

THE RELATIONSHIP BETWEEN SUPPLEMENTATION AND SPORT

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ABSTRACT

Nowadays, the fitness industry has become a growing industry alongside the nutritional supplements industry within the food industry. Small and large companies are fighting for consumers. They offer products tailored to different training goals, whether sold online or offline. Companies are developing their marketing strategies by observing consumer preferences and habits. But do we need supplementation? Are the products on the market safe? What do we even mean by a food supplement? Is it a good idea to buy supplements that are in line with the latest trends? In this study we will show whether or not supplementation is really necessary for athletes and what determines whether it is.

Keywords: food supplement, sport nutrition, food marketing, consumer preferences, fitness industry

1. INTRODUCTION

These days, more and more people are turning to gyms, which often commonly involves taking supplements. Do recreational, hobby and elite athletes need to take supplements? Are there cases where a varied diet is sufficient? Which nutrients should be included in the diet of athletes and for what purpose? The present study is devoted to answering these questions, among others.

The market for nutritional supplements has clearly grown in recent decades. Week after week, new products are being launched by supplement manufacturers. Each new period has its new 'miracle pills', creating a trend among dietary supplements. Consumers have more and more to look out for. From the nutritional content, to the different brands and formulations, there are many factors that influence why we should or should not choose a product. What we can say is that in this growing market, it is worth treating new products with caution, and if possible, finding out what they are good for. It is also worth considering whether it is really necessary to use a food supplement. If in doubt, it is worth seeking professional help from a doctor or dietician to avoid getting lost in the plethora of supplements.

As well as the source of the supplements you buy, it is also important to make sure that you buy foods and supplements from sustainable sources where possible. The issue of sustainable sports nutrition needs further research, but professionals should take care when preparing diets to ensure that the most sustainable and varied foods are put on the table of the individual athlete.

2. MATERIALS AND METHODS

This paper is based on further research in the literature. In order to keep our research as up-to-date as possible, we have tried to draw on the literature of recent years for the present research. We have used databases that list scientific works such as ResearchGate, Scopus, Google Scholar, among others.

This study is a complementary exploration of the literature review of our qualitative and quantitative research on sports nutrition supplements. As the literature review and market situation require a broadening of this research area, we will continue to conduct further research on this topic.

3. LITERATURE REVIEW

3.1. The market of food supplements

A focus group survey of 25,000 people in 1998 [1] showed that nearly 41% of the people in the study were taking some type of vitamin and other supplements. 46.2% of women consumed such products, compared with 35.3% of men. Typically, the majority of consumers are middle-aged or older women, who typically suffer from arthritis, obesity, high blood pressure, high cholesterol and cancer. And the younger population uses supplements to boost their bodies and immune systems in times of fatigue, exhaustion and stress. The future of the industry is bright, but consumers need to be helped to know exactly what they need, in what quantities, and which products they can use as a preventative measure to prevent illness. Health professionals have a large and important role to play in this. They need to be informed and to know what supplements their patients are taking and why. Professionals also have a very important role to play in this, as they need to be able to assess the biological and psychological value of dietary supplements and what their use means for patients [1].

The more informed consumers involved in sport may notice that more and more companies are entering the market for sports supplements and that manufacturers are trying to come up with newer and newer products. Their marketing tools are reaching a wider and wider range of consumers. In addition to offline and online presence, influencer marketing has become part of today's marketing strategy. Many interesting questions can be asked on the subject. For example, what is the basis on which consumers choose nutritional supplements? How can manufacturers convince consumers to choose their products? Is supplementation important to individuals or is it just a marketing ploy? In addition to the interesting questions, this area requires a great deal of attention as it is a growing industry, and the importance and research aspects of the topic are justified.

