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Federal Department of Home Affairs FDHA
Federal Food Safety and Veterinary Office FSVO

Online survey on the intake of dietary supplements in Switzerland





Dienstag, 28. November 2023

Was wir im Winter wirklich brauchen

Vitamine rüsten unsere Abwehrkräfte gegen lästige Erkältungen. Die Volksweisheit «Viel hilft viel» ist jedoch falsch – mitunter kann sie sogar gesundheitsgefährdend sein.

Stephanie Schnydrig

Mit der kalten Jahreszeit schnieft, niest und hustet es rundherum. Das Immunsystem hat viel zu tun – und es steht ausser Frage, dass es eine ganze Reihe von Mikronährstoffen wie die Vitamine C und D oder Eisen und Zink braucht, um optimal zu funktionieren. Dafür ist eine abwechslungsreiche Ernährung wichtig: «Je bunter der Teller, desto besser», sagt Janice Sych, Ernährungswissenschaftlerin an der Zürcher Hochschule für angewandte Wissenschaften (ZHAW). Hingegen: Stichhaltige Beweise, dass Pillen, Getränke und Pülverchen mit Vitaminen und Mineralstoffen das Immunsystem stärken, gibt es keine.

Beispielsweise hat eine Untersuchung festgestellt, dass eine Vitamin-C-Supplementierung die Häufigkeit von Erkältungen in der Allgemeinbevölkerung nicht verringert und die Dauer auch nicht verkürzt. Auch zu Vitamin D gibt es ernüchternde Ergebnisse: Übersichtsstudien zeigen, dass Vitamin-D-Präparate die Häufigkeit von Atemwegsinfektionen zwar verringern, doch der Effekt ist minim. Bei Personen mit einem starken Mangel ist er grösser.

Wer viel misst, misst viel Mist

Generell ist eine Ergänzung mit Vitaminen und anderen Mikronährstoffen sinnvoll, wenn ein Defizit vorliegt. Sollte man deshalb vorsorglich vor der kalten Jahreszeit sein Blutbild checken? «Ohne konkreten Verdacht auf einen Mangel rate ich ganz klar davon ab», sagt David Fäh, Ernährungsmediziner an der Berner Fach-



Eine abwechslungsreiche Ernährung ist das A und O – vor allem in den kalten Wintermonaten.

BILD PEXELS



Populäre Nahrungsergänzung

Vitamine & Co. – Was bringen die Präparate wirklich?

... nicht belegt ist. Die Überzeugung, sich mit Nahrungsergänzungsmitteln etwas Gutes zu ... falls einen kritischen Konsum gibt, also eine Überversorgung mit Nahrungsergänzungsmitteln.»



