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VALUE OF NUTRITIONAL ASPECTS IN DIET AND PROBABILITY OF INJURY IN SPORTS OF GOVERNMENT AND PRIVATE SCHOOL STUDENTS: A COMPREHENSIVE ANALYSIS

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ABSTRACT

There is cost of eating every bite of food in sports world. As different sports persons takes different types of food items in diet that depend on their society, culture, geographical area etc. For example in South India rice and fish is available in buffer whereas in Northern Indian states of Punjab and Haryana there is wheat grain in their food menu. Similarly in western Rajasthan Maize and millet founds in the food plate of mostly population. Again this intake of nutritional by human body or we can say school students is directly linked with probability of injury. Because it is consideration in the field of sports that, the nutritional elements and the probability of injury are interrelated. So there are different reasons for taking different type of nutritional elements by school students that includes like geographical areas, living standard, richness and poorness, environment and Society for government and private school sports students. In this article we will correlate the nutritional aspect and probability of injury of Government and private school sports student's by uses of the data of their diet plans.

Keywords: *MDM, HM, Discus Throw, Hammer Throw, Javelin Throw, Collagen, Saturated Fats*.

Introduction

As we see in government and private schools there is lot of difference in food habits. Private school students likes fatty and fried food items as Burger, pizza etc. whereas Government School sports students depends on the foods like milk, curd, vegetables and pulses that are found in homes at their villages. There is reason behind this as big private schools have a large platform of sports facilities and also have students from rich families and also these schools have all facilities of their own personal big canteens having all options of fried fatty, baked type food items. Again these big private schools are located in big cities and have freedom to their students for weekend outing. So the student travels to malls and other food shops of pizza burger and other fried items. The sports persons of private schools have highly concentration of fried and fatty foods in their daily routines. As belongs to rich families these students of private schools have highly pocket money and all this spend on fatty- fried food items.

The condition of government school sports students is totally different and opposite to those by private schools. Sports activities held in Government schools in India is found in different format and conditions. For example if a sports person played International from any government school of village in any event, then only that event becomes famous in that government school of that village. And the new comers became only interested in that famous event. There are many examples of that Gagadwas village of Rajgarh Tehsil in Churu District of Rajasthan. Throwing events of athletics are very famous like discus throw, hammer throw, javelin throw etc. It became possible after 2 throwers participate in international events from that village. Similar example is of Shahabad Markanda village in Kurukshetra district of Haryana. From that small village some players participate in Indian hockey team. From that day to today hockey became their village game. And at present there is Astro turf ground of hockey in village also. Not only men but also women played in Indian National Hockey Team. Rani Rampal of Shabad village was Indian hockey captain of India. As two or three events found in Government schools of villages becomes profitable for sports students, as due to single events or single Sports the seniors of sports have proper

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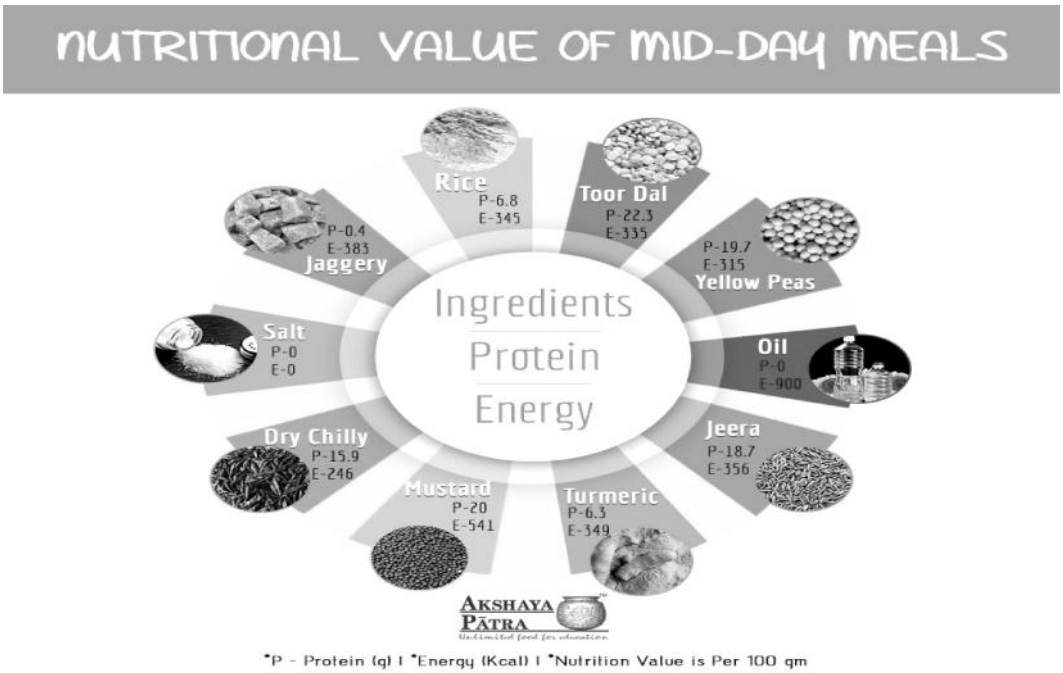
knowledge about that sports, its exercises and its related muscle injuries. So the seniors gave knowledge to their juniors. This helps School sports students a lot to prevent from sports injury. As due to located away from big cities and situated in villages the diet plan of sports person students have not included junk food, fatty and fried food. Their diet plan includes milk, butter, curd, pulses, green vegetables etc. The chart of government school sports students is full amount of energy, protein and vitamins minerals due to village effect. This diet comes from the village homes as we know in villages every house have livestock's, but this is not in case of poor villagers, a exception case here. About 80-90% village population have life stocks in their home. So the government school sports students have benefit of their oven home meal plus mid day meal given by Government of India. Here we will see nutritional value of mid day meal given by government.



