



**Institute of Sports Science, Karl-Franzens-University Graz**

# Overview of common dietary supplements in Long Distance Triathlon

**– A retrospective survey based on 1200 Long Distance Triathletes**

**Hoeden, D.\*; Fladischer, T.\*\*; Titze, S.\***

\* Institute of Sports Science, Karl-Franzens-University Graz, Austria

\*\*Department of Trauma Surgery, LKH Bruck/Mur; Austria

# Overview:

- ***Background***
- ***Aim of the survey***
- ***Methods of the survey***
- ***Results of the survey***
- ***Conclusion***

## Prevalence of active triathletes

in GER, SUI and AUT



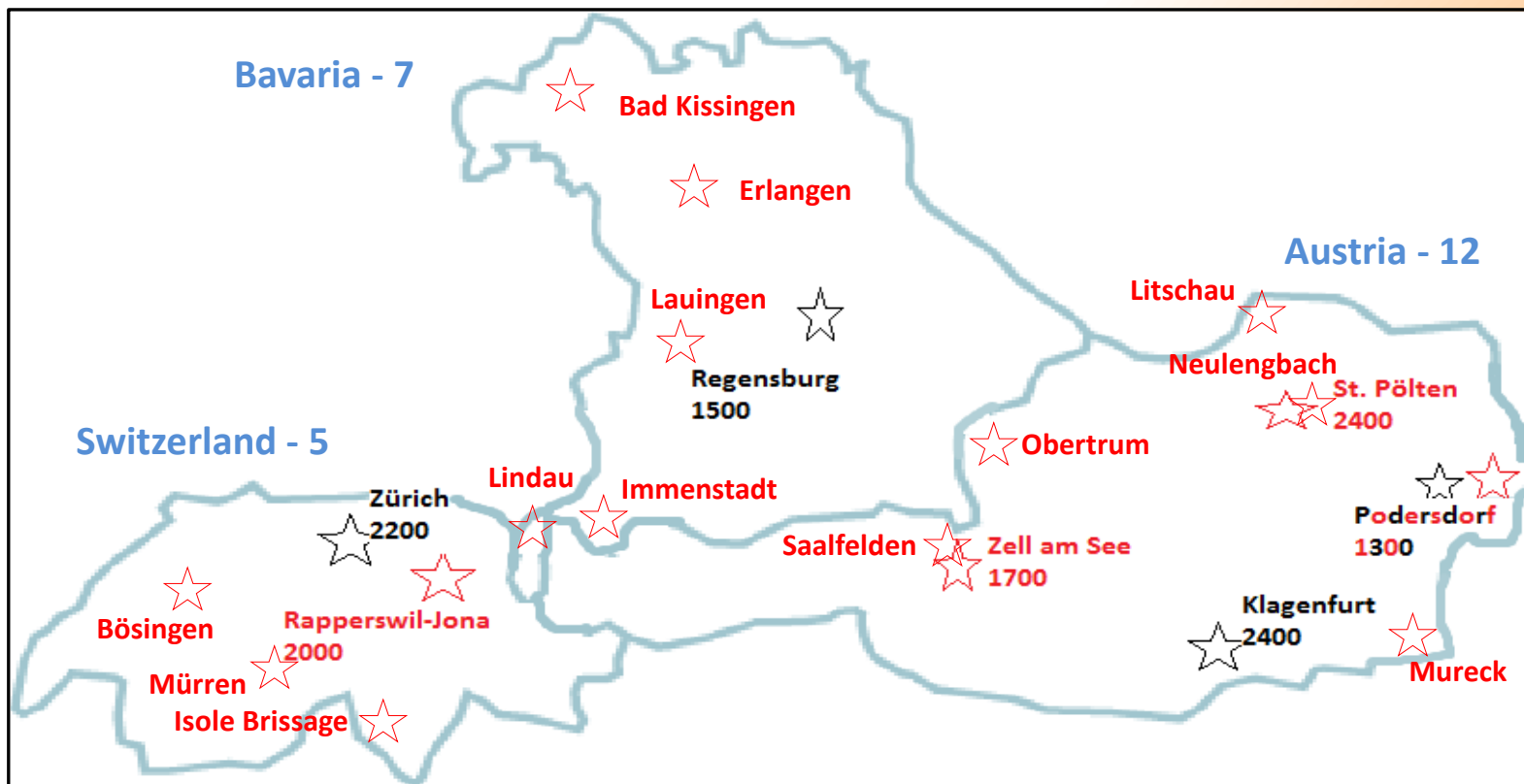
Swiss Triathlon, Zosso

<http://www.finisher-magazin.at/de/finisher/mediadaten/>

[http://www.triathlon-tipps.de/wie\\_hoch\\_ist\\_die\\_zahl\\_der\\_triathleten\\_in\\_deutschland\\_si\\_417.html](http://www.triathlon-tipps.de/wie_hoch_ist_die_zahl_der_triathleten_in_deutschland_si_417.html)

