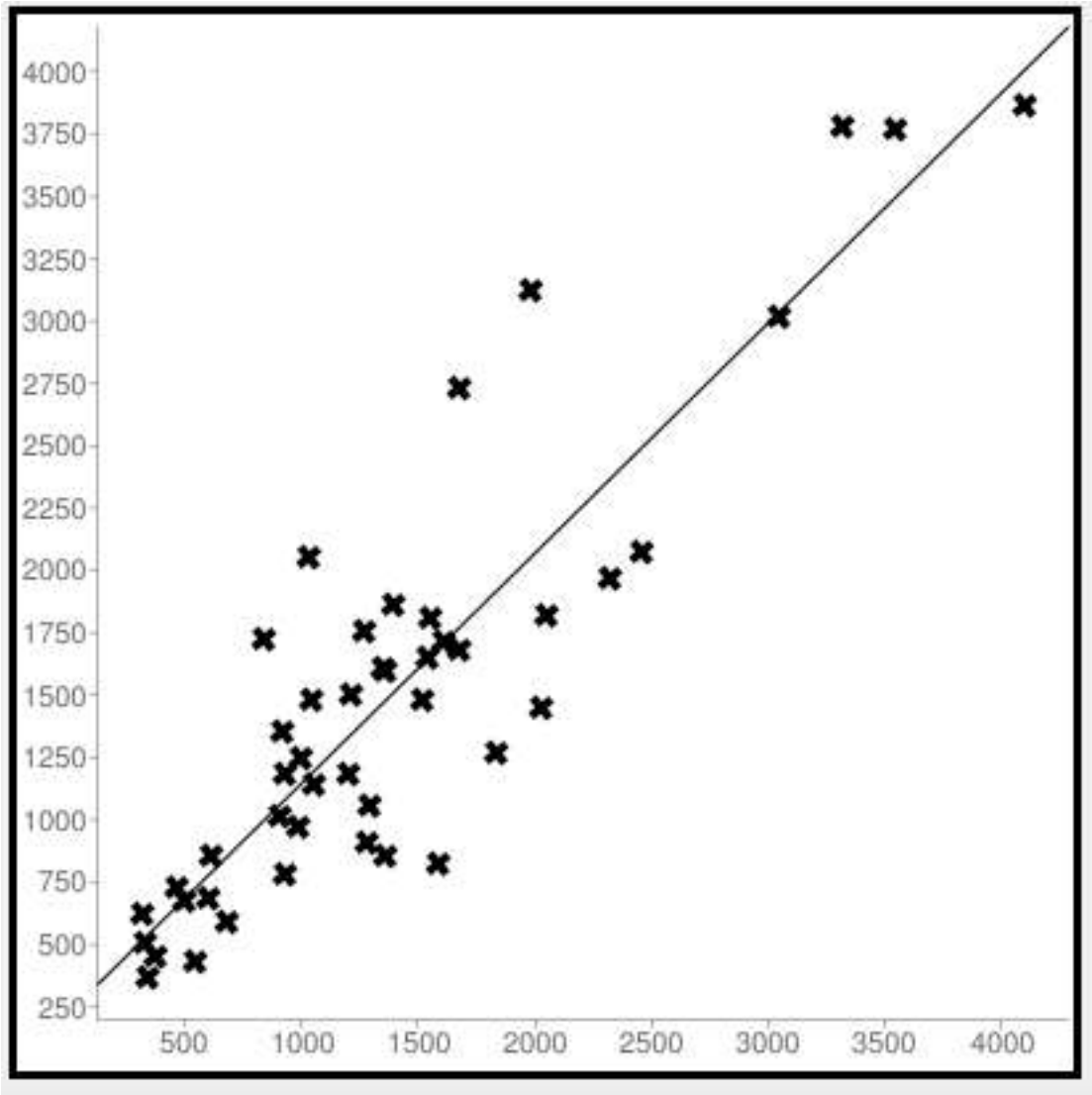
	1° giorno	2°giorno	3° giorno
Latte Intero	100 ml	150 ml	120 ml
Yougurt Scremato		125 gr	250 gr
Cereali add. Vit. D	50 gr	60 gr	

** 100 ml = 1 bicchiere di latte*
** 125 gr = 1 vasetto standard di yougurt*

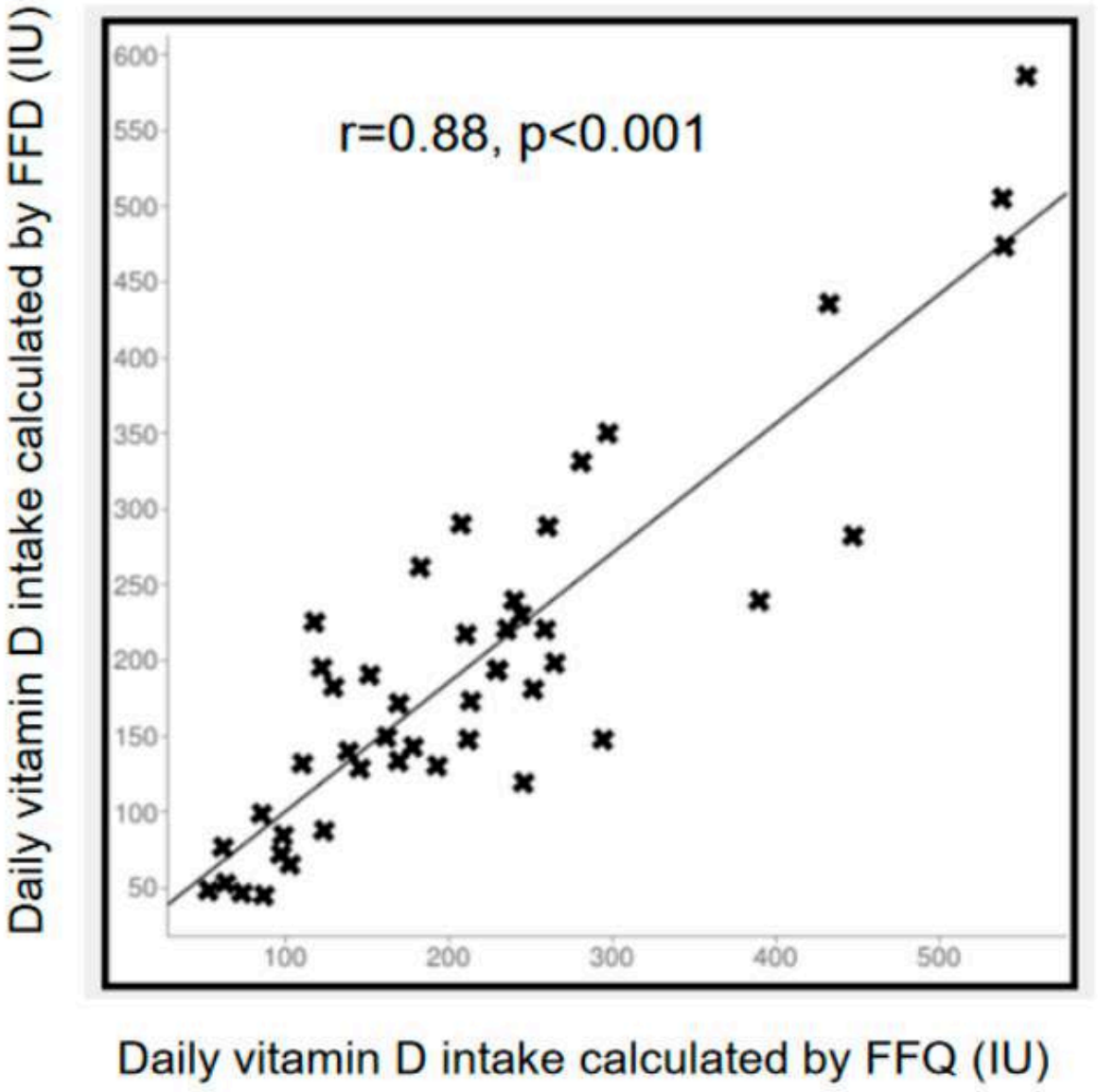
	giorno 1	giorno 2	giorno 3	giorno 4	giorno 5	giorno 6	giorno 7
Latte Intero							
Latte Scremato							
Latte parz. Scremato							
Latte add. Vit. D							
Yougurt Intero							
Yougurt Scremato							
Yougurt parz Scremato							
Yougurt add. Vit. D							
Cereali add. Vit. D							