Many people may ask whether it is necessary to take supplements or whether it is sufficient to get the nutrients we need from food. Close's 2022 study illustrates the point that it is not always enough to get the nutrients we need from food, as there are cases where it may be necessary to supplement with food. When we talk about food, we mean whole foods and beverages that are not fortified with various minerals, vitamins and other substances contained in food supplements. To avoid doping, experts recommend that nutrients should be taken primarily in the form of food, but it is also accepted that there are substances that should be taken in the form of supplements to improve health and performance. Close et al. have made a total of 6 claims that such supplementation may be necessary. The first of these is that there are substances that may be difficult to get into the body in the required amounts or would result in excessive energy intake. There are also foods that the athletic individual may not like, and foods rich in nutrients that may be needed to a greater extent. The nutritional content and ergogenic benefits of individual foods also vary greatly. Some nutrients are needed in concentrated amounts to promote immune tolerance and/or to make up for deficiencies. Some foods are difficult to consume immediately before, during or after exercise. It is also worth mentioning that in places where food hygiene and contamination may be a problem, tested supplements can help [2].

3.2. Consumer preferences

When looking at consumer preferences, it is worth considering why they choose a particular product when making a purchase. Stimuli and advertising through various online and offline platforms can influence their purchasing decisions. In addition, the experiences of people you know and your own experiences may also play a role in your decision to buy a particular product.

Among other things, we cannot ignore the appearance and packaging of products, because often, in many cases, this is the reason why consumers buy a product. A study from 2023 confirms this, as it plays a major role in profit making. On the one hand, a positive image can be created in the minds of consumers when they see packaging that appeals to them. On the other hand, if designers use eye-catching, attractive designs, they can influence the number of purchases. It is also important that the manufacturer chooses the right packaging

units, as different needs may arise depending on habits and income. The choice of the packaging material itself is also an important issue, as care must be taken for both the product and the environment, as the protection of both is very important. In addition, the label should also be clear about all the information that the consumer needs to know. Here, of course, we must not forget the legislation and regulations in force. The country of origin can also be an important factor, so it should also be clearly indicated. Indications of the quality of the product should also be included on the packaging, in order to stimulate demand for other products from the manufacturer. [3]

Of course, it is not only the packaging that is important in terms of influencing consumer decisions, but also how this and other factors can influence the marketing strategy of different companies. Because if we can understand consumer behaviour and how it is distorted by consumers, we can provide a great basis for different companies to develop their marketing strategies. Because if they examine the factors that influence their decisions, manufacturers can respond as necessary. [4]

Consumer choices have been studied in the field of nutritional supplements. The results of a survey of 273 respondents in Hungary show that nearly 60% of respondents consume dietary supplements regularly or intermittently. Nearly 21% consume these products on a daily basis and nearly 39% on a dietary basis. The 2023 survey shows that women and those with a higher education are the main users of dietary supplements. However, it is important to ensure that this group of conscious consumers does not overdose on various minerals and vitamins, as they feel very knowledgeable on the subject. As a result of the quantitative research, the researchers were able to develop 3 distinct groups using cluster analysis. The members of the "supportive" and "traditionally minded" groups have a positive opinion on supplementation. The same cannot be said for the third cluster, the "opposing" cluster. It can be said that foods that are part of a healthy diet can be seen as a competitor in the market for dietary supplements [5].

3.3. Sustainability and supplementation

Nowadays, it's really important to look at the different aspects of sustainability and the protection of our environment. Of course, the need for this also extends to sports nutrition and supplementation. Consumers who consider sustainability to be an important aspect can also take this into account when choosing the products they want to buy. However, the 2020 study by Meyer et al. does not take a positive view of this issue, as sustainability is very low in sports nutrition recommendations. This is seen as a real research gap by the authors of the article, as there is very little mention of plant-based, whole-food nutrition in the various studies. So more research is needed on the effects of a sustainable diet on the health and performance of athletes. In addition, reducing food waste and the use of packaging materials is another area for further research. [6]

It can be said that depending on the training goal, athletes need to consume 1.2-2.0 g of protein per kg body weight [7][8]. A 2015 study also suggests that further research is needed on plant-derived proteins, but the results of a 3-month study showed that there was no difference in the results of athletes who had muscle gain and strength gains in a study with whey and pea protein groups [9].

