International Journal of Physical Education and Sports Sciences
Vol. 11, Issue No. 18, (Special Issue) January-2017, ISSN 2231-3745

Components of Physical Fitness, Diet and Nutrition Required For an Athlete

Mr. Poornabodha Kadagadkai*

Physical Education Director, KLSGIT, Belagavi

Abstract – Health is wealth. Good health can be achieved by regular practice of yoga, physical exercises and proper nutritious diet. The regular practice controls the emotions, produces mental peace and distributes prana evenly throughout the body. The physical fitness components enhance health as well as skills. Health related fitness components that are related to how well the systems of our body work. Skill related fitness which forms the basis for successful sport or activity participation. No sportsperson or an equally active person would like to lose out on their activities because of lack of nutrients. For this, efficient sports nutrition chart may be require which takes care of all the nutrients like proteins, fats, carbohydrates, minerals and vitamins. The Vegetarian diet plan for weight loss is not just to lose weight, but it is also a maintenance method for a slim and proportionate body. Along with these, it will help us to practice eating vegetables and fruits which will help to boost up the metabolic rate. Vegetarian diets and weight loss go hand in hand. It is the healthiest and the fastest way to shed pounds. This vegetarian diet program has become famous around the world. Perhaps more than any other food philosophy, the healthy nutrition is a repository of love-filled wisdom, designed to calm the mind and prepare the body to receive nourishment. According to O.M. Aivanhov. "Eating is a magic ritual during which the food becomes transformed into health, force, love, light. While you eat…think of …food with love, for that will make it open its treasures to you." [Living Yoga]. "The Bhagavad Gita tells us that if the cook who prepares the food is not of a loving, calm nature, the food won't benefit you – spiritually, mentally, or physically." [Dr. K. L. Chopra, cardiologist .

----------♦----------

INTRODUCTION

Physical fitness is the ability to carry out daily tasks and routine physical activities without undue fatigue. While too much reliance on technology could make us less fit, we see that we can improve physical fitness through the performance of different exercises. In the most general terms, a fit person is able to perform tasks with more sustainable energy and for longer periods than an unfit person. But, fitness is more than just the ability to work longer; in fact, it includes a number of components, one of which is **cardiorespiratory endurance**. This is a measure of circulatory and respiratory system's ability to deliver oxygen and nutrients to and eliminate waste products from cells. Our cells need oxygen and nutrients in order to fuel our muscles during periods of physical activity. When our cells work they produce wastes that need to be transported away. How efficiently our body does these tasks is a measure of our cardiorespiratory endurance. Jogging, riding bicycle, rowing a boat, swimming, aerobic exercises etc. are some of the exercises which strengthens our heart and lungs by making them work harder. Did you ever hear that really fit athletes have very low resting heart rates? That's because a high level of fitness leads to a strong heart, which is able to pump a lot of blood with fewer heartbeats. Other health related physical fitness components are: **Body Composition** is the relative percentage of body fat compared to lean body mass (muscle, bone, water, etc). **Flexibility** is the range of movement possible at various joints. **Muscle strength**, which is the ability of a muscle or group of muscles to exert force against resistance. Having greater muscle strength enhances physical fitness because it allows you to more easily perform tasks such as pushing, pulling and lifting. **Muscle endurance** is yet another component of physical fitness. It is defined as the ability of a muscle or group of muscles to exert force for extended periods. The skill Related fitness components are those aspects of fitness which form the basis for successful sport or activity participation. **Speed**: The ability to move quickly from one point to another in a straight line. **Agility**: The ability of the body to change direction quickly. **Balance**: The ability to maintain an upright posture while still or moving. **Coordination**: Integration with hand and/or foot movements with the input of the senses. **Reaction Time**: Amount of time it takes to get moving. **Power**: The ability to do strength work at an explosive pace.

Diet and nutrition - In **nutrition**, **diet** is the sum of food consumed by a person or other organism. The

word **diet** often implies the use of specific intake of **nutrition** for health or weight-management reasons. Choose baked or grilled food instead of fried when you're eating out and implement this at home, too. Make water and fat-free or low-fat milk your go-to drinks instead of soda or sweetened beverages. Serve fruits as everyday desserts—like baked apples and pears or a fruit salad.

Performing at our athletic best starts with a healthy diet. Getting the proper nutrition is essential for your body to operate at its peak capacity. The key is to eat a well-balanced diet consisting of carbohydrates, protein, vitamins, fiber and healthy fats. You also need to eat more than the average person, but be sure to make healthy food choices for the best results.