giorno 8	giorno 9	giorno 10	giorno 11	giorno 12	giorno 13	giorno 14	
							Latte Intero
							Latte Scremato
							Latte parz. Scremato
							Latte add. Vit. D
							Yougurt Intero
							Yougurt Scremato
							Yougurt parz Scremato
							Yougurt add. Vit. D
							Cereali add. Vit. D

Statistically significant correlation (r=0.88, p<0.001) between the amounts of vitamin D intake calculated by food frequency diaries (FFDs) and by food frequency questionnaires (FFQs).



Statistically significant correlation ($r = 0.89$, $p < 0.001$) between the amounts of daily vitamin D intake calculated by food frequency diaries (FFDs) and food frequency questionnaire (FFQ)



nutrients

MDPI

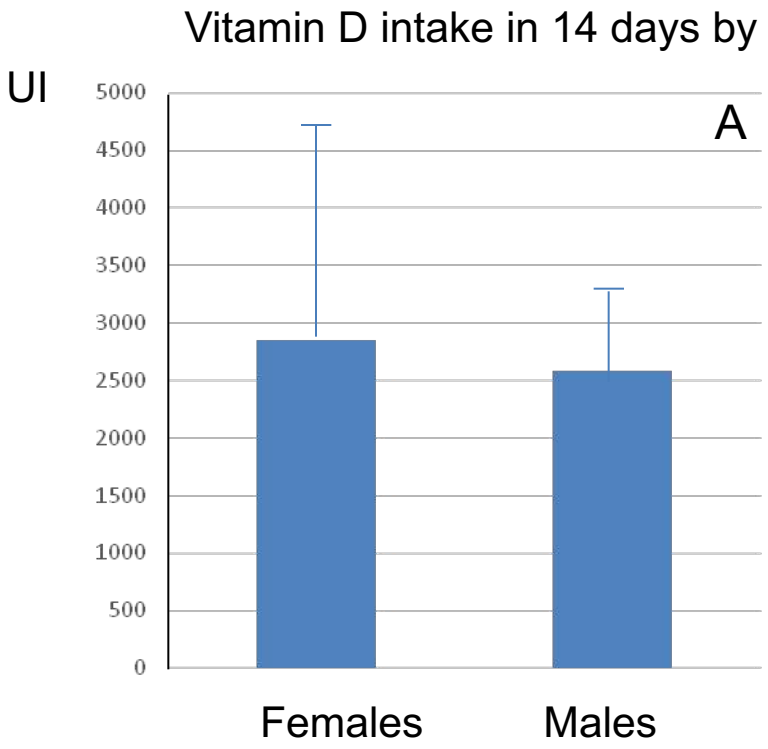
Article

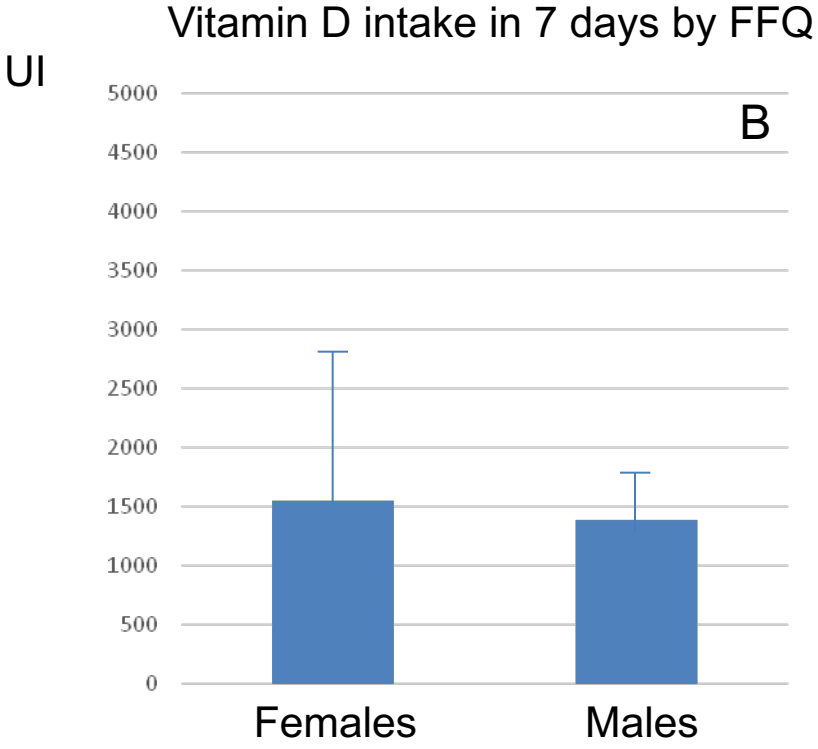
Dietary Vitamin D Intake in Italian Subjects: Validation of a Frequency Food Questionnaire (FFQ)