# Local Values of Middle and Long Distance Triathletes:

## Participants in Switzerland, Bavaria, Austria



**~ 20.000  
participants**

— **Long Distance**  
— **Middle Distance**

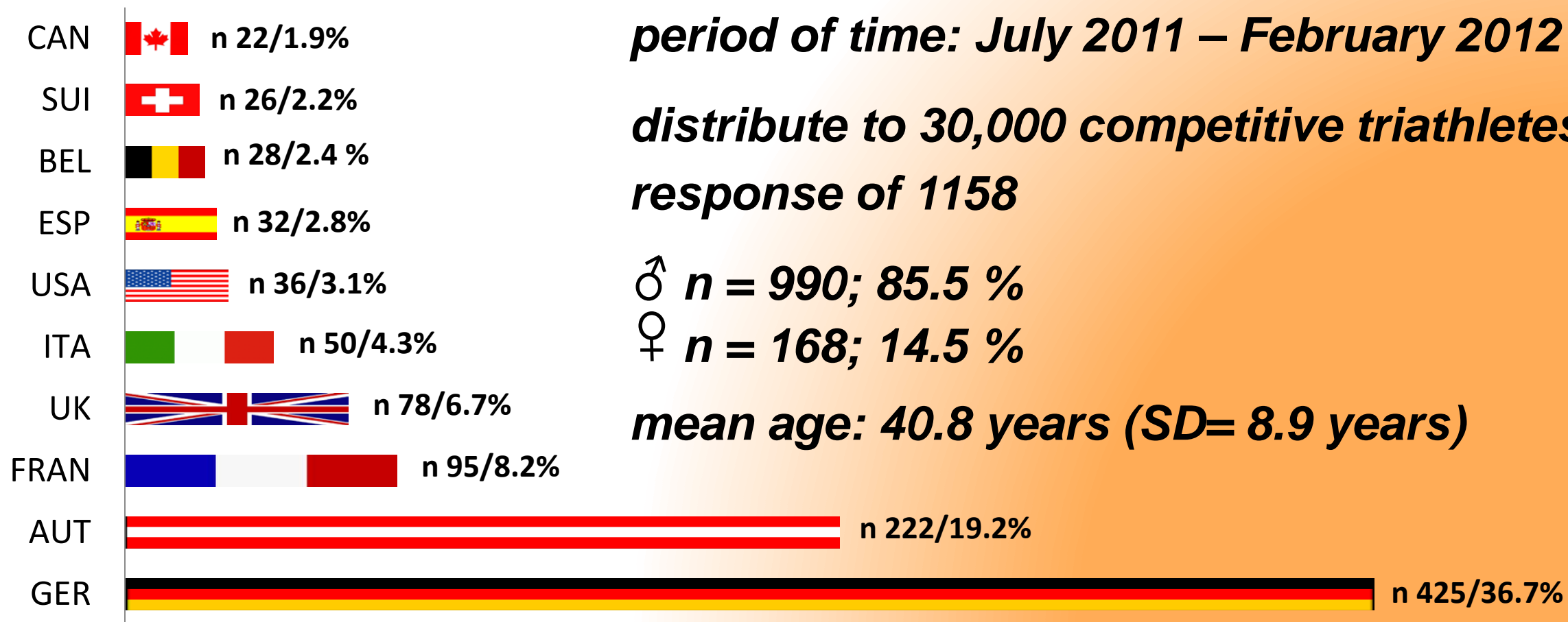
## **Aim of the survey:**

➤ ***A general overview of dietary supplements intake in Long Distance Triathlon***

***with special regards to***

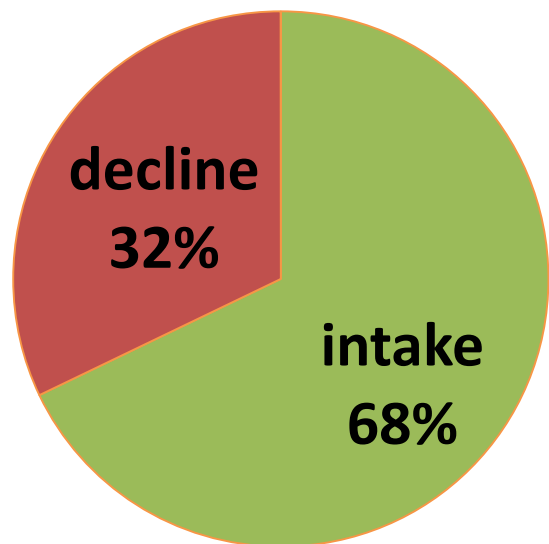
- ***how many triathletes are users***
- ***usage by gender***
- ***overdoses***
- ***guidance by experts***

