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## A study of attitude towards use of ergogenic aids among national level players

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### Abstract

The purpose of the study was to study the Knowledge and awareness amongst the sports persons regarding the use of ergogenic aids, a total of 200 (50 from each sport, i.e. Athletics, Shooting, Boxing and Wrestling) male players were purposively selected to act as subjects for the study. The subjects were selected from all over North India in different tournaments/clubs/academies with minimum national level participation. The age of the subjects ranged between 17 to 30 years and the mean age of the subjects was found to be  $20 \pm 2.92$  years. A questionnaire was developed to survey the knowledge and attitude regarding the use of ergogenic aids amongst sports persons of North India. This questionnaire assessed the knowledge of sports persons regarding the type of ergogenic aids, their use and frequency, source of information and knowledge regarding their perceived effects. Thereafter the collected data on the selected parameters was analyzed by Chi Square Test for understanding the divergence of observed results. For better understanding, graphical illustrations of the findings, bar diagrams have been presented. Level of significance was set at 0.05.

**Keywords:** Ergogenic aids, attitude

### Introduction

Ergogenic aid is defined as “any means of enhancing energy utilization, including energy production, control, and efficiency”. The history of ergogenic aid use can be traced back to the superstitions and ritualistic behaviors of athletes. As early as 500-400 B.C., trainers recommended the consumption of certain animal parts to confer agility, speed or strength associated with that animal. Early Greek athletes crudely assessed the correlation between performance and dietary intake and manipulated their diets to improve performance. However, the majority of the research that associated diet and supplements with improved performance comes from the early 20th century. At this time, research was focusing on understanding muscular work, fuel use during exercise, and the specific role of protein fat, and carbohydrates. With the discovery and isolation of vitamins and a better understanding of metabolism, the quest for the competitive edge and ergogenic aids were placed on a “scientific footing” (Applegate, 1997)

Nutrition is increasingly recognized as a key component of optimal sporting performance, with both the science and practice of sports nutrition developing rapidly. Recent studies have found that a planned scientific nutritional strategy (consisting of fluid, carbohydrate, sodium, and caffeine) compared with a self-chosen nutritional strategy helped non-elite runners complete a marathon run faster and trained cyclists complete a time trial faster. Whereas training has the greatest potential to increase performance, it has been estimated that consumption of a carbohydrate-electrolyte drink or relatively low doses of caffeine may improve a 40 km cycling time trial performance by 32-42 and 55-84 seconds, respectively (Jeukendrup, 2001). Evidence supports a range of dietary strategies in enhancing sports performance. It is likely that combining several strategies will be of greater benefit than one strategy in isolation. Dietary strategies to enhance performance include optimizing intakes of macronutrients, micronutrients, and fluids, including their composition and spacing throughout the day. The importance of individualized or personalized dietary advice is becoming increasingly recognized, with dietary strategies varying according to the individual athlete's sport, personal goals, and practicalities (e.g., food preferences). “Athlete” includes individuals

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competing in a range of sport types, such as strength and power (e.g., weight-lifting), team (e.g., football), and endurance (e.g., marathon running). The use of dietary supplements can enhance performance, provided these are used appropriately (Neufer, 1985).

**Objective**

To study the knowledge and attitude towards the use of Ergogenic aids among national level athletes.

**Hypothesis**

It was hypothesized that the national level athletes would have knowledge and Unfavorable attitude towards the use of Ergogenic aids.

**Methodology**

**Selection of the subjects**

The purpose of the study was to study the Knowledge and awareness amongst the sports persons regarding the use of ergogenic aids, a total of 200 (50 from each sport, i.e. Athletics, Shooting, Boxing and Wrestling) male players were purposively selected to act as subjects for the study. The subjects were selected from all over North India in different tournaments/clubs/academies with minimum national level participation. The age of the subjects ranged between 17 to 30 years and the mean age of the subjects was found to be

20±2.92 years.

**Selection of the variables**

Perfection in sports is only achieved when mastery is achieved in every stage of learning. Nutrition is increasingly recognized as a key component of optimal sporting performance, with both the science and practice of sports nutrition developing rapidly. Keeping in mind the feasibility criterion and with the consultation of experts and guide the following variables have been set for the study:

- Demographic Information
- Sports Participation
- Types of Ergogenic Aids
- Use and frequency of ergogenic aids been used
- Origin of their knowledge
- Knowledge about perceived benefits

**Criterion measures**

The questionnaire was developed to survey the knowledge and attitude regarding the use of ergogenic aids amongst sports persons of North India. This questionnaire assessed the knowledge of sports persons regarding the type of ergogenic aids, their use and frequency, source of information and knowledge regarding their perceived effects.