Ranuccio Nuti [1,*], Luigi Gennari [1], Guido Cavati [1], Filippo Pirrotta [1], Stefano Gonnelli [1], Carla Caffarelli [1], Luciano Tei [2] and Daniela Merlotti [3]

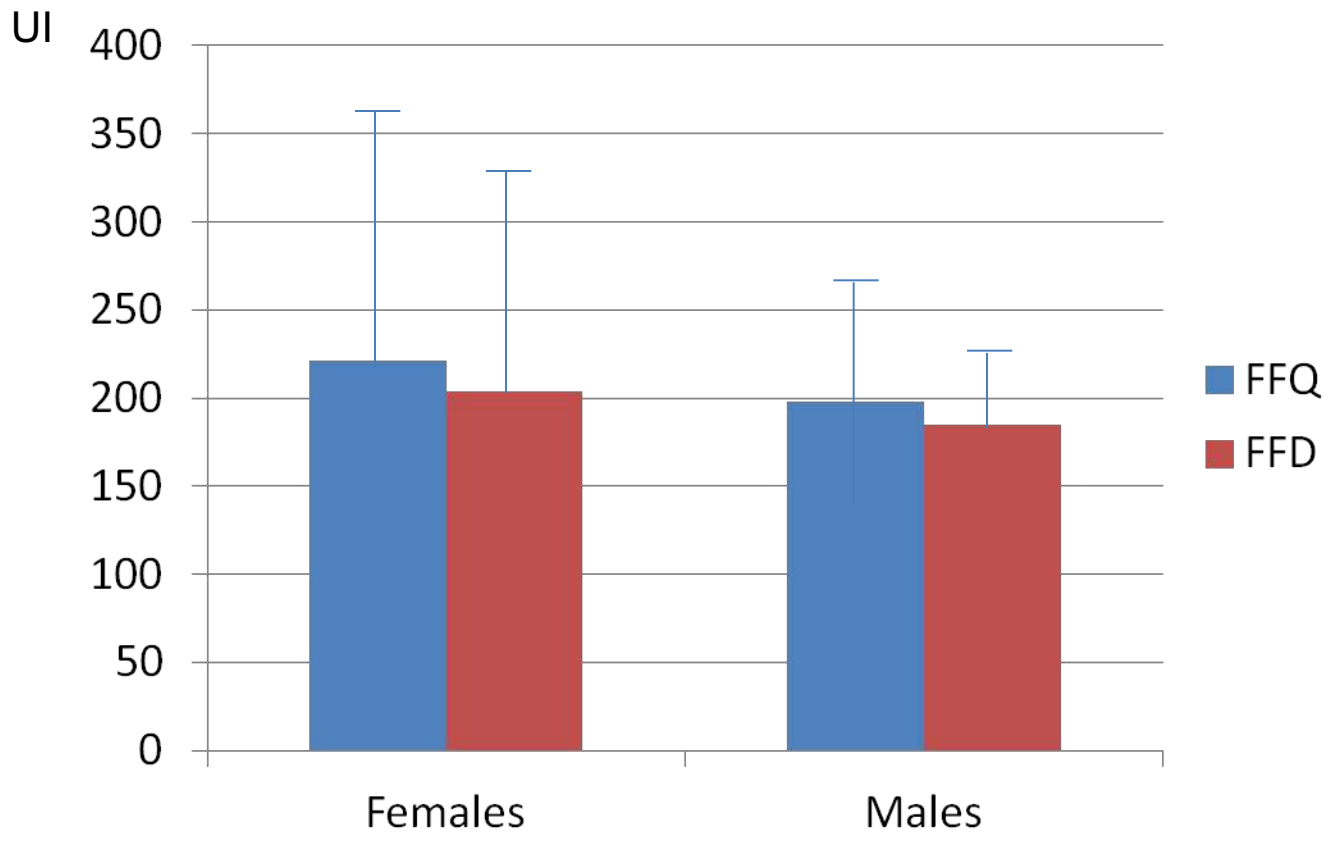
Nutrients **2023**, *15*, 2969. https://doi.org/10.3390/nu15132969 www.mdpi.com/journal/nutrients

Mean (± SD) vitamin D intake in 14 days assessed by FFD and mean (± SD) vitamin D intake in 7 days assessed by FFQ in females and in males.