## Sample:

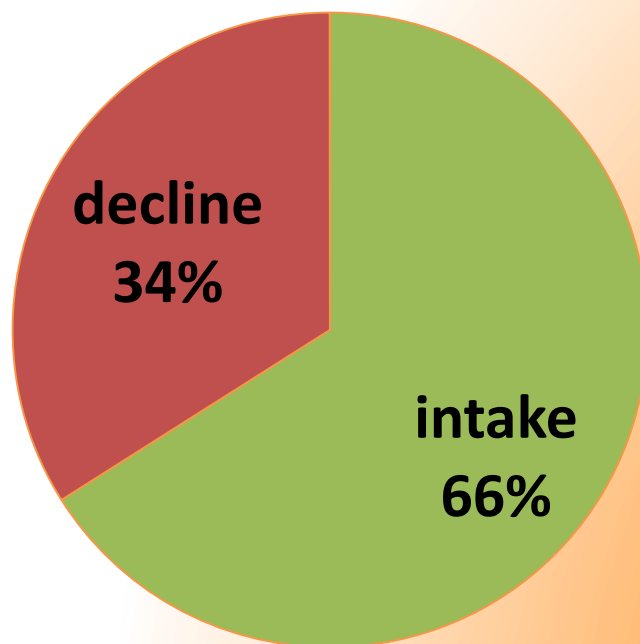


**Dietary supplement intake:**

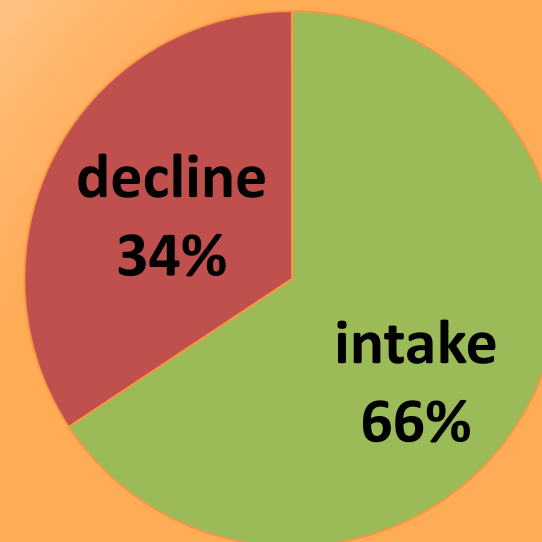
**women (n=168)**



**total (n=1156)**



**men (n=988)**



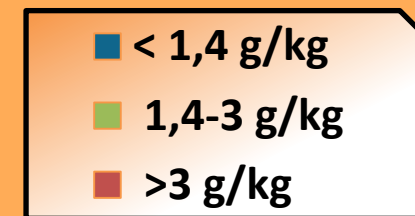
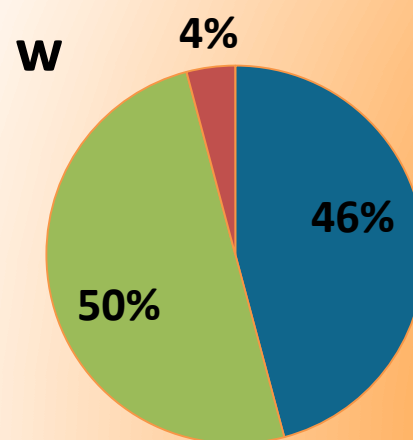
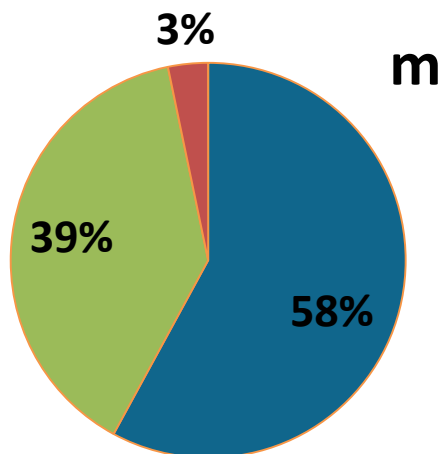
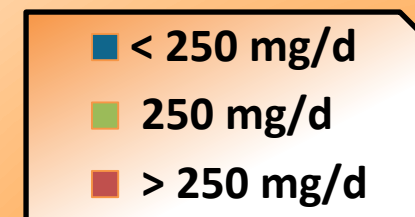
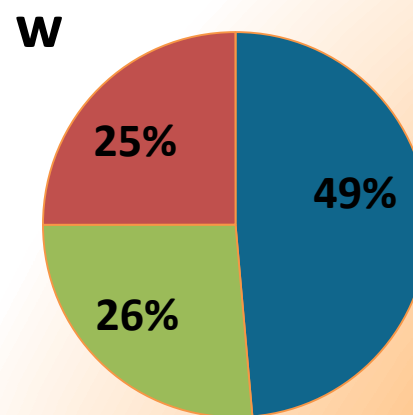
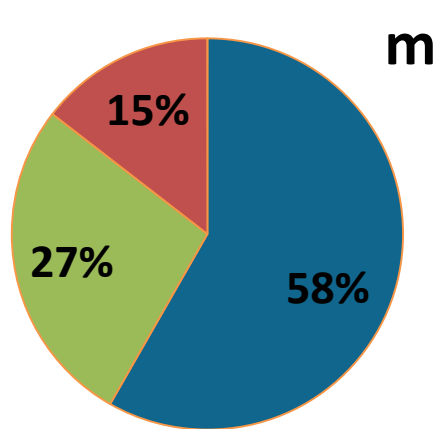
## Ranking of dietary supplements

