

# A STUDY OF PHYSIQUE, BODY COMPOSITION AND DIETARY INTAKE OF KABADDI PLAYERS OF PUNJAB

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## ABSTRACT

*The purpose of the study was to analyze the Body Composition and Dietary intake of Punjabi male Kabaddi players ranging in age from 25 to 35 years. The study was conducted on 30 male kabaddi players. The subjects were taken from Baba Sihan Singh Gill Academy, Sidhasar, and District Ludhiana. Various anthropometric measurements like height, weight thickness of skin fold from biceps, triceps, subscapular and suprailiac were taken on each subject using standardized techniques. Dietary record of each subject was taken for three consecutive days using recall method. MSU nutriguide software was used to analyze the diet. Results indicated that the percent energy contribution of carbohydrates in daily diet was observed to be 49.39% while they should consume 60% carbohydrates in their diet. However kabaddi players were taking 35.18% fat, which was 5.62% more than the recommended value of 30%. Due to more fat ingestion kabaddi players were overweight they possessed BMI 26.67kg/m<sup>2</sup>.*

**Keywords:** Optimal nutrition, Cognitive abilities, Body composition, Dietary intake.

## INTRODUCTION

Indigenous games are commonly known as rural games. These rural games represent reflection of culture of that particular state or nation. Kabaddi is one of the most popular of folk games in the world, mainly in India. Kabaddi is attacking and defending game played between two teams having seven players each. In India, these rural games generate a tremendous interest because these sports neither requires a lot of money nor fanfare or colorful togging up, still these games helps to build stamina, sharpen the cognitive abilities and create a spirit of sportsmanship required in various facets of life singh and singh (2013), jaipal and siwah (2013).

Kabaddi is a very strenuous outdoor game that required physiological parameters like strong long capacity and cognitive abilities like reaction time & co ordination for this. To achieve these fitness components nutrition and training work together synergistically. Therefore, just as we have optimal training, one should have optimal nutrition. According to Burke (1995), a student athlete may not be adequately nourished due to poor understanding of sports nutrition principles. Hornak (1997) stated that nutrition education is a key element in promoting life long healthy eating and exercise behaviors. Planning is all important when balancing training and eating schedule of a player. It emphasizes the fact that a trainer or coach must recognize the nutritional status of a player.

## **MATERIAL & METHODS**

The study was conducted on 30 kabaddi male players ranging in age from 25 to 35 years. The subjects were taken from Baba Sihan Singh Gill Academy, Sidhsar, Dist. Ludhiana. Various anthropometric measurements such as height, weight, skin fold thickness like biceps, triceps, subscapula and suprailliac skinfold were taken on each subject using standardized techniques (Weiner, J.S. & Lourie (1969). MSU nutriguide software was used to calculate % contribution of carbohydrates, fats and protein in daily diet of subjects. Body composition was calculated using the formula by Siri's equation (1956)

## **RECORDING OF DAILY DIETARY INTAKE**

Information related to the daily dietary intake content was obtained from dietary records of the subjects. Dietary record of each subject was taken for three consecutive days using recall method. From this information average daily dietary intake of nutrients was calculated using MSU nutriguide software. Mean values was obtained by using statistical package (SPSS Version 10)

## RESULTS & DISCUSSION

The purpose of the study was to investigate the Body composition and dietary analysis of Punjabi male kabaddi player. The results of the present study were described as follows:

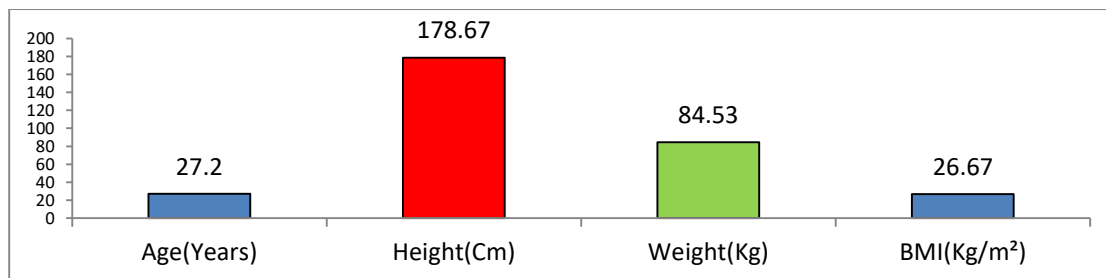


Figure 1: Age (years), Height (cm), Body Weight (Kg) and BMI (Kg/m<sup>2</sup>) of male Kabaddi players

Figure 1 depicts mean decimal age of kabaddi players of the present study was recorded 27.2 years. Kabaddi players of the present endeavor were having mean body height 178.67cm ( $\pm 5.9$ ) and 84.53 kg ( $\pm 9.16$ ) as mean body weight. The mean BMI value 26.67 kg/m<sup>2</sup> ( $\pm 2.19$ ) indicated that these players were crossed the normal limits of BMI and they were in overweight zone of BMI.