**Results of the study**

**Table 1:** How ergogenic aids improve performance \*Specialization Cross-tabulation

		Specialization					
		Athletics	Boxing	Shooting	Wrestling	Total	
How ergogenic aids improve performance	Increase Performance	Count	8	11	2	2	23
	% within How Ergogenic aids improve performance	34.8%	47.8%	8.7%	8.7%	100.0%	
	% within Specialization	16.0%	22.0%	4.0%	4.0%	11.5%	
	Fasten Recovery	Count	15	3	11	6	35
	% within How Ergogenic aids improve performance	42.9%	8.6%	31.4%	17.1%	100.0%	
	% within Specialization	30.0%	6.0%	22.0%	12.0%	17.5%	
	Build Muscles	Count	11	4	7	1	23
	% within How Ergogenic aids improve performance	47.8%	17.4%	30.4%	4.3%	100.0%	
	% within Specialization	22.0%	8.0%	14.0%	2.0%	11.5%	
	Lose Weight	Count	3	11	7	5	26
	% within How Ergogenic aids improve performance	11.5%	42.3%	26.9%	19.2%	100.0%	
	% within Specialization	6.0%	22.0%	14.0%	10.0%	13.0%	
	Decrease Stiffness	Count	7	4	1	9	21
	% within How Ergogenic aids improve performance	33.3%	19.0%	4.8%	42.9%	100.0%	
	% within Specialization	14.0%	8.0%	2.0%	18.0%	10.5%	
	Give me an energy boost	Count	2	7	0	11	20
	% within How Ergogenic aids improve performance	10.0%	35.0%	0.0%	55.0%	100.0%	
	% within Specialization	4.0%	14.0%	0.0%	22.0%	10.0%	
	Decrease chance of injury	Count	2	0	5	8	15
	% within How Ergogenic aids improve performance	13.3%	0.0%	33.3%	53.3%	100.0%	
% within Specialization	4.0%	0.0%	10.0%	16.0%	7.5%		
Increase muscle strength	Count	1	1	0	5	7	
% within How Ergogenic aids improve performance	14.3%	14.3%	0.0%	71.4%	100.0%		
% within Specialization	2.0%	2.0%	0.0%	10.0%	3.5%		
Increase oxygen uptake	Count	0	2	13	1	16	
% within How Ergogenic aids improve performance	0.0%	12.5%	81.3%	6.3%	100.0%		
% within Specialization	0.0%	4.0%	26.0%	2.0%	8.0%		
Improves Immune system	Count	1	7	4	2	14	
% within How Ergogenic aids improve performance	7.1%	50.0%	28.6%	14.3%	100.0%		
% within Specialization	2.0%	14.0%	8.0%	4.0%	7.0%		
Total	Count	50	50	50	50	200	
% within How Ergogenic aids improve performance	25.0%	25.0%	25.0%	25.0%	100.0%		
% within Specialization	100.0%	100.0%	100.0%	100.0%	100.0%		
Pearson's Chi-Square		108.686*	0.000				
Phi Test		0.737*	0.000				
Cramer's V		0.426*	0.000				

Table no 1 clearly indicates the cross tabulation of Game of Specialization and the fact that how ergogenic aids improve

performance, which shows that sub categories of choice of sports i.e. Athletics, Shooting, Boxing and Wrestling are

having different opinions regarding the benefits of using ergogenic aids, the Pearson's Chi-Square value is found to be 108.686\*, that is significant at 0.005 level, Since, the Chi square is significant the hypothesis earlier set for the opinion of the sports persons regarding the fact that how ergogenic aids improve sports performance is independent to the specialization is not accepted and therefore opinion regarding the fact that how ergogenic aids improve sports performance is dependent to the specialization of sports, Moreover, the Phi (0.737\*) and Cramer's V (0.426\*) tests of the strength of association shows that a good strength of association is observed amongst the variables.

### Conclusion and Discussion

When we talk about the usage of ergogenic aids on regular basis majority of the sports persons said yes they take ergogenic aids on regular basis, different type of ergogenic aids such as sports drinks, caffeine, Nutritional supplements, pain killer analgesics, electrolyte, antioxidants and amino acids moreover majority of the sportsperson were found using such ergogenic aids several times a week, the reason behind the fact is that majority thinks that ergogenic aids improve sports performance, when we asked how ergogenic aids improve performance several different aspects such as they increase performance, they fasten recovery, they build muscles, they lose weight, they decrease stiffness, they give an energy boost, they decrease chance of injury, they increase muscle strength, they increase oxygen update and finally they improve immune system.

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