🔄 01.02.2023, 18:25 Uhr · 🎥 Mit Video

'Nahrungsergänzungsmittel' in Sendungen, Video und Audio



Der Markt mit Nahrungsergänzungsmittel boomt

🎥 Tagesschau, 11.07.2019



Nahrungsergänzungsmittel individuell abstimmen

🔊 Ratgeber, 21.11.2016

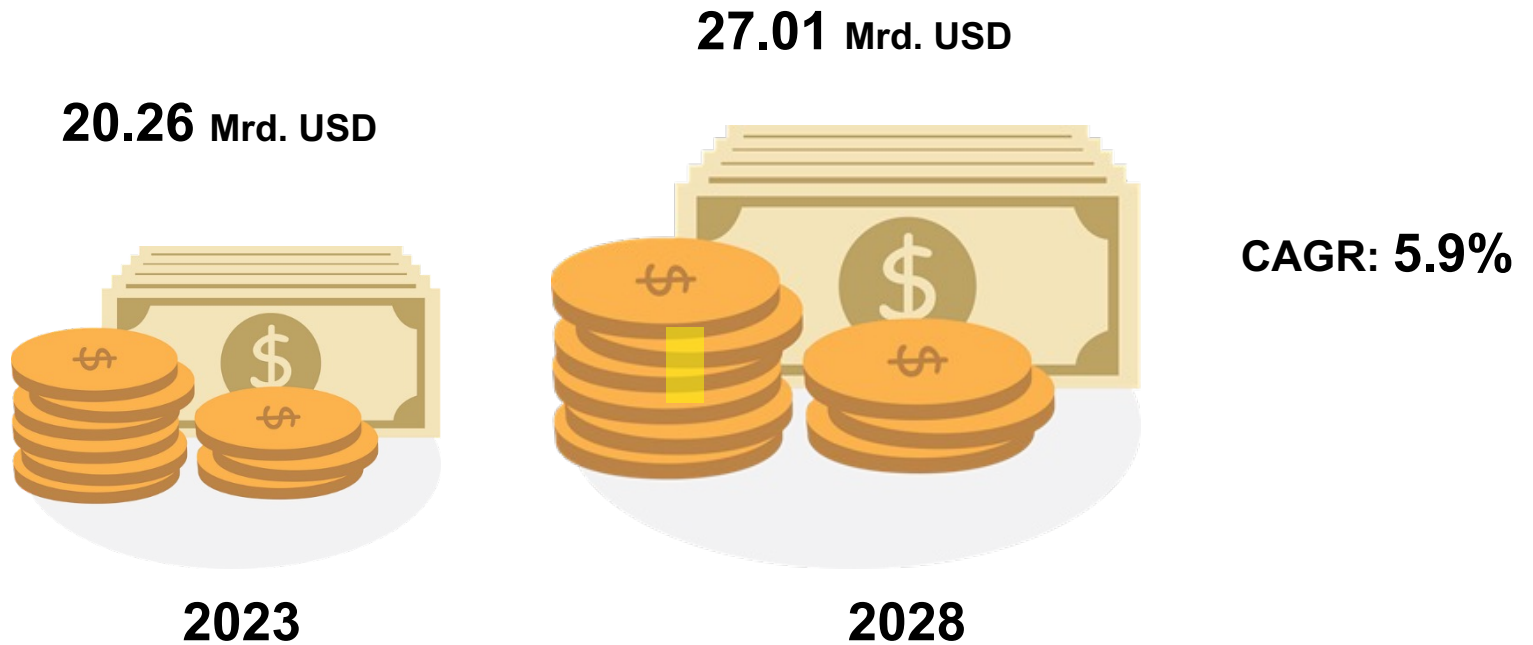


Overview

- Background and objectives
- Method and realization
- Results
- Conclusion



Europe Dietary Supplements Market



Source: Mordor Intelligence



Dietary supplement use in Switzerland

According to the first national nutrition survey for adults (menuCH) 2014/2015, **47 %** of adults had consumed food supplements in the four weeks

Another study, which is based on a Lausanne cohort (CoLaus) and including people living in the Lausanne region concluded that the prevalence of food supplement consumption (all types of food supplements) was **26 %**

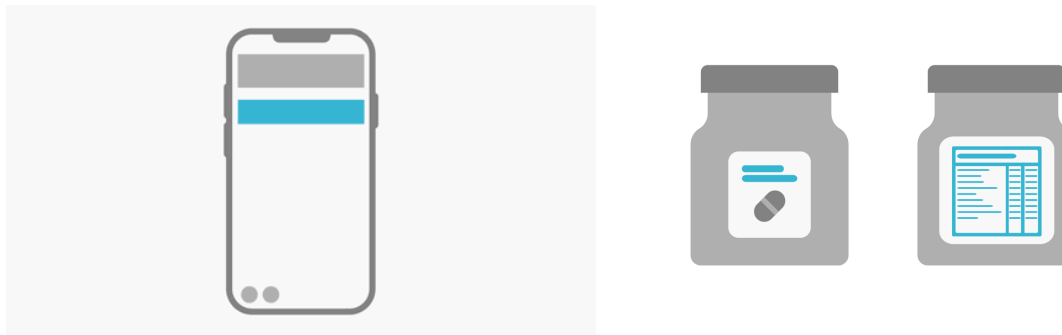
Marques-Vidal P. et al. Trends in vitamin, mineral and dietary supplement use in Switzerland. The CoLaus study. European Journal of Clinical Nutrition. (2017).



Aim of the survey

Collect detailed data on general **consumption behavior**, the frequency of **multiple intakes** and the most **common reasons** for taking supplements.

Gather accurate information on **product compositions** and **product dosages** to calculate the exact amount of nutrients consumed and determine the **potential risk of overconsumption** of food supplements.