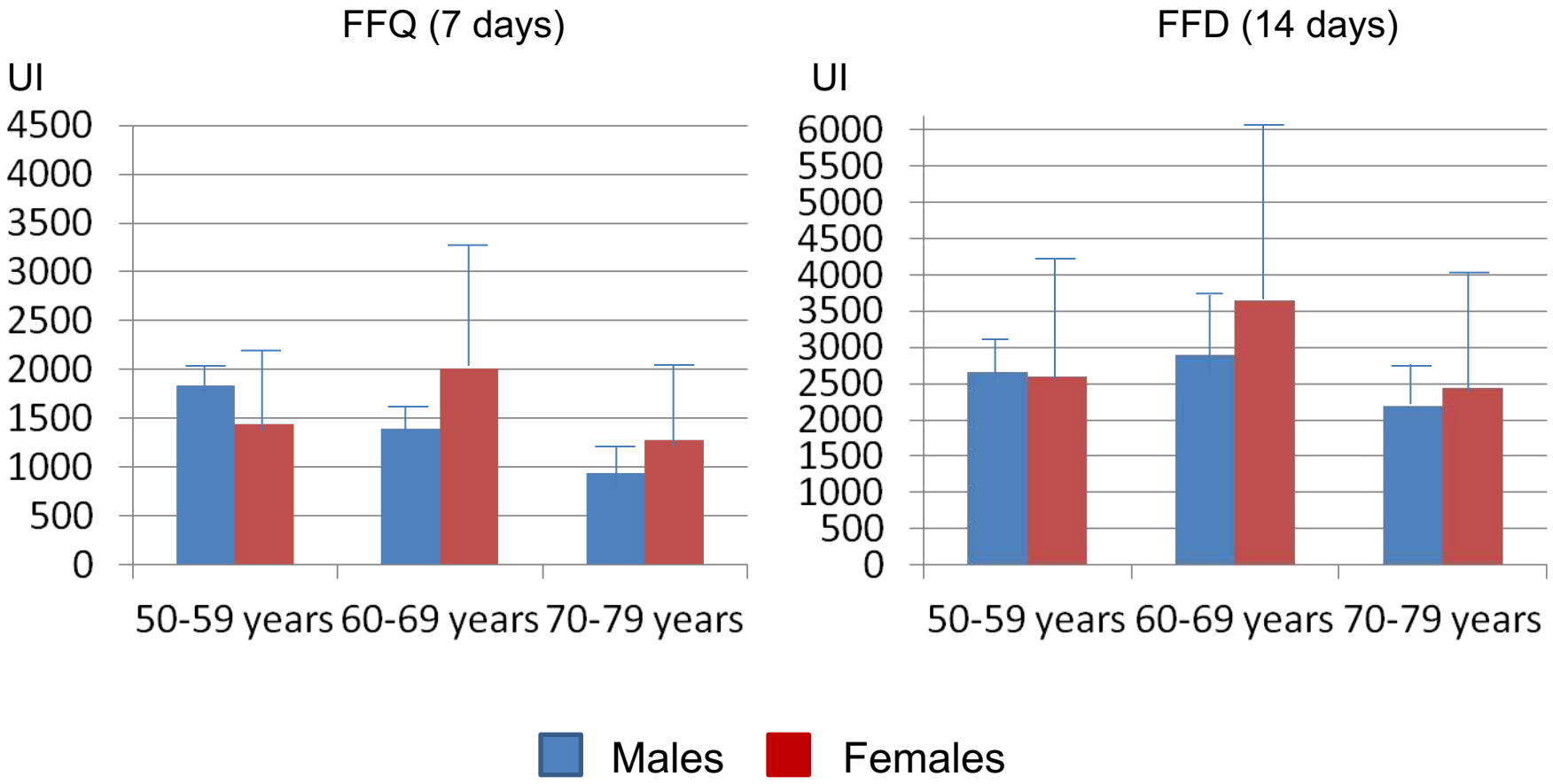




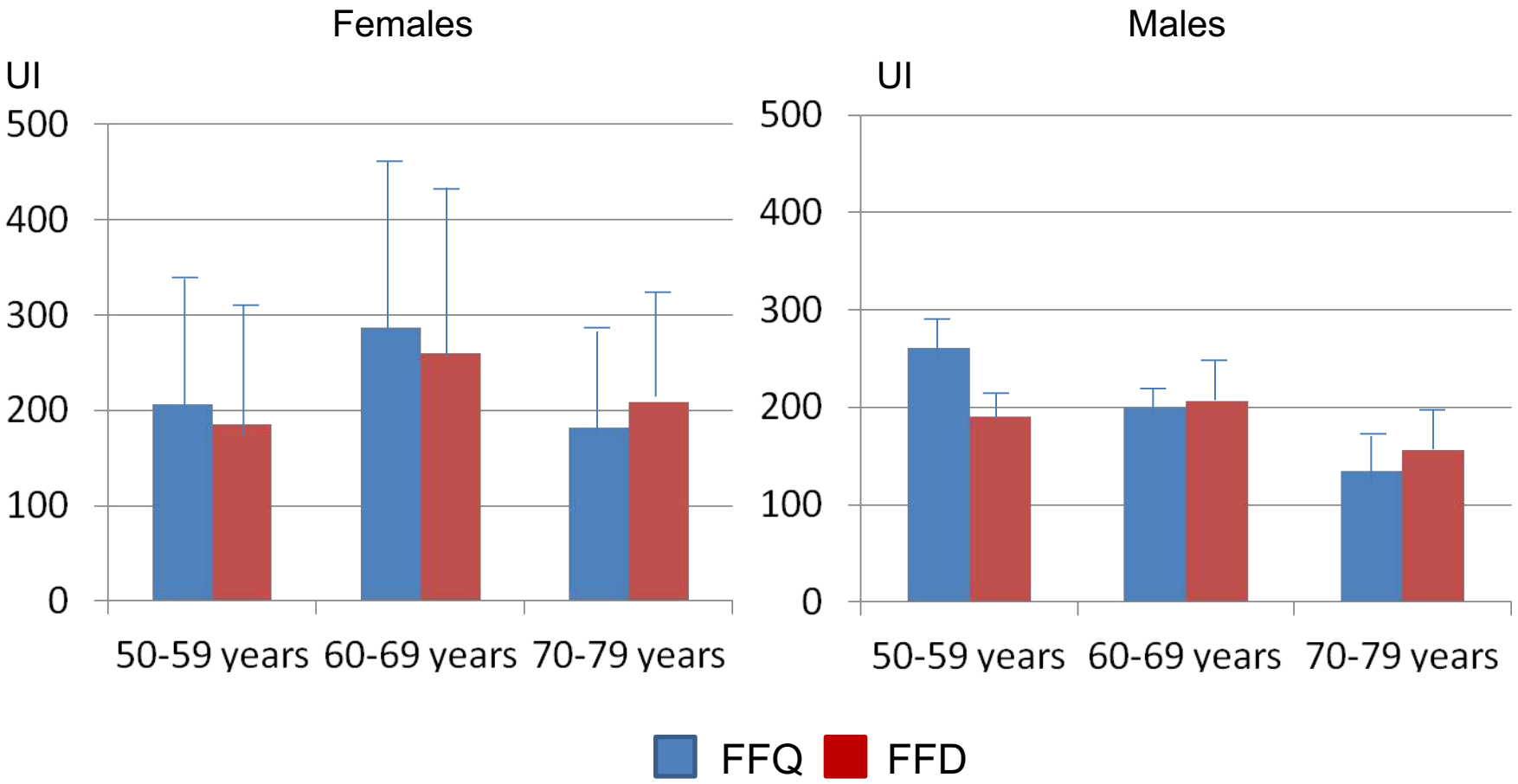
Mean ± SD daily vitamin D intakes assessed by FFQ and by FFD in females and in males.



Mean ± SD vitamin D intakes assessed by FFQ in 7 days and by FFD in 14 days in males and females, subgrouped in three decades of age.



Mean ± SD daily vitamin D intakes sub-grouped in three decades of age assessed by FFQ and FFD in females and in males.



Conclusions I

A significant and more than acceptable correlation was appreciated between the data obtained by FFQ and FFD despite the different lengths of the observational periods.
Consequently, the FFQ may be considered a valid tool to investigate the dietary vitamin D intake in the outpatient setting.

Importantly, the information obtained from the FFQ and the FFD diaries allows us to underline that the vitamin D intake in the Italian, healthy population is low (dramatically far from the 15 mcrg per day recommended by the USA Institute of Medicine) and does not cover the RDA in the absence of adequate sun exposure.