MEAL FREQUENCY

You can benefit from increased energy levels throughout the day by eating frequently. Eating every two to four hours, or the equivalent of four to six meals a day, is ideal for most athletes. By eating smaller meals more frequently, you can meet the daily calorie requirements your body needs to perform, keep your metabolism high and maintain a steady blood sugar level. Consuming foods and drinks filled with sugar, such as soda, can cause blood sugar spikes and is not ideal for athletes who rely on endurance or prolonged energy sources.

BREAKFAST

You need plenty of carbohydrates and protein for breakfast after a good night's sleep. Some good food choices include fruit, oatmeal, whole-grain cereals, skim milk, eggs, turkey bacon and, for vegetarians in particular, soy products. Breakfast will help give you energy right from the start of the day. Eat a small snack two to three hours after breakfast to keep your energy levels high.

LUNCH

As an athlete, you need to eat a low-calorie meal for lunch that consists of fruits and vegetables. A light pasta dish is usually a good choice. A chicken Caesar salad is also a nutritious source of protein, vitamins and minerals that is low in calories. The key at lunchtime is to maximize the amount of nutrients you consume while not going overboard on your calorie count. Eat a low-calorie snack in mid-afternoon.

DINNER

Dinner is the final meal of the day and it should be well-balanced and rich in protein, fiber, healthy fats, vitamins and carbohydrates. An effective sample menu would include a chicken breast, green beans, whole-wheat bread or rice and a piece of fruit for dessert. Avoid eating late; if you eat a dinner high in fiber it will help curb your appetite before bedtime.

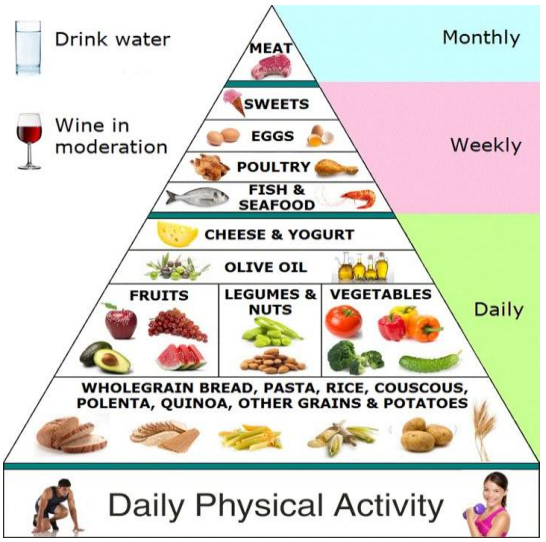
Each sports person will have different dietary requirements depending on Training, Age, Sex, Body size, sports played and environment for training and competition.

Intake	Training	Competition				
		Before		During	After	
	Daily	2-4 hours	1 hour	ea. 15-60 min.	20 min.	1-4 hours
Fluids	> 1 liter	500 ml [3]	300-500 ml [4]	150-350 ml [5]	See Carbs	See Carbs
Carbs	6-10 g/kg [1]	200-300 g [2]	1-4.5 g/kg [2]	30-60 g/hr.	1 g/kg [6]	1 g/kg [7]
Protein	1.2-1.6 g/kg	Med Protein	Not Required	See Fluids [5]	8-10 g	8-10 g/ hr.
Fat	>1 g/kg	Low Fat	None	None	Low Fat	Low Fat
Glycemic Index	Low-Med	Low-Med	Low	Med-High	High	Med-High

Recommended Nutrients for Training and Racing (Endurance Athletes)

1. 8-10 g/kg during heavy training and competition. Req'd. for complete resynthesis (20 hrs).
2. 1 g/kg 1 hr. prior, 2 g/kg 2 hrs. prior, 3 g/kg 3 hrs. prior, etc.
3. 500 ml 2 hrs. prior.
4. 300-500 ml 15-30 min. prior.
5. 150-350 ml every 15-20 min. Accelerade Sports Drink contains protein.
6. 1 g/kg within the first hour.
7. 1 g/kg over next 4-6 hrs.

Low Carb= 10% caloric intake, Med Carb=60% caloric intake, High Carb= 90% caloric intake.



No fitness – No peace, Know diet & nutrition – Know your strength, now health – Now peace.

REFERENCES

O.M. Aivanhov

Dr. K. L. Chopra, cardiologist

Daily Meal Plans for Athletes by JOSEPH EITEL

Corresponding Author

Mr. Poornabodha Kadagadkai*

Physical Education Director, KLSGIT, Belagavi

E-Mail – venkatachalapathi22@yahoo.co.in