Nutrition for Runners

NUTRITION DURING TRAINING

Good nutrition plays a significant role in health and overall fitness of a runner. Runners' diet should include a proper balance of carbohydrates, proteins and fats to ensure good energy, performance and endurance. Fluids and proper hydration are key components in preventing dehydration, fatigue and poor performance. Specific vitamins and minerals are essential for recovery and preventing injuries.

Although lower body fat may give a chance at improved performance, excessive calorie restriction to achieve lower body fat can result in fatigue, nutritional deficiencies, hormonal imbalances, bone injuries and disordered eating. Requirements of macro nutrients (carbohydrates, proteins and fats), micronutrients (vitamins and minerals), fluids vary depending on the stage and phase of training.

An individual's carbohydrate should depend on their daily training load. High volume days should have higher carbohydrate consumption and recovery days should have moderate carbohydrate consumption. Carbohydrates should make up about 60-65% of a runner's total calorie intake. Runners should aim to consume 6-10 grams of carbohydrate per kilogram of body weight, per day. Most carbohydrates should be consumed in the form of nutrient dense foods such as whole grain products, starchy vegetables, fruits, dairy products etc. Some easy to absorb carbohydrates in the form of sports drinks and energy gels may need to be included around training to improve performance, especially during heavy training loads. Intake of rapidly absorbable carbohydrate soon after training will also aid in replenishing the muscle glycogen stores as well.

Intake of proteins in right quantities is essential to maintain the muscle mass for runners during training. Proteins are necessary for muscle recovery, regeneration and injury prevention. Optimum protein intake is also of priority for control of blood sugar, boosting of immune function which are of utmost importance to a runner. Apart from being an essential nutrient, protein also helps in making you feel fuller which helps in curbing hunger during long duration training loads. To ensure adequate protein intake, one must obtain 15%-20% of their calories from proteins. An intake of 0.8-1.2 grams of protein per kilogram of body weight per day will be sufficient. Instead of taking one or two meals rich in protein, runners should aim to spread their total protein intake for the day in three or four meals. It is a great idea to have some protein in every meal. Protein should be obtained from sources low in saturated fat. Low fat dairy products, lentils, dried beans, eggs, fish, chicken, nuts and seeds are good sources.

Fats in diet should also be given importance in a runner's diet. Especially sources of unsaturated fatty acids such as nuts, seeds, oils for cooking etc. provide the essential fatty acids. Omega-3 fatty acids from some fish or flaxseed, chia seeds, walnuts and sesame seeds have protective

effect on heart. Essential fatty acids are crucial in regulating inflammation during training and helping in recovery. Runner's diet should have 20-30% of calories from fats, and predominantly from the sources of seeds, nuts rather than deep fried foods, butter or high fat milk products. Foods rich in trans-fats such as bakery fast foods should be avoided or atleast taken in very limited quantities.

NUTRITION DURING COMPETITION

Fatigue due to lack of fuel and improper hydration could lead to runners not being able to achieve their desired intensity during races. The main fuel during run is glycogen which is stored in the muscles. Taking meals rich in simple carbohydrates but low in fiber, protein and fat 12-24 hours prior to the race will effectively replenish the muscle glycogen stores. A meal high in white rice, pasta, refined wheat flour(maida), potatoes, sweet potatoes are recommended only during carb loading. However, even during carb loading time, a runner still needs to limit their carbohydrate calories intake to 65% of the total calories only. Rest of the calories should still come from lean protein and good fats.

On the race day, a simple carbohydrate meal couple of hours before the race is recommended. A peanut butter sandwich or banana smoothie or even eating a fruit with peanut butter will ensure that the runner is fueled up and ready to take on the race. Foods that constantly release glucose into your blood such as bananas, dates and raisins can be used as a fuel during the race. Normally only a maximum of 60 grams of glucose can be absorbed in one hour during the run. So, pace the feeding accordingly.

Hydration during training is as important as race day hydration. Runners should determine their fluid loss by weighing before and after long runs and replenish the water accordingly. It is not necessary or recommended to drink all of the fluid at once. Instead, taking twice the amount of fluid lost over a period of next 4-6 hours after long runs is more appropriate.

During race days, drinking carbohydrate drinks along the race path will ensure replenishment of both glucose as well as fluid. Using training days to devise a plan for race day fluid intake is more beneficial than trying new drinks on the race day.

Eating low fiber foods and drinking liquid meal supplements before hard training sessions and race days could help in controlling gastrointestinal symptoms for the runners who are affected by it.