Conclusions II

The low vitamin D intake is quite similar in females and males, and it is not significantly influenced by age. In Italy, the diffuse dietary habits of the Mediterranean Diet (mainly including olive oil, wheat, vegetables, and grapes), together with the lack of consistent food fortification, undoubtedly contribute to a low vitamin D intake.

The availability of this validated FFQ will thus allow us to replicate the study in a larger sample. Should these data be replicated in a large and representative sample of the Italian population, they will demonstrate that, in Italy, the vitamin D intake is very low and markedly contributes to hypovitaminosis D.

SAD

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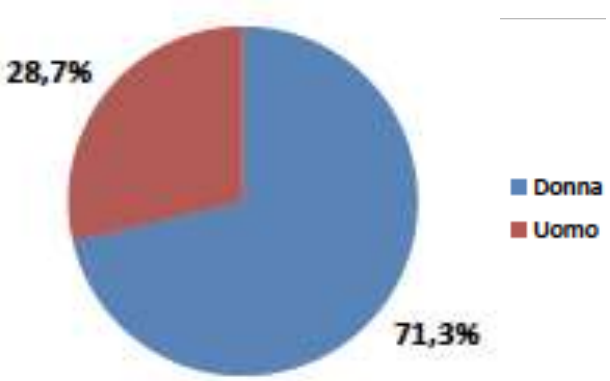

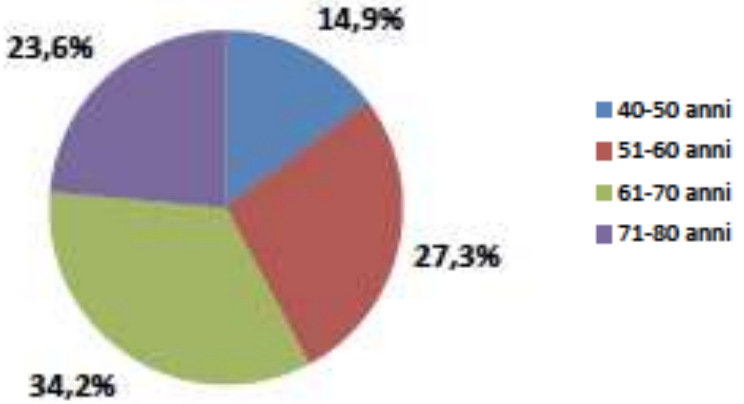

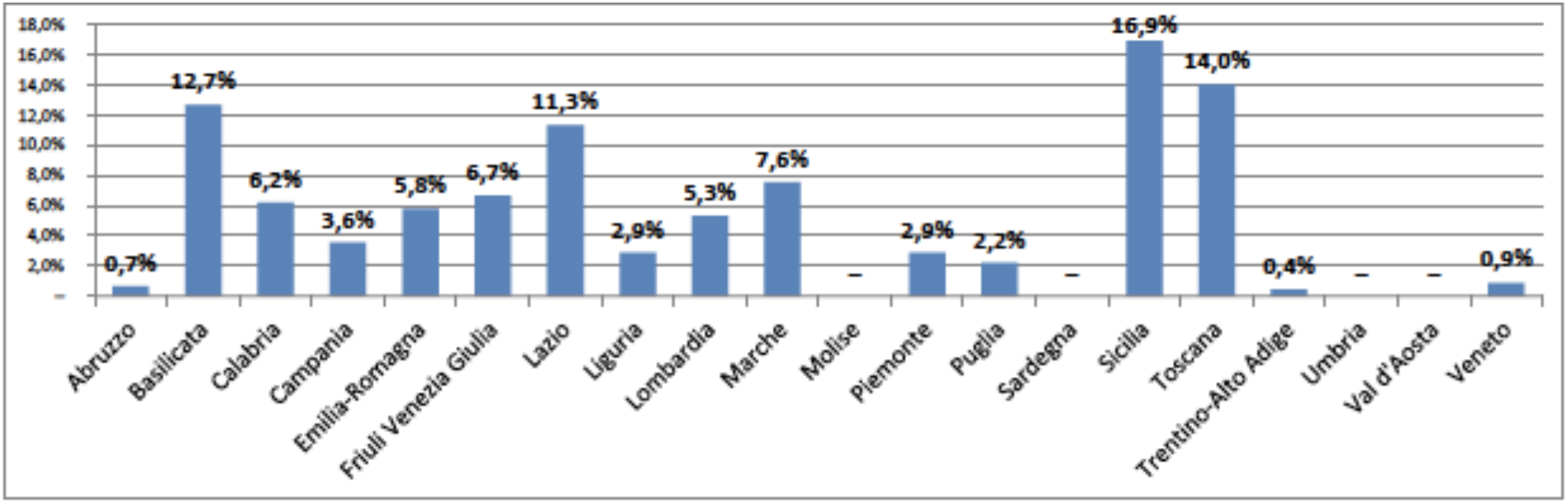

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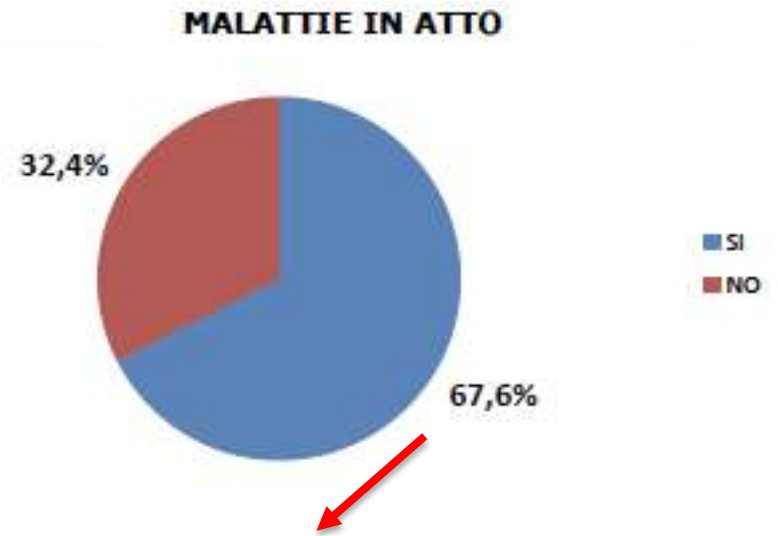

