International Research Journal of Natural and Applied Sciences
ISSN: (2349-4077)
Impact Factor 5.046 Volume 8, Issue 07,July 2021
Website- www.aarf.asia, Email : editor@aarf.asia , editoraarf@gmail.com

NUTRITIONAL DEFICIENCY IN THE FEMALE RUNNER ATHLETE OF HARYANA.

Dr. Poonam Jatav& Bhagat Singh***

There are numbers of nutritional deficiencies, issues and Challenges that female endurance athletes of Haryana may encounter. For health and Performance to be high, these nutritional issues need to be monitored and addressed. In Haryana being the patriarchal society where female were considered other assets, family likely to give less importance to girl athlete in comparison to their male counterpart. Table 1 (Bottom) gives a list of potential nutrition issues that may arise and briefly reviewed here.

Energy Intake.

Female runners either recreational or competitive national or international athlete need to consume enough energy to cover the energy demand of their sport, the energy demand of daily living, the energy required to build and repair body tissues and energy to maintain overall health. Women of reproductive age must also cover the energy demand of reproduction and menses. If the athlete is still growing, additional energy is needed to assume normal growth and maturation. While energy

demand can be very high in female endurance athlete than sprinters still it is not uncommon for them to want to lose body fat to improve performance or to achieve a desired body size(Hinton Sanford et al,2004). However without, adequate energy wise food selection and appropriate timing of food and fluid intake, nutrients intakes may be inadequate to maintain health and performance. In Haryana where whole mark of complete diet is milk and milk made product and strictly seasonal vegetarian food. Writer enquired from the female athlete of middle distance runner about their diet and nutrition. Majority of them heavily dependent on their simple homemade food and no extra diet was provided to them. Their energy intake was hardly equal to 1600-1800 kcal/d. It is difficult to get adequate nutrients(Protein, carbohydrate, essential fatty acids , vitamins and mineral) to maintain good health especially when expanding high amount to energy in exercise and training session and competiting at district and state level. Runners who undergo in training session 6-10h/week typically need 2500kcal/d or more to main train body weight. Competitive endurance runner, exercising 10-20h/week or more may need as much as 4000-4500kcal/d

Consequences of Inadequate diet:-

Majority of Haryanvi female runner athlete complain of tiredness and fatigue, faces difficulty in training at high intensities, injuries and lack of improvement in performance. this all clearly indicate that the energy intake of these athlete is reduced or low either inadvertently or purposeful dieting. Because endurance athlete typically emphasis carbohydrate intake, protein and fat intake in endurance runner athlete can be inadequate that is why athlete complain above symptoms. Some of the sign and symptoms of low energy intake are bulleted below.

.Poor growth/injuries. For young athletes, if growth is below recommended levels, it may be due to inadequate energy to fuel both exercise and growth. Repeated injuries that heal slowely may also be sign of overtraining and under training.

. Fatigued/Irritability. If the athlete is finding it difficult to concentrate during exercise or even shaky or lightheaded while training. It may be due to inadequate energy. This can be especially true if the athlete hasn't eaten for 3-4h before training session or if they do a long hard run before eating breakfast.

. **Exercise Induced Menstrual Dysfunction**. Poor energy intakes may be manifested as oligomenorrhea(irregular periods) especially during the training and competitive season,or amenorrhea(no period for more than three months)(Nattiv.loucks et al.2007) The irregularity or cessation of menses may be a sign that the body does not have enough fuel for both exercise and reproductive functions. If a female runner is on oral contraceptive, it is important to ask if she is using these because of menstrual irregularities. However , it is important to know that an athlete does not have to have an eating disorder or disordered eating to have menstrual irregularities(Manore,kam et al 2007)In female athletes low energy intakes that do not match energy expenditure appear to be primary contributor to exercise induced menstrual dysfunction.(Cuebels,kam et al 2013) It is important to share that no Haryanvi Female runner was suffering menstrual dysfunction.