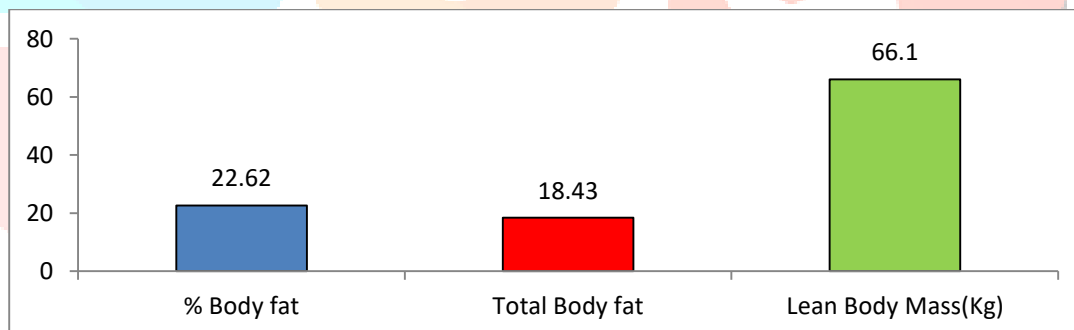


Figure 2: Body Composition of male Kabaddi players

The analysis of body composition of present kabaddi males showed that these males possessed a mean value of 22.62 ( $\pm 1.42$ ) for percent body fat. These subjects had 7.62 % more body fat when compared with normal values for % body fat given by Rols and Word (1982). In terms of absolute value for total body fat (kg) these subjects were found to possess 18.43kg ( $\pm 2.49$ ) total body fat and 66.1kg ( $\pm 7.03$ ) Lean body mass.

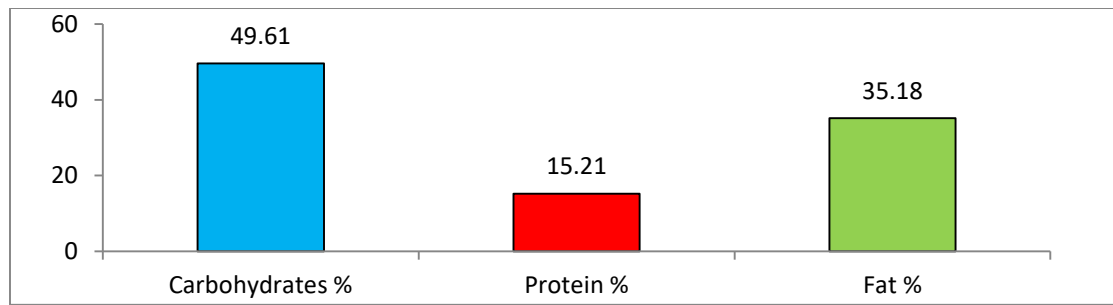


Figure 3. Percentage contribution of different macronutrients towards total energy intake

Figure described that subjects of the present study were derived total energy from carbohydrates, proteins and fats. Out of the total energy intake 60% should come from carbohydrates but in these kabaddi players only 49.61% energy was contributed by carbohydrates. Proteins contribute 15.21% in total energy intake while recommended intake was 10% therefore kabaddi players of the present study were ingesting 5.22% more proteins.

Out of the total energy intake 20-30% should come from fats. However Punjabi kabaddi players of present study were taking 35.18% fat which showed that these players were ingesting 5.18% more fat that lead to high percentage of body fat (22.62%).

Carbohydrates play a vital role in providing fuel during exercise. Sports nutritionists have suggested that people participating in daily exercise program should increase the carbohydrates in their diet from 58% to 70% of the total calories consumed, while reducing fat intake to 18% of total caloric intake. But, the present picture of macronutrients taken by kabaddi players of Punjab showed a very miserable condition. As, carbohydrates were key energy source for muscular contraction these players were ingesting approximately half of the required carbohydrates.

Therefore, it was concluded that these players should increase carbohydrate intake while reducing fat and proteins intake simultaneously to attain an optimum value of percent body fat which ultimately affects the performance of kabaddi players.

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