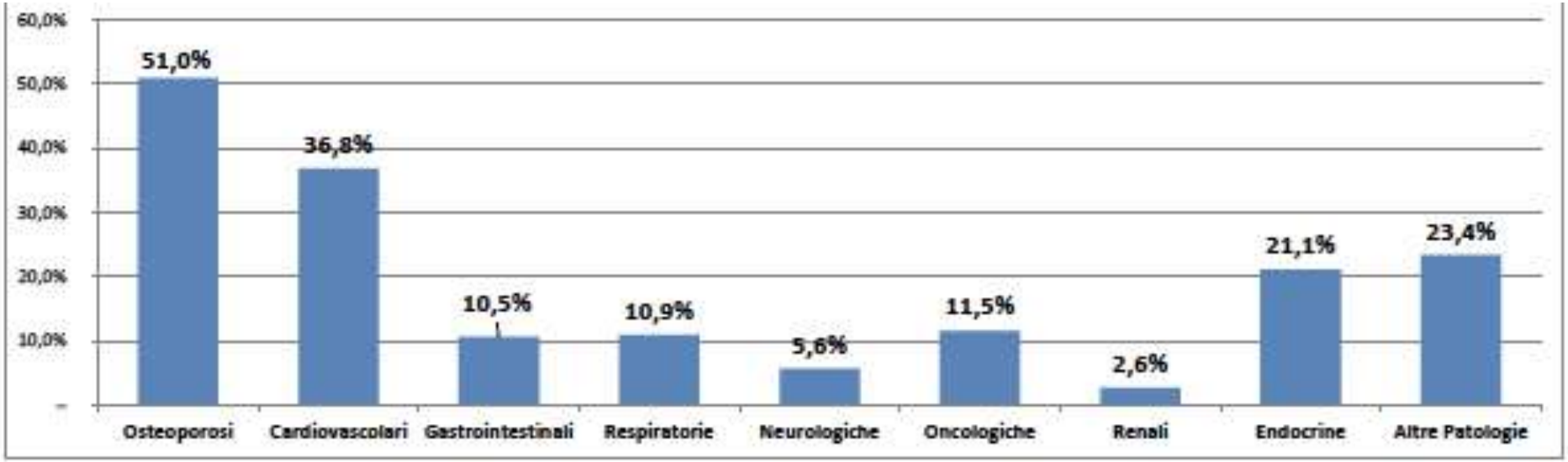

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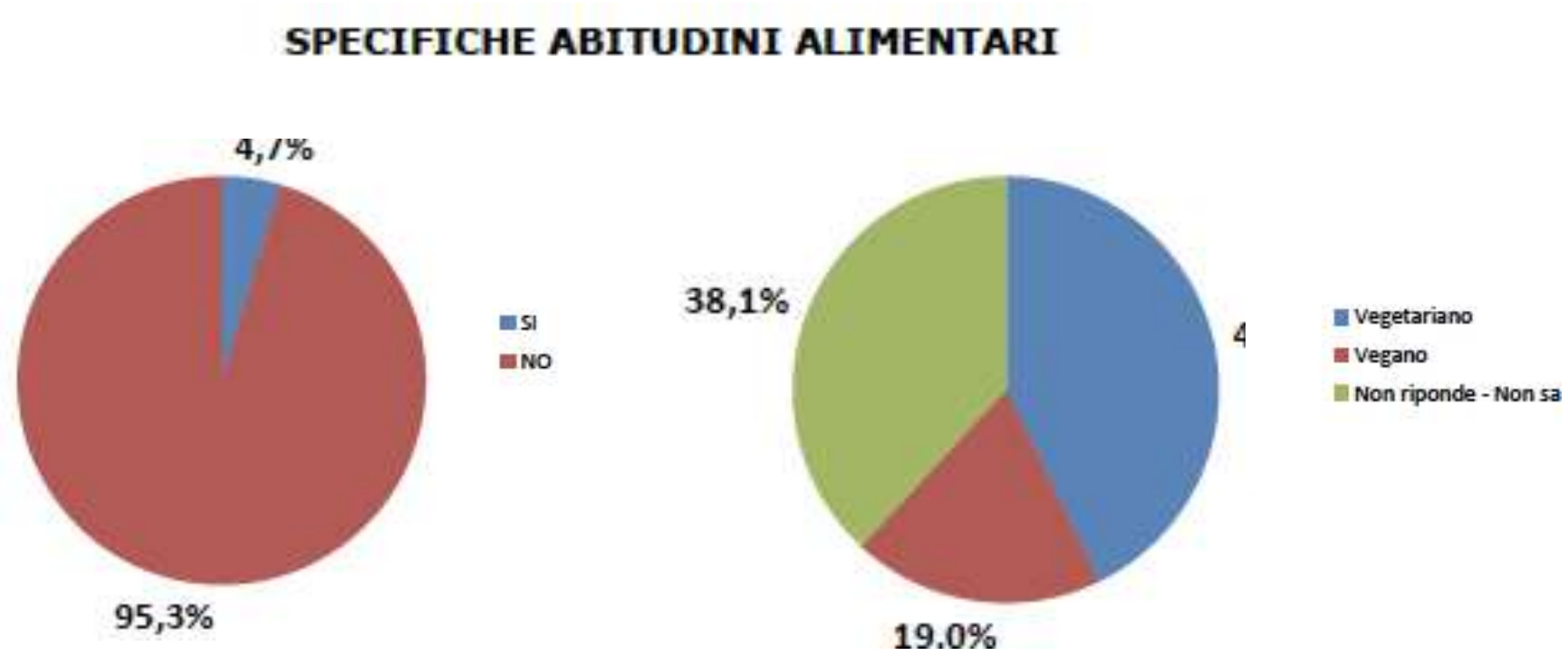