**M=649; W=114; T=763**

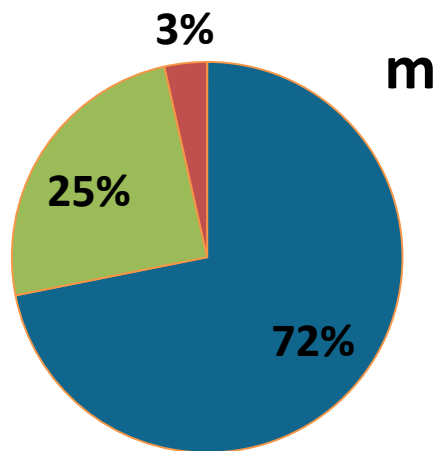
		M/n	W/n	T/n	M/%	W/%	T/%				M/n	W/n	T/n	M/%	W/%	T/%
1.	magnesium	393	72	465	61	63	61		10.	Selenium	126	21	147	19	18	19
2.	vitamin C	292	57	349	45	50	46		11.	base powder	107	22	129	16	19	17
3.	electrolyte	227	40	267	35	35	35		12.	l-glutamine	106	16	122	16	14	16
4.	calcium	207	44	251	32	39	33		13.	l-carnitine	106	16	122	16	14	16
5.	B-vitamins	198	39	237	31	34	31		14.	others	74	15	89	11	13	12
6.	zinc	199	36	235	31	32	31		15.	coenzyme Q10	61	13	74	9	11	10
7.	BCAAs	199	20	219	31	18	29		16.	creatine	77	8	85	12	7	11
8.	essent. aminos.	183	24	207	28	21	27		17.	taurine	63	8	71	10	7	9
9.	vitamin E	165	32	197	25	28	26		18.	colostrum	41	4	45	6	4	6



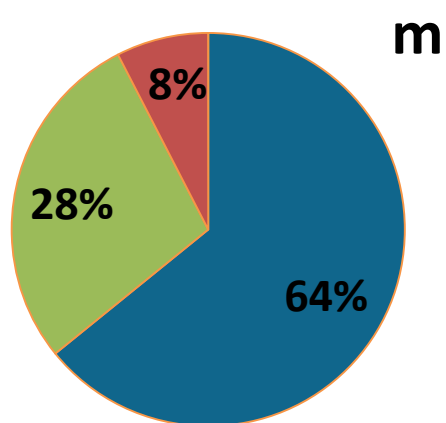
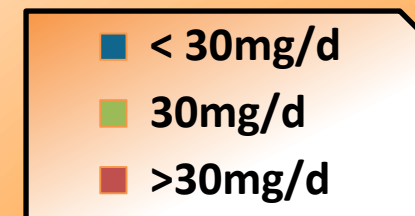
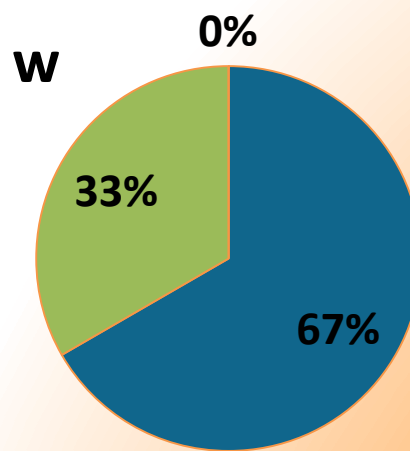
# “Daily” doses of different dietary supplements



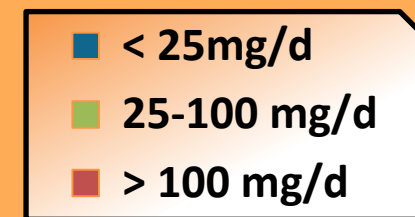
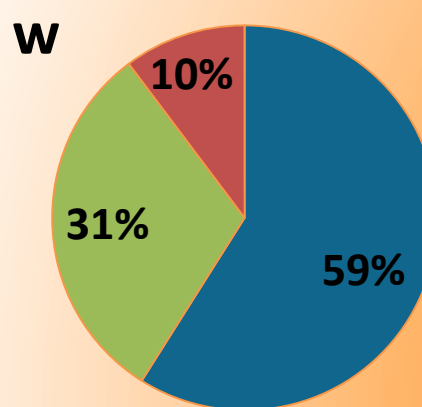
# “Daily” doses of different dietary supplements