Study design

Population:	Population in Switzerland aged 18 and over
Method:	Online survey (CAWI)
Address source:	Sampling frame for personal and household surveys (SRPH)
Sample size:	n = 1'282
Net resp. rate:	36.6 %
Response time:	10 - 15 minutes
Survey period:	March 2 to April 11, 2022
Contractor:	Demo SCOPE AG

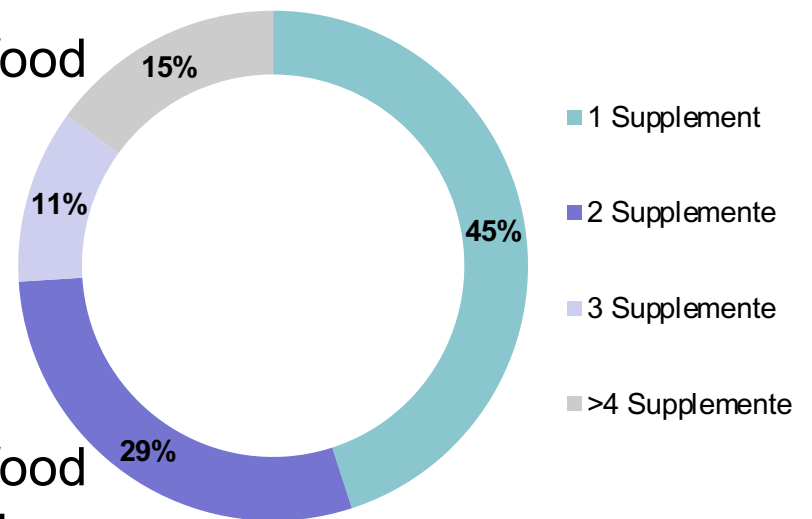


Results

Frequency of use of food supplements

30% of participants have taken food supplements in the **last 7 days**

28% of participants have taken food supplements in the **last 12 months**





Consumption and purchasing behavior of food supplement consumers

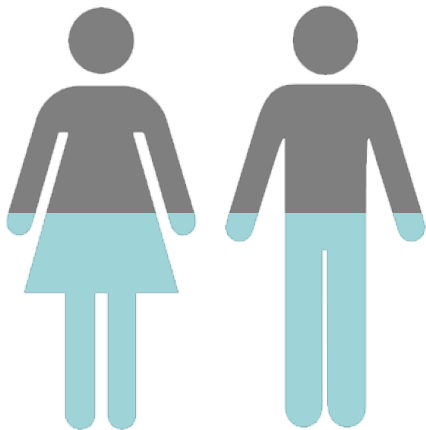
- Food supplements tend to be taken on a long-term basis: **40%** for several months, 35% for several years
- **25%** of food supplements are consumed seasonally, i.e. more in winter than in summer
- **22%** take food supplements on the recommendation of a doctor or pharmacy, 20% on the advice of a family member, acquaintance or friend
- **52%** of products are bought in pharmacies, drugstores or doctors' surgeries, 26% are purchased online or by mail order and 19% in retail outlets or supermarkets



Who buys online?

- A quarter buy food supplements online

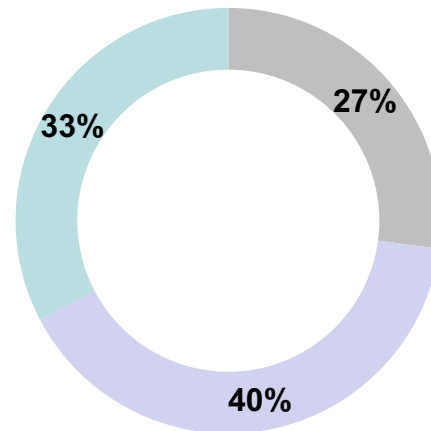
Gender



54.2 %

45.8 %

Age

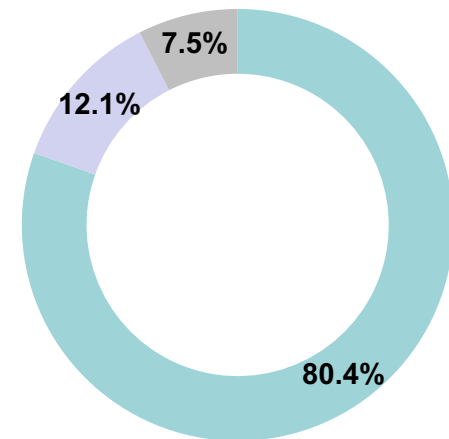


■ 18-34

■ 35-54

■ 55-75

Region



■ D-CH

■ W-CH

■ I-CH



Socio-demographic characteristics of food supplement consumers

- Gender: 36% **women**; 25% men
- Place of residence: 33% **cities**, 27% countryside, 25% agglomeration
- Region: 34% **D-CH**, 23% W-CH, 20% I-CH
- Level of education: 35% **high**, 31% medium, 11% low
- Income: 44% **>15,000**, 29% 3,000-7,000, 28% < 3,000