SAD

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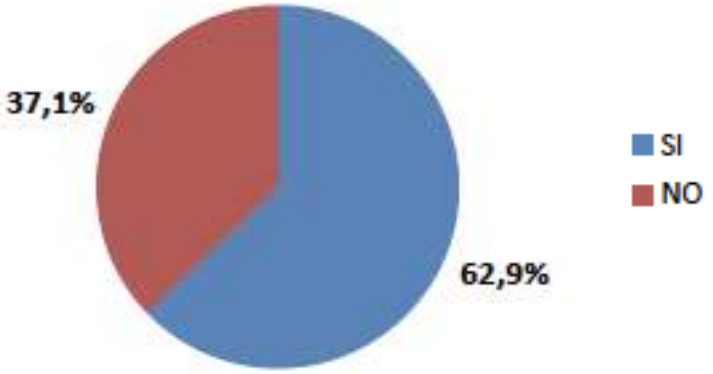
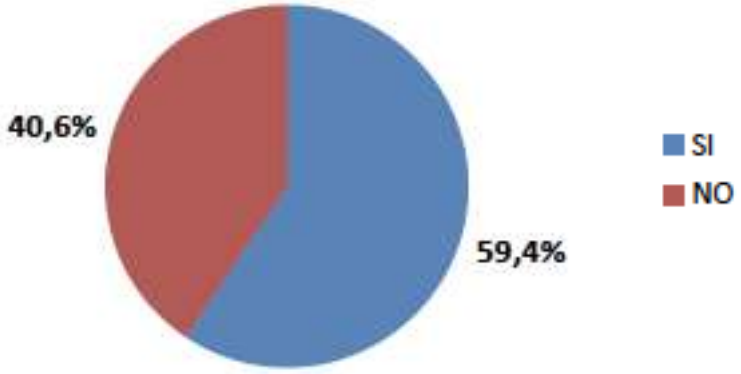
LATTE

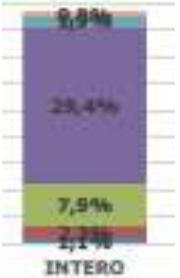


TIPOLOGIA	Totale Risposte %
INTERO	26,1%
SCREMATO	16,7%
PARZIALMENTE SCREMATO	57,1%
Totale Risposte	100,0%

YOGURT



TIPOLOGIA	Totale Risposte %
INTERO	43,4%
SCREMATO	15,8%
PARZIALMENTE SCREMATO	18,5%
YOGURT GRECO VANIGLIA MAGRO	13,2%
YOGURT PARFAIT	1,5%
YOGURT GRECO CON FRUTTI	7,5%
Totale Risposte	100,0%



da 20 a 50 ml | da 51 a 70 ml | da 71 a 100 ml | da 101 a 150 ml | da 151 a 200 ml | da 201 a 250 ml

SAD

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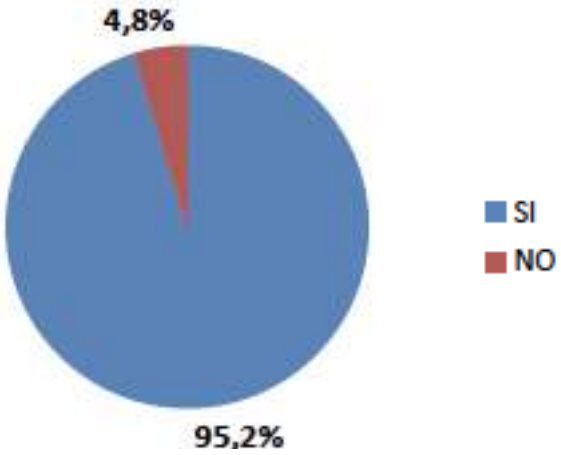
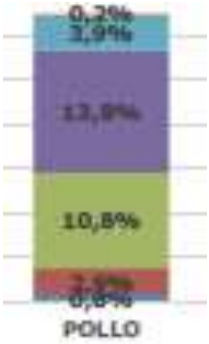
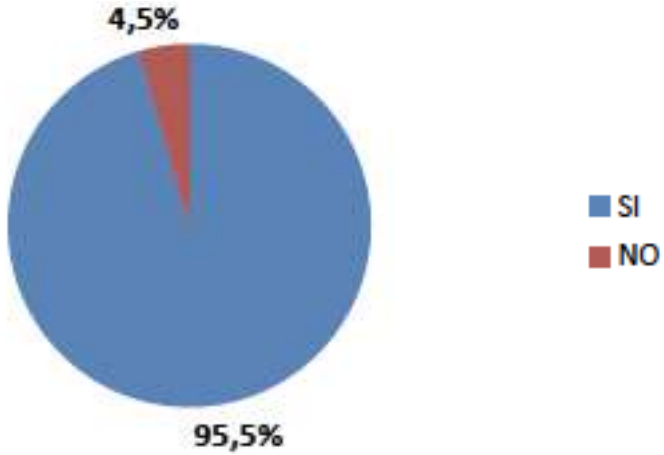
CARNE



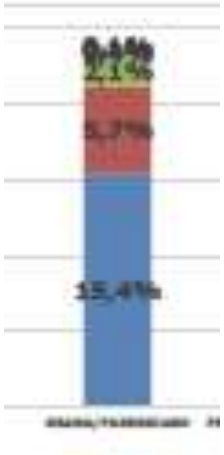
TIPOLOGIA	Totale Risposte %
BISTECCA MANZO	18,1%
BOLLITO MANZO	2,9%
FETTINA/SCALOPPINA MANZO	16,6%
MAIALE E SUOI DERIVATI	15,5%
POLLO	33,2%
FARAONA	0,5%
TACCHINO	10,0%
AGNELLO	3,2%
	-
	-
	-
Totale Risposte	100,0%



FORMAGGI



TIPOLOGIA	Totale Risposte %
EMMENTAL/GROVIERA	6,3%
FONTINA	2,9%
GRANA/PARMIGIANO	23,8%
PECORINO PRIMO SALE	8,4%
PROVOLONE	5,5%
CAMEMBERT	0,6%
GORGONZOLA	3,5%
MOZZARELLA CON LATTE INTERO	15,8%
MOZZARELLA CON LATTE PARZ. SCREMATO	5,5%
RICOTTA	12,4%
CHEDDAR	0,7%
FETA	2,9%
FORMAGGIO SPALMABILE	9,8%
BRIE	1,6%
BRICK	0,2%
Totale Risposte	100,0%



da 20 a 50 ml | da 51 a 70 ml | da 71 a 100 ml | da 101 a 150 ml | da 151 a 200 ml | da 201 a 250 ml

SAD

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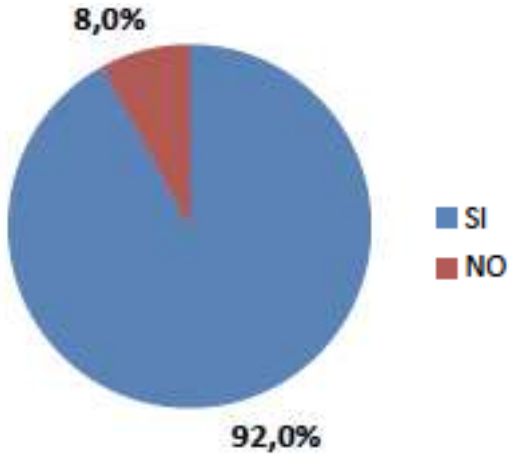
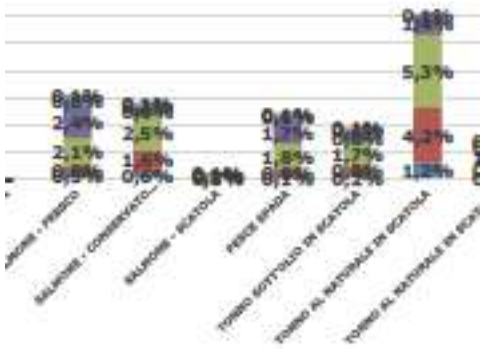
PESCE