To prevent from injuries there are 7 ways that helps strong defence against muscle strains and tears and also properly nourished the sports persons to recover faster from the injury they already effected from. These 7 ways are as:

- **Hydration of Body:** Furthermore, that does not imply gallons of bottled sporting beverages. We mean talking about safe, pure water for preventing injury. A dehydrated joint or tissue is more vulnerable to tears and injury. Adequate water use is essential to avoiding sporting success and injury. Athletes ought to consume water to remain properly hydrated, because only a 1 percent reduction in body weight will affect athletic efficiency. Water is a good hydrating product. Athletes will drink at least 16 ounces of fluid two hours before workout, and 5 to 10 ounces, consumed every 15 to 20 minutes during workout. Before and during workout, athletes will get into the routine of measuring themselves and decide how much water weight they lose from activity - and drink 16 and 24 ounces of water with every pound lost. Sports drinks are suitable for athletes engaged in endurance activities (e.g., marathon, triathlon) or stop-and-go sports (e.g., soccer, sprinting) replacing lost fluids, carbohydrates and electrolytes. The most popular sports beverages are made up of 6 to 8 per cent carbohydrates (14 to 19 grams of carbohydrates per serving 8 ounces). Diluting sports beverages reduces the production of carbohydrates and thus contains very little calories to replenish any missing.
- **Keep up educate quantity and collagen healthy with Vitamin C:** Collagen is necessary to hold bone together. It supplies ligaments and tendons both with power, flexibility and durability. Vitamin C is an essential player in the equation of collagen. Athletes will appreciate foods high in vitamin C, such as citrus fruits, dark leafy greens, broccoli and strawberries. It could be good to apply a squeeze of fresh lemon to your water too.

- **Good inflammation of wholesome fats:** Omega-3 fatty acids work as the main weapon against chronic inflammation in your body. Omega-3s will do wonders to help guarantee nourishment in your active joints and muscles so that your immune system is safe so balanced. Most players have an omega-3 deficit and eat almost too much omega-6's. Oily fish, seeds, and raw walnuts are all fantastic omega 3 sources.
- **Develop a bone health nutritional tree:** Load every meal with calcium, magnesium, and vitamin D-rich foods and your bone strength would be enough to resists the injuries. While calcium receives advantage of extensive for its function in bone health, the fact is that magnesium and vitamin D are equally essential. Calcium is certainly required for healthy bones and thus for the prevention of stress fractures, however the body does not absorb calcium properly and requires vitamin D for absorb. However if you continue to develop solid bones for some milk and cheese, bear in mind that many people experience an adverse dairy reaction. Instead, a diet high in green leafy vegetables, raw nuts and seeds, cold-water fish and whole grains will help you fulfill your needs for calcium, magnesium and vitamin D.
- **Add zinc in diet:** When you get injured, zinc may be a very effective mineral to support the muscle and tissue repair cycle. Red meat, lentils, pork, and brown rice are all types of zinc content. Integrate these tips into your sporty life, and you're on the road to becoming an integrative sportsman. You will do better for your sporting future by feasting on consistent whole meals and being cautious of injury prevention. If you're a professional player or daily fitness enthusiast, these tips are beneficial for any form of exercise.
- **Need of carbohydrates, proteins and fats for school sports students:** Total energy requires equal to carbohydrates (5 to 7 gram per kg of body weight) + protein (4.2 to 1.7 gram per kg per day) + fat (10% from saturated fat). During exercise the focus for trying to eat is on carbohydrates, especially glucose sources and electrolytes. When workout continues more than an hour, an additional 30 to 60 grams of carbohydrates need to be eaten during the workout. Most energy demand estimation calculations consider the gender, weight and height of a person as well as the degree of physical activity. Because of these variations and the value of sufficient calorie intake, it is important to contact a sports dietitian for optimum energy dosage. As private school students needs energy, because they have already saturated fat stored in their body. Whereas in case of, government schools students, they haven't much saturated fat on their bodies. For peak sport results, carbohydrates are important, because the body uses this nutrient more effectively than fat or protein. It is also essential to keep timing of carbohydrate intake. Athletes should consume 1.0 to 4.0 g / kg body weight one to four hours before exercise, focusing on longer-lasting carbohydrate sources combined with a protein source (e.g., peanut butter on whole grain bread). For physical exercise and sport (7.0 to 10.0 g / kg / day), and high-intensity sports (5.0 to 8.0 g / kg / day), carbohydrate consumption requirements are higher. We will see here with values that how much protein and micro nutrients need for school student.