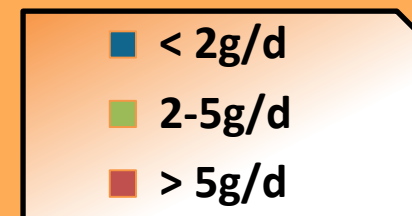
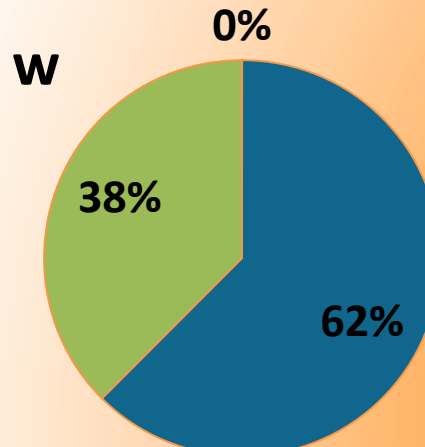
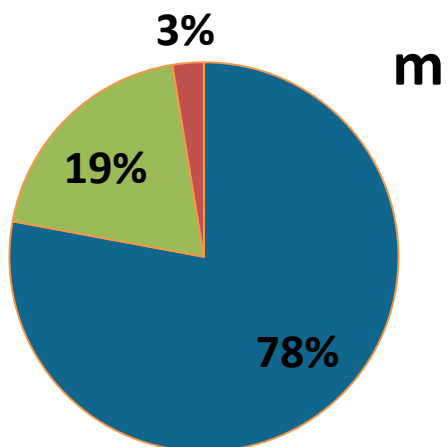
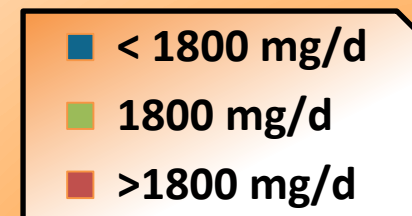
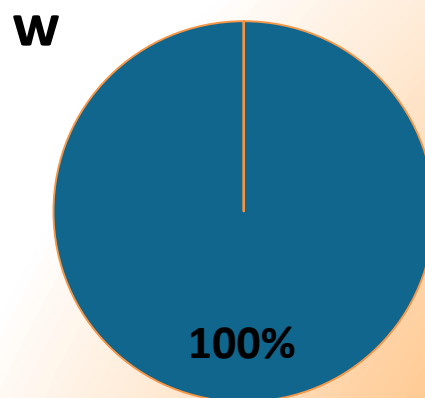
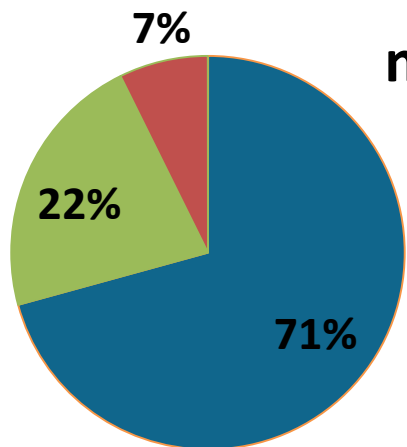
zinc



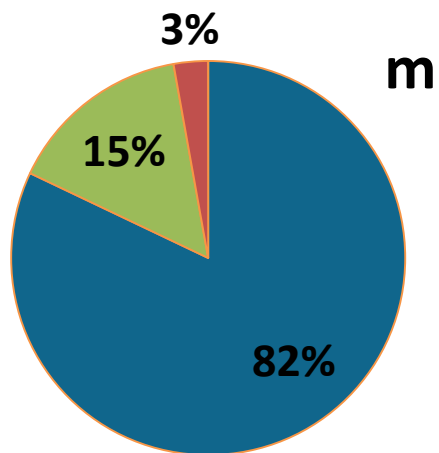
B-vitamins



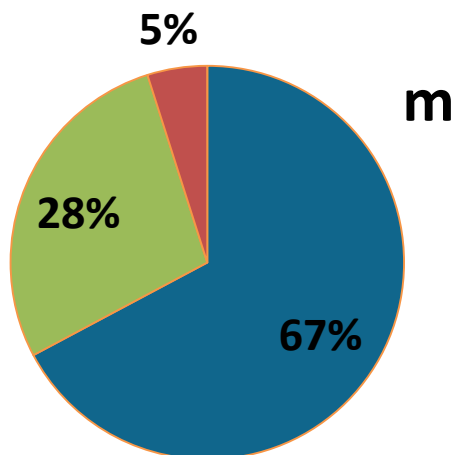
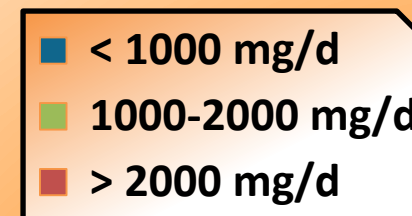
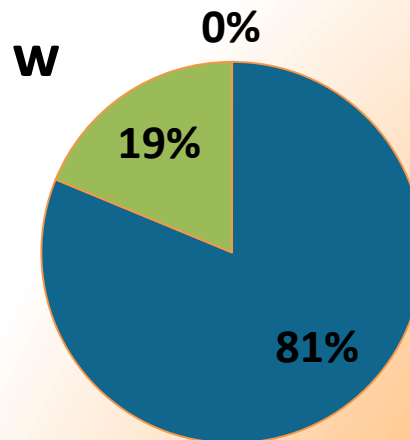
# “Daily” doses of different dietary supplements



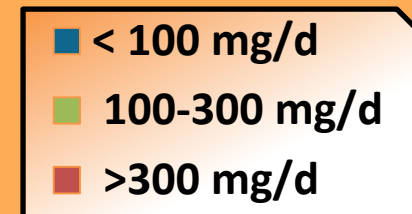
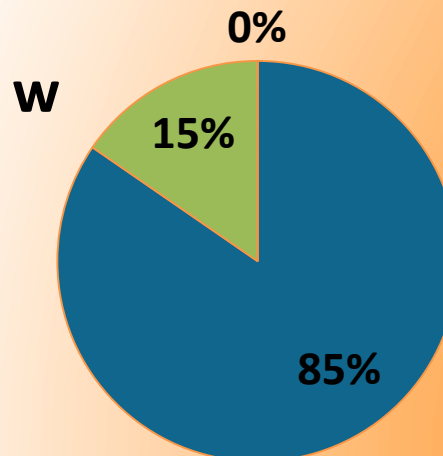
# “Daily” doses of different dietary supplements