TIPOLOGIA	Totale Risposte %
PESCE AZZURRO (ALICI, ACCIUGHE) - FRESCO CONSERVATO SURGELATO	7,4%
PESCE AZZURRO (ALICI, ACCIUGHE) - SCATOLA	1,2%
PESCE AZZURRO (SARDINE) - FRESCO CONSERVATO SURGELATO	2,1%
PESCE AZZURRO (SARDINE) - SCATOLA	0,3%
PESCE AZZURRO (SGOMBRO) - FRESCO	2,1%
PESCE AZZURRO (SGOMBRO) - CONSERVATO SURGELATO IN SCATOLA	1,7%
BRANZINO/SPIGOLA	9,2%
DENTICE	1,4%
MERLUZZO	9,4%
BACCALA'	4,2%
STOCCAFISSO	0,8%
NASELLO	3,0%
ORATA	8,6%
PALOMBO	0,6%
PLATESSA	2,4%
OMBRINA	0,3%
SOGLIOLA	1,6%
ANGUILLA	-
SALMONE - FRESCO	6,4%
SALMONE - CONSERVATO AFFUMICATO SURGELATO	5,7%
SALMONE - SCATOLA	0,5%
PESCE SPADA	5,0%
TONNO SOTT'OLIO IN SCATOLA	4,0%
TONNO AL NATURALE IN SCATOLA	12,3%
RICCIOLA	0,3%
TROTA	1,3%
UOVA DI PESCE	0,1%
SARAGO	-
ARINGA FRESCO	-
ARINGA - CONSERVATO SURGELATO IN SCATOLA	0,1%
GAMBERO	5,0%
Totale Risposte	100,0%

da 20 a 50 ml | da 51 a 70 ml | da 71 a 100 ml | da 101 a 150 ml | da 151 a 200 ml | da 201 a 250 ml

SAD

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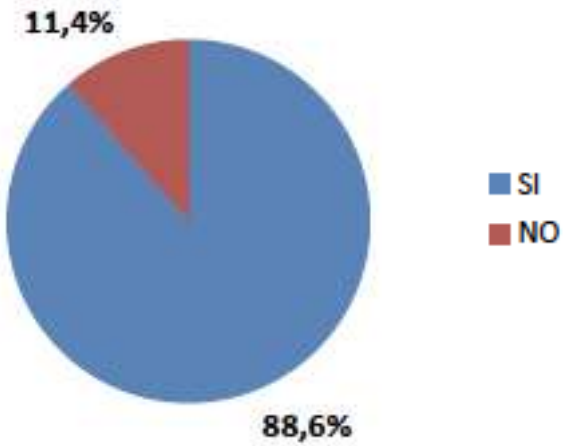
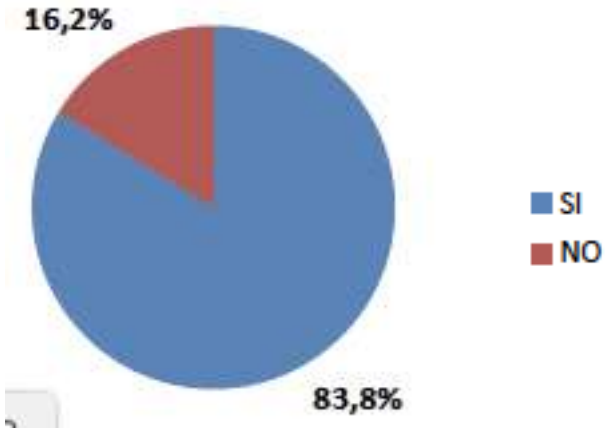
UOVA



SALUMI

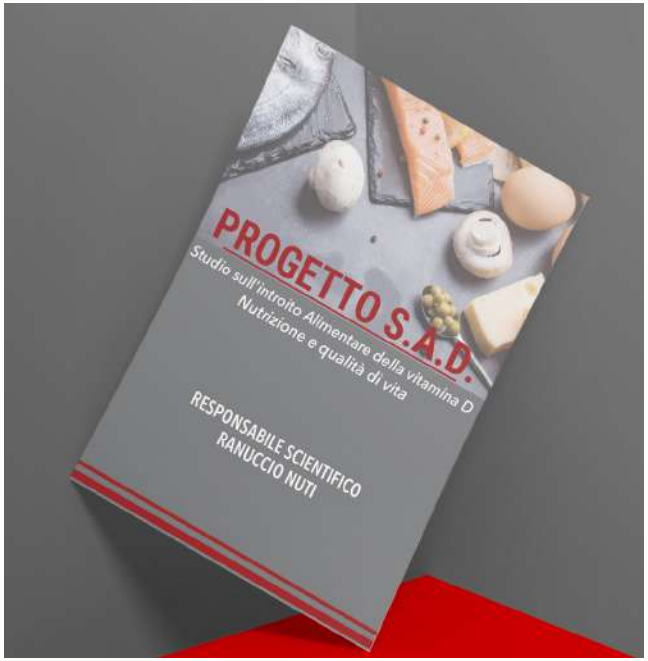


TIPOLOGIA	Totale Risposte %
PROSCIUTTO CRUDO	33,2%
PROSCIUTTO COTTO	20,8%
PROSCIUTTO ARROSTO	2,3%
SALAME (es FINOCCHIONA, SIMILI)	10,5%
BRESAOLA	16,7%
MORTADELLA	9,2%
SPECK - COPPA - CAPOCOLLO	7,4%
	-
	-
	-
	-
Totale Risposte	100,0%

da 20 a 50 ml | da 51 a 70 ml | da 71 a 100 ml | da 101 a 150 ml | da 151 a 200 ml | da 201 a 250 ml

PROGETTO S.A.D.

STUDIO INTROITO **A**LIMENTARE VITAMINA **D**



Contatta *MYEVENT srl*
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al questionario

segreteria.gismo@myeventsrl.it

Tel. 06 944 88 87