Health behavior

- **Exercise behavior** of food supplement users: 32% active, 20% passive
- **Smoking behavior** of food supplement users: 34% ex-smokers, 31% non-smokers, 21% smokers
- 52% of food supplement users vs. 29% non-consumers lead a personal lifestyle largely influenced by **health considerations**.
- 55% of food supplement users vs. 35% non-consumers consider a **healthy diet** to be very relevant.



Categories of food supplements

Categories of food supplements	N	%
Vitamins (e.g. vitamin C, vitamin D, vitamin B12, folic acid)	186	26.6
Combination preparations with vitamins and minerals	167	23.9
Minerals (e.g. calcium, magnesium, iron, selenium, zinc)	113	16.2
Omega-3 fatty acids (e.g. fish oil, krill)	67	9.6
Plant-based products (e.g. plant or algae extracts, phytoestrogens)	64	9.2
Preparations with proteins and amino acids	54	7.7
Probiotics (e.g. bacteria, yeasts, etc.)	21	3.0
Other	20	2.9
Don't know/no answer	7	1.0
Total	699	100



Intake of vitamins and minerals through dietary supplements and risk of overdose

Vitamin/Mineralstoff	n	% *	Mittelwert	Median	Minimum	Maximum	UL	n (Überschreitung UL)	% (Überschreitung UL) *
Vitamin C [mg]	148	11,5	249,7	109,3	1,7	3000,0	-	-	-
Vitamin D [µg]	143	11,2	29,2	12,5	0,2	260,0	100	9	6,2
Magnesium [mg]	134	10,5	184,2	102,9	10,0	2000,0	250 ^c	34	25,4
Vitamin B ₁₂ [µg]	129	10,1	62,5	4,0	0,1	1000,0	-	-	-
Vitamin B ₆ [mg]	121	9,4	3,5	1,7	0,1	30,0	25	1	0,8
Folsäure (B ₉) [µg]	115	9,0	412,0	240,0	0,2	5000,0	1000	3	2,6
Vitamin B ₁ [mg]	113	8,8	3,7	1,4	0,0	50,0	-	-	-
Vitamin B ₂ [mg]	110	8,6	4,2	1,6	0,1	50,0	-	-	-
Zink [mg]	115	9,0	8,3	6,6	0,3	38,0	25	3	2,6
Biotin (B ₇ , B ₈ , H) [µg]	107	8,3	446,0	85,7	0,1	10000,0	-	-	-
Vitamin E [mg]	106	8,3	17,9	12,0	0,4	230,4	300	0	0
Niacin (B ₃) [mg]	106	8,3	26,0	18,0	0,7	100,0	900	0	0
Pantothensäure (B ₅) [mg]	99	7,7	12,7	6,0	0,1	125,0	-	-	-
Calcium [mg]	91	7,1	258,2	142,9	10,0	1600,0	2500	0	0
Vitamin A [µg]	76	5,9	631,0	400,0	2,3	3200,0	3000		1,3
Selen [µg]	75	5,9	43,6	39,3	1,1	228,6	300	0	0
Eisen [mg]	74	5,8	21,0	8,0	0,4	200,0	-	-	-
Kupfer [mg]	72	5,6	0,8	0,7	0,0	3,0	5	0	0
Mangan [mg]	63	4,9	1,5	1,0	0,1	8,0	-	-	-
Vitamin K [µg]	49	3,8	57,5	37,5	5,7	280,0	-	-	-
Jod [µg]	50	3,9	113,2	75,0	1,1	600,0	600	0	0
Molybdän [µg]	38	3,0	42,3	32,1	3,6	171,4	600	0	0
Chrom [µg]	37	2,9	35,4	20,0	2,9	160,0	-	-	-
Kalium [mg]	13	1,0	355,7	300,0	50,0	1320,0	-	-	-
Phosphor [mg]	13	1,0	131,3	71,4	25,0	700,0	-	-	-
Bor [mg]	5	0,4	0,6	0,1	0,1	2,1	10	0	0
Natrium [mg]	4	0,3	64,6	65,0	21,1	107,1	-	-	-
Chlor [mg]	2	0,2	212,9	212,9	85,7	340,0	-	-	-