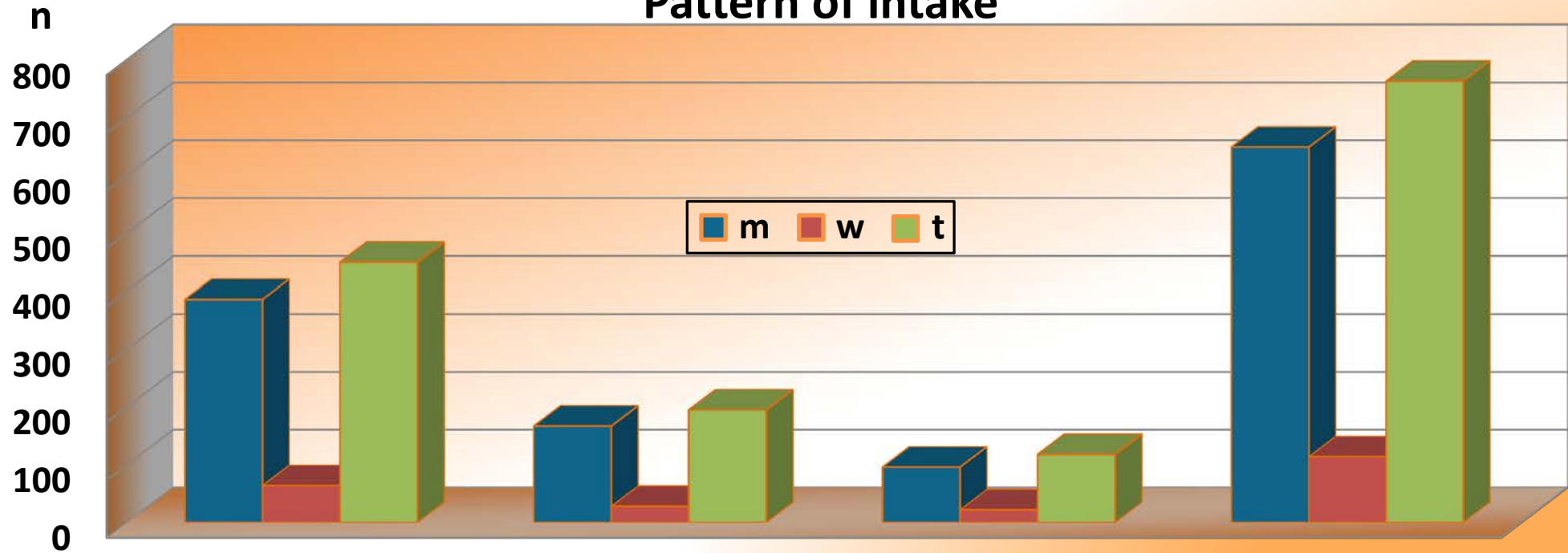
**L-carnitin**



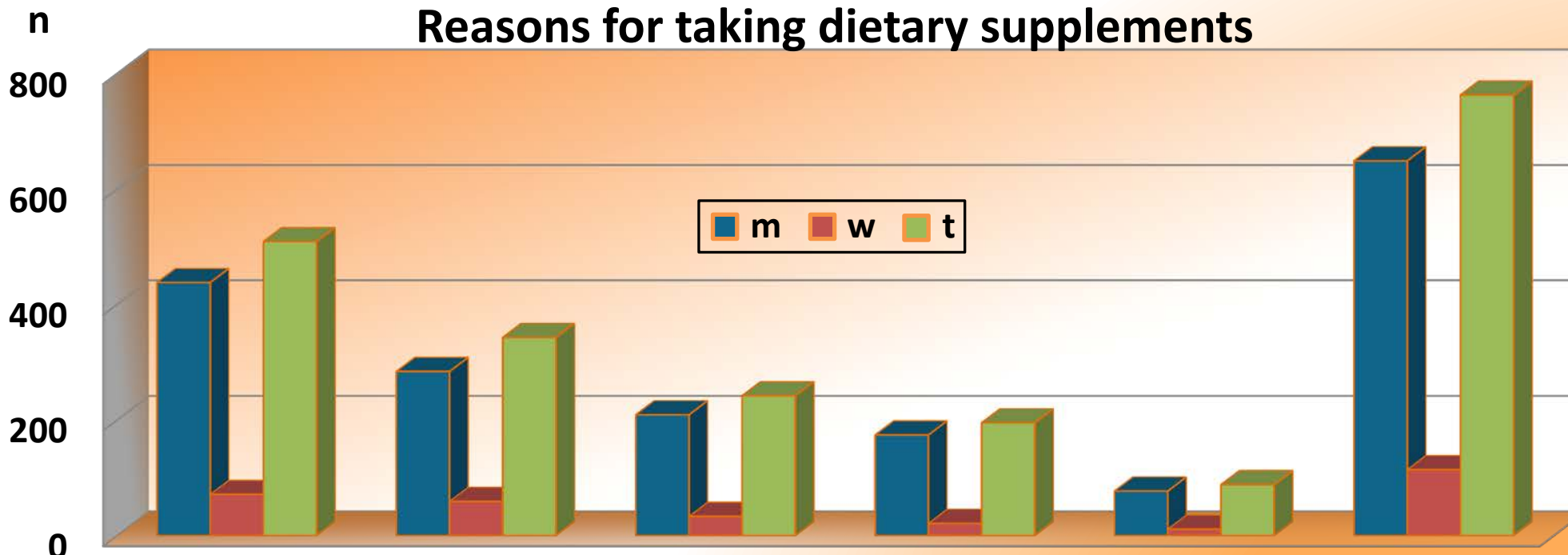
**coenzym-Q10**



## Pattern of intake

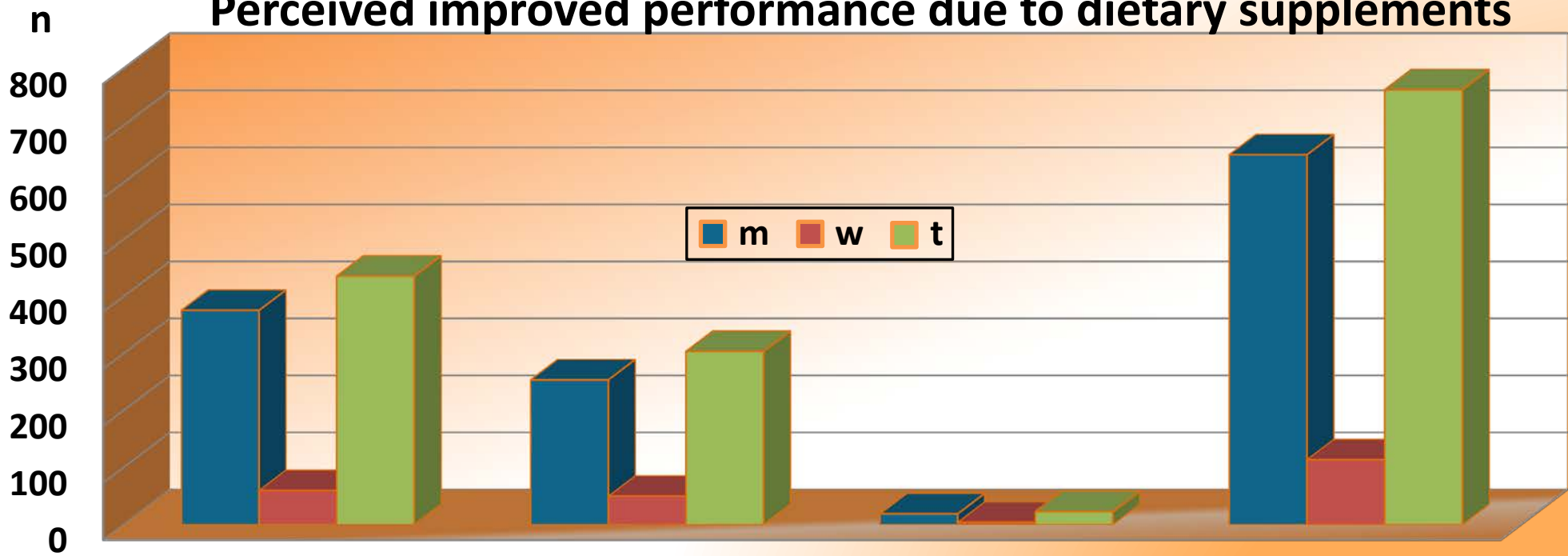


	regularly		before competition		block dietary course		total
	n	%	n	%	n	%	
m	386	39	167	17	96	10	649
w	64	38	28	17	22	13	114