. Weight loss. Once other health issues are eliminated, weightloss while training hard is clear sign of inadequate energy intake. For the athlete who wants to lose body fat and weight, this process should

be planned at a time during the training schedule when exercise demand are low and there is more time to focus on energy intake and food selection(Manore 2013) It is not recommended that an athlete diet for weight loss during the competitive season or when the training is high.Finally any focus on weight loss realy needs to be on loss of fat while preserving lean tissue. This may mean that diet composition needs to be monitered and that adequate protein is consumed to maintain lean tissue. The girls/female athlete under study were in good Physical state and there was no need to reduce their weight.

Macronutrient Intake.

It is well documented that endurance exercise requires adequate carbohydrate for to performance and to replenish glycogen stores after exercise is over. It is generally recommended that endurance female athlete training hard consume between 7-10 gm carbohydrate/kg body weight/d(Burke et al2007) depending on the size and energy needs of the athlete. This level of carbohydrate can be difficult for some female athlete to consume, especially if unprocessed low energy dense carbohydrate are being consumed(e.g. whole fruits and vegetable, and whole wet grain) In Haryana female athletes are not habitual of eating rice on daily basis therefore carbohydrate deficiency are likely to be happen. Research suggest that low energy dense diets may be contributing factor in the low energy availability and menstrual dysfunction see in some endurance female athletes(Reed,Bowell et al.2011).

Protein requirements of female athletes have not been examined as carefully or as extensively as those in active males. Female endurance runners of Haryana most likely to be at risk for low protein intake are vegans , who eliminates all animal products from their diet. It is seen that athlete (female) from Haryana strictly following the vegan diet and also follow the dieting for weight loss. Thus the primary focus needs to be on getting adequate high quality protein that is spread across the day(Tipton and witard2007) Currently it is recommended that Endurance athlete(female) consume 1.2-1.4g protein/ per kg body weight(Di Marco et al 2009) Unfortunately majority of the research in this area has been done in men. Protein deficiency in Haryana female runner were rampant.

Micronutrient Intakes:-

Issues related to micronutrient intakes supplements and gut health have been covered in many other research however it is realize that active women are at risk for low micronutrients if they restrict energy intake/or eliminate food groups. Thus it is important to assess blood(Iorn, B-12 and folate) and energy nutrients(B-vitamins) and bone related nutrients. if micronutrient status is low, health and performance can be compromised. Finally it is not unusual for endurance runner athlete to have gut issues that may limit their selections of food, reduced nutrition absorption and limit food or fluid intake around exercise session. These issues also be discussed and dietary approaches undertaken to assure adequate energy and nutrients intakes.

Summary

A number of nutritional issues may occur in the female endurance runner: however most of these issues can be addressed and corrected if the athlete are aware that they exist and know how to monitor their health. Discussing their nutritional issues with a training sports dietician can help and

prevent nutritional problems before they arise. Haryana female runner athlete can be educated by their coaches and trainer about the importance myriad diets in their competitive career. Religious and other traditional belief of the athlete can be invaded by educating them with proper mindset and literature.

Table-1 Potential Nutritional Issues that face the female runner athlete of Haryana.

Too much faith in religion and traditions of area.
Getting adequate energy and addressing poor energy intake. Depending heavily on diary product.
Selection of appropriate sport and nutritional supplements.
Elimination of food groups, which can limit the energy and nutrients derived from these foods
Adequate micro nutrient intakes to support bone health, red cell production, energy production and maintain overall health.
Adequate carbohydrate and protein intake to meet the demand of various training phases, maintenance of lean mass and bone, and consumed at the appropriate times around exercise to improve performance and recovery.

** Dr. Poonam Jatav is the research Scholar in the Dept. of Physical-Education M.D.University Rohtak.

* Bhagat Singh is working as Professor in the Dept. of Physical-Education M.D. University Rohtak Haryana.

References:-

Burke, L.M.G.Millet and M.A.Tamopolsaky(2007) Nutrition for distance events" Journal of sports sciences25(1);529-38

Mannore M.M.(2013) Weight management in the performance athlete. "Nestle nutrition institute workshop series75-129-133.

Tipton K.D.and and Witard(2007) Protein requirements and recommendation for athlete

Di Marco et al 2009 Position of American deitic association,dietician of canada and the American college of sports medicine.

Reed,Bowell et al.2011. Exercising women with menstrual disturbances consume low energy dense food.