- Nutritional support –
- To achieve the above objectives a cooked mid day meal with the following nutritional content is provided to all eligible children.

components	Primary	Upper primary
Calorie	450 kcal	700 kcal
Protein	12 g	20 g
micronutrients	Iron,folic acid,vit A	Iron,folic acid,vit A

- The rationale behind the scheme is that mid day meals contribute to the right to education by facilitating enrolment and attendance by improving the nutritional levels of children thereby reducing sick days and improving ability to pay attention.

Mid day meal scheme envisages supply of educate quantities of micronutrients such as for iron, Folic acid, zinc and these micronutrients are to be supplemented with the school health and other programs of National Rural Health Mission of Ministry of Health and Family Welfare.

- **Need of proteins and fats:** Recommended average consumption of protein is 1.2 to 1.7 g / kg / day. The amount of protein is not only based on the degree of physical exercise but also on the development or healing levels of the athlete. For example, athletes who are at or around puberty during a critical period of growth may need more protein. Dietary fat fulfills several functions. It is an alternative energy source, contains important fatty acids that the body cannot synthesize on its own, and helps consume fat-soluble vitamins. Athletes will meet the same rules on intake as those suggested for the general: 20 to 35 % of total calories will come from fat, and fewer than 10% from saturated fat.

Now we will see how much nutritional value is found in government as well as private school sports students. From above table it is clearly known that there is need in case of proper diet that prevents injury coma of the Government schools as well as private schools students have enough proteins, minerals and vitamins.

Menu/day	Government school students	Private School Students
Milk	300 ml (MDM) + 500 ml (HM) = 150+300calories	400 ml=200 calories
Breakfast (2 idlis or any other substitute tiffin)	100 calories	100 calories
Rice/day	250 g=1000 calories	250 g=1000 calories
Oil	50 calories(MDM) + 270 calories (HM)	300 calories
Vegetables	150 calories	300 calories
Curd	70 calories	50 calories
Junk food	-	600 calories

*Here MDM means mid day meal given by government and HM means home meal.

Result

Here we see that nutrition in diet and fitness at field are depend on each other. If the nutritional diet becomes unbalanced then there will be increased risk of injury at sports fields and again if fitness become unbalanced or a school student got any injury, then with medicine there is equal importance of diet. This diet includes Fluids as well as non Fluids. These non Fluidic diet have minerals vitamins, proteins fats etc. So as we see for sustained physical activity, that involved of practice and competitions needs proper nutrition and energy requirements. As by diet chart we see above there is less probability of injury in government students, because they have profit of both mid day meal by government and their oven homemade. These both meals have good ratio of combination of energy, protein and Minerals. Whereas due to already obesity found by parental hierarchy and genetically reason, the private school students have more probability of sports injury during practice or competitions. Also already present saturated fats, on body of private school sports students leads them to muscle fracture and other injuries. Whereas this not happened in government school because they have not obesity type of problems. As students of Government schools have already athletic body structure and have well strengthened bones and muscles due to their physical activities of village, agriculture and other physical activities done at village home. It's the probability case, but there is exception always. As in private schools their attention on food chart is given properly in these days, also proper check up of sports students is happening there. These types of initiative steps that are taken by private schools are very helpful to solve this problem of sports injury. Today's gym culture, yoga classes and Zumba exercise type sessions are holding in every area of cities that helps the private school sports students to get up it like Government School sports students. In remote villages of poor agricultural yield areas, there is also problem of good nutrition in those areas of Government schools. If we minus the calories, carbohydrates, proteins, given from home of government school students, from the chart and only consider the mid day meal given by government, then this only value not fulfil these sport students of government schools. Here in government schools data we added calories of mid day meal and from home of students also. As in villages there is no shortage of milk, vegetables, pulses, curd etc.

As mid day meal value is enough only for common students not for sport students. And this leads probability of injury to them. So at conclusion point we can say that value of nutritional aspects and probability of injury are interrelated and this depends on different types of conditions valid or private as well as Government School sports students.

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