t	450	39	195	17	118	10	763



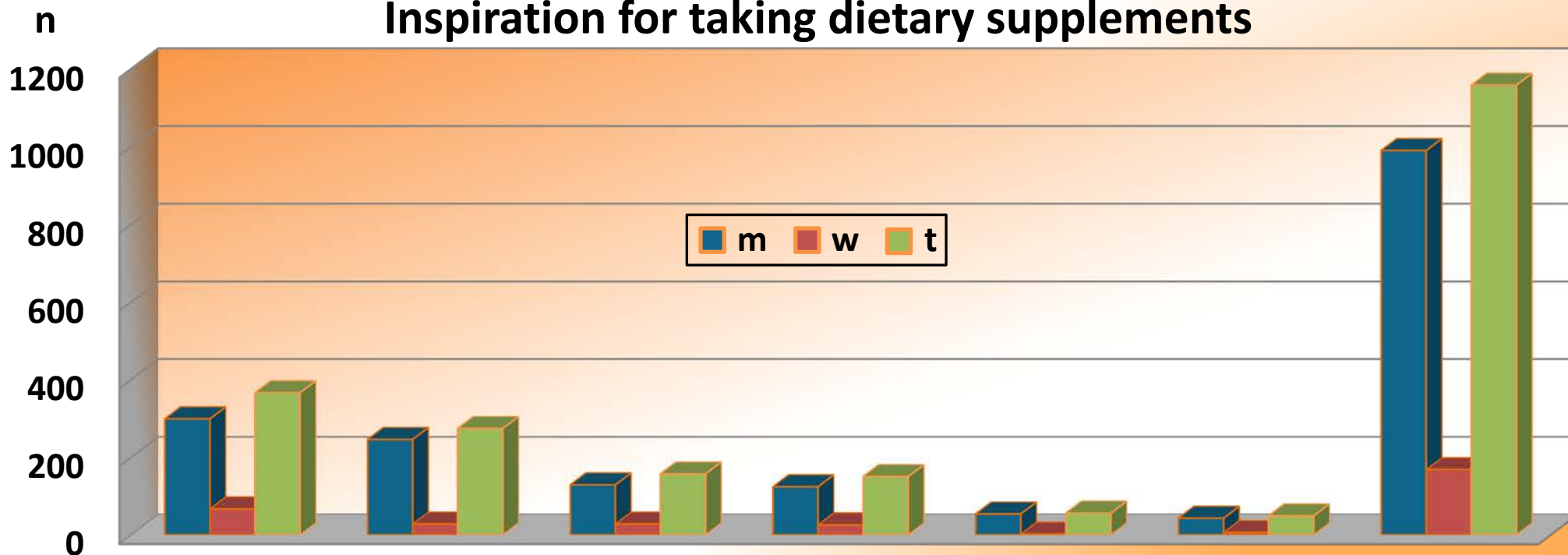
	recovery		illness resistance		injury prevention		endurance		strength		total
	n	%	n	%	n	%	n	%	n	%	
m	438	67	284	44	209	32	174	27	77	12	649
w	71	62	59	52	33	29	21	18	11	10	114
t	509	67	343	45	242	32	195	26	88	12	763