It is also worth considering what diets should be followed by sporting individuals. We can point to the flexitarian diet as a win-win strategy for both the individual athlete and the environment. It can meet protein needs and provide adequate protein quality. Furthermore, sustainability guidelines can be met. It is also worth mentioning that in this diet, the athlete can decide whether or not to increase plant-based meals based on his or her own principles [10]

3.4. Consumers and supplementation

It is understandable that the nutritional needs of recreational athletes differ from those of individuals who participate in recreational sports and lead sedentary lifestyles. It is worth investigating these consumption patterns, as this would provide an indication of whether athletes are using certain supplements in accordance with their dietary requirements. It is also worth emphasising and making consumers aware that these products

can be harmful and may not produce the right results if they are not consumed as prescribed. Monitoring these habits can help health professionals to reduce risks and maximise health. Of course, body image can also be a factor influencing the consumption of these products. It would be worthwhile to educate consumers on the appropriate use of supplements to dispel various misconceptions [11].

In 2019, Peter Peeling et al. conducted a comprehensive study of athletic athletes using dietary supplements to achieve and enhance optimal performance. The study addresses the fact that athletes are exposed to a wide variety of nutritional products due to the broad market promising different effects, but there is little evidence on their safety. It also discusses the costs of using dietary supplements, the risk that the expected performance may not be achieved, and the risks of using banned substances, which may result in a ban from sport. The authors thus conclude that sports foods and supplements should be used by athletes with strong evidence that they are safe, legal to use, effective to use and should be carefully tested by the athlete before use in preparation for competition [12].

4. RESULTS AND DISCUSSION

There is a huge range of nutritional supplements on the market for consumers to buy. However, it can be said that not all sports require supplementation. The concept of "food first" should be followed. This means that a varied and balanced diet is the first thing to follow, and that it is only when a high level of physical activity is being performed, or when the athlete needs to eat within a calorie limit and needs to take the necessary nutrients in the form of supplements, that supplements are appropriate.

Of course, the higher the level of sport that someone is involved in, the greater the chance that they will need some form of supplementation. Think of the various martial arts and powerlifters who need to be in a certain weight class. In addition, the strict diet of bodybuilders should not be forgotten. It is also important to take into account the food preferences of the individual athlete, as it would not be pleasant to prescribe a diet that includes foods that are not to his liking.

It is also worth mentioning that many people either overuse supplements or use them inappropriately. Certain periods have their own trends and fashions in dietary supplements. It's always worth treating any new product with caution and buying only from a safe source.

5. CONCLUSIONS

Overall, regardless of the level of sport or activity, it is worth trying to eat a more varied and colourful diet to get the necessary nutrients and minerals into your body in the most natural way possible. Of course, the more sport you do, the higher your physical activity level, the more you need to consume these substances. In cases where the athlete is no longer able to meet their nutrient needs through normal nutrition, it is advisable to opt for supplements. This is because we need to take into account the individual needs of the athlete, including his or her food preferences, his or her food intolerances and food intolerances. In many cases, an increase in one macronutrient may involve an increase in another macronutrient. Consider, for example, if you want to increase your protein intake for an athlete's training goals, and you want to supplement it with, say, oilseeds. However, in addition to being low in carbohydrates and high in protein, these foods are also relatively high in fat. Thus, the caloric needs of an athletic individual would be greatly exceeded. This is a good example of why supplementation is necessary.

We should not overlook the fact that the topic of sustainable supplementation is less researched and that these factors are not really addressed in dietary recommendations. It would be worthwhile to continue to address this in our current consumer society, as the ever-increasing supply could distort or even amplify this effect, and it would be worthwhile to provide consumers with the right education in good time.

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