Preferences of dietary supplements in long distance triathlon

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Introduction

The number of triathletes is steadily increasing. Due to the huge energetic requirements of long endurance performances athletes tend to take dietary supplements. The aim of this survey was to examine dietary supplements intake among long distance triathletes with focus on prevalence, overdose, reason(s), recommendation, increased performance and guidance by experts.

Methods

The link of our online-questionnaire, which was translated into five different languages, was sent to 30,000 athletes by email. We did this in cooperation with the Austrian Triathlon Association and organizers of several long distance triathlon events. The questionnaire was answered by 1158 athletes, 990 (85%) male and 168 (15%) female, from 43 nations. The survey took place between July 2011 and February 2012.

Results

Sixty six percent of the athletes reported having taken dietary supplements at least once in their life (Table). Those ingredients, which strengthen the immune system and have a scavengers (antioxidative) function are in the first half of the ranking. Surprisingly, those ingredients that are well known in triathlon sport through advertising are not well-used among the long distance triathletes and are found in the last third of the ranking. This is also true for l-carnitine and coenzyme Q10, which are important for long endurance performances (lipometabolism). A clear gender difference in favour of male participants is clear to see in the case of essential amino acids, especially BCAAs, which support muscle generation and regeneration. Thirty nine percent of all participants take dietary supplements on a regular base, 17% straight before competition and 10% as a block dietary course. Concerning the reasons for taking dietary supplements, 67% take them to improve their regeneration, 45% to increase their resistance to disease and 32% in order to prevent injuries. 40% of the participants noticed an improvement in their performance as a result of taking dietary supplements. The intake is mostly governed by the athletes themselves (48%) and/or supported by literature (36%), followed by counselling from a physician, trainer, pharmacist or physiotherapist. Overall, only 12% of the male and 19% of the female participants take dietary supplements under physician supervision and there is in general a tendency of an overdose.

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

Conclusion

Dietary supplement intake is widely spread among long distance triathletes mainly with the purpose to improve the regeneration. However, overdose of the used dietary supplements occur. As overdose can place an extra burden on the body and can have negative effects, guidance by experts is strongly recommended and more research is needed in this area.