## Perceived improved performance due to dietary supplements



	no		yes		no response		total
	n	%	n	%	n	%	
m	376	58	254	39	19	3	649
w	60	53	50	44	4	4	114
t	436	57	304	40	23	3	763

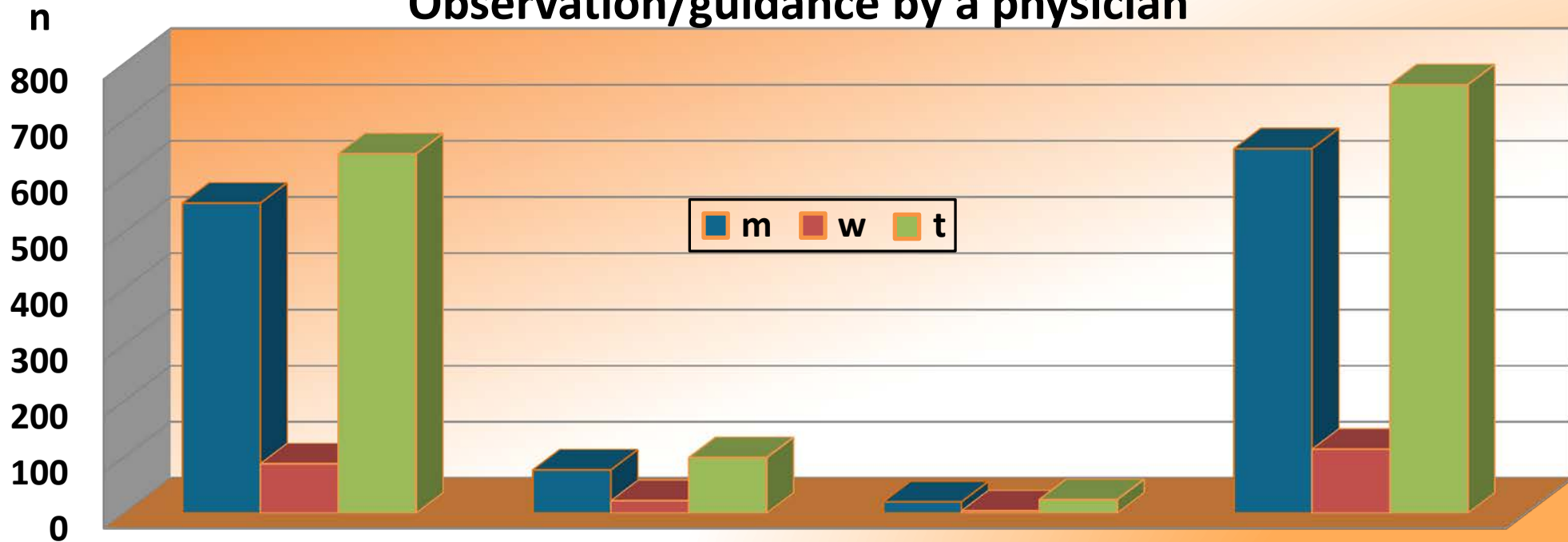
## Inspiration for taking dietary supplements



	own initiative		literature		physician		trainer		pharmacist		physio-therapist		total
	n	%	n	%	n	%	n	%	n	%	n	%	
m	299	46	246	38	129	20	124	19	54	8	43	7	649
w	67	59	28	25	28	25	26	23	2	2	6	5	114
t	366	48	274	36	157	21	150	20	56	7	49	6	763



## Observation/guidance by a physician



	no		yes		no response		total
	n	%	n	%	n	%	
m	552	85	77	12	20	3	649
w	88	77	22	19	4	4	114
t	640	84	99	13	24	3	763

## **Conclusion:**

- ***Overdose***
- ***Guidance by experts strongly recommended***
- ***Overdose can also cause negative effects***
- ***More research is needed in this area***



*Thank you for your attention*



***A retrospective online–survey in cooperation with the  
Austrian triathlon association,  
institute of sport science KF Uni Graz and with  
the organizers of several Middle and Long Distance Triathlon events***