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

Nutrition Plan for Power Performance of Athletes

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Abstract – This paper outlines the current energy, nutrient, and fluid recommendations for active and competitive athletes. These general recommendations can be adjusted by sports dietitians to accommodate the unique issues of individual athletes regarding health, nutrient needs, performance goals, physique characteristics (i.e., body size, shape, growth, and composition), practical challenges and food preferences.

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INTRODUCTION

Nutrition plan is always designed and suited to one's changing workout demands. Providing the right combination of foods to satisfy body's energy needs in the every step of the performance way is the main idea of planning what to eat. The Nutrition plan, for changing one's body weight to improve performance must be done safely, or it may do more harm than good. Keeping body weight too low, losing weight too quickly, or preventing weight gain in an unnatural way can lead to negative health effects1. It is important to set realistic body weight goals.

Aspirant athletes who try to improve performance by losing weight should consult a qualified and experienced sports dietician; Experimenting with diets on their own can lead to poor eating habits with inadequate or excessive intake of certain nutrients. Consulting a Nutrition professional to discuss a diet that is right for the sport, age, gender, and based in FIIT principle of Training

The 3-phases of nutritional plan presented below, is to satisfy workout demands, providing the right combination of foods to satisfy one's body's energy needs in every step of the way in achieving optimum performance2. However, the aim of a nutritional plan in these phases is to attempt - the best way where one can do within his/her limitations - to teach him/her, and to determine what works for one's body. The easiest way is to limit carbohydrate intake until performance begins to suffer, (not deteriorate) then add them back in.

The Nutritional Proportions for each of the 3 Plans are as Follows:

PHASE	GOAL	PROTEIN	CHO	FAT
PHASE 1 FAT SHREDDER	Strengthen muscle and shed excess body fat	50%	30%	20%
PHASE 2 ENERGY BOOSTER	Maintain Phase 1 changes with additional energy for midstream performance	40%	40%	20%
PHASE 3 ENDURANCE MAXIMIZER	