- **Vitamins C** (n=148) and **D** (n=143) and **magnesium** (n=134) were mentioned most frequently
- An **overdose** above the tolerable upper intake level (UL) has **rarely been observed**.
- The UL for **vitamins A, B6, folic acid** and **zinc** was exceeded by a few respondents (<4%).



Intake of vitamins and minerals through dietary supplements and risk of overdose

- For **9** respondents, the UL for **vitamin D** was **exceeded** by the consumption of food supplements.
- For **8** of these people, the food supplement had **not prescribed** by a doctor.
- Vitamin D can be **dosed in different ways** (number of drops or milliliters), based on two **different units** of measurement (micrograms or international unit).
- The results of this study show that this leads to confusion among consumers. This can lead to incorrect use with serious risks if there are no **precise instructions** for use from healthcare professionals or the manufacturer.



[Ann Med Surg \(Lond\)](#). 2023 May; 85(5): 1971–1974.

PMCID: PMC10205217

Published online 2023 Apr 6. doi: [10.1097/MS9.0000000000000528](https://doi.org/10.1097/MS9.0000000000000528)

PMID: [37228984](https://pubmed.ncbi.nlm.nih.gov/37228984/)

An interesting case of unintentional vitamin D toxicity in an infant due to erroneous supplement concentration: a case report

[Nikita Kharal](#), MSc,^a [Anuradha Kadel](#), MSc,^a [Srijana Sapkota](#), MD,^a [Prakash Pokhrel](#), MSc,^a [Sujata Baidya](#), MSc,^a [Machhindra Lamichhane](#), MD,^b [Arun K. Sharma](#), MD,^b [Eans T. Tuladhar](#), MD,^a [Vijay K. Sharma](#), MD,^a and [Apeksha Niraula](#), MD^{✉a}

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Introduction and importance:

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Despite the rare occurrence of vitamin D toxicity in infants, increased use of vitamin D formulations as well as incorrect supplement concentration by manufacturing pharmaceutical companies, has contributed to an increased incidence of vitamin D toxicity. Over-the-counter vitamin D preparation constitutes variable concentrations that can render life-threatening consequences in children.



Conclusion

- ✓ **30 %** of adults in Switzerland **consume food supplements**
- ✓ **Supplement consumers are more likely to lead a healthy lifestyle** (smoke less, exercise more, pay more attention to a healthy diet) than non-supplement consumers
- ✓ **Vitamin and mineral** supplements are most in demand
- ✓ **Intake levels vary greatly** depending on product composition and frequency of use
- ✓ **Risk of overdosing** on vitamins and minerals with a defined UL is low
 - ✓ But: the nutrient intake quantities from the normal diet and from fortified foods are not available for a conclusive risk assessment.



Conclusion

- For healthy people who eat a varied and balanced diet, **food supplements are generally not necessary**
- Nor can they **replace a varied diet**
- A balanced and varied diet in accordance with the Swiss food pyramid already provides the body with **all essential nutrients**
- The temporary intake of a dietary supplement can be useful if individual nutrients are not absorbed in sufficient quantities
- This tends to affect **certain population groups**, e.g. women who wish to have children, pregnant women or older people





Thank you for your attention!

«Online-Umfrage zur Einnahme von Nahrungsergänzungsmitteln in der Schweiz – Schlussbericht im Auftrag des Bundesamts für Lebensmittelsicherheit und Veterinärwesen BLV»

[Umfrage zu Nahrungsergänzungsmitteln \(NEM\) \(admin.ch\)](#)

«Besteht bei der Einnahme von Nahrungsergänzungsmitteln in der Schweiz ein Gesundheitsrisiko? Schweizer Ernährungsbulletin.»

[1_DE_Einnahme_von_Nahrungsergaenzungsmitteln_in_der_Schweiz\(1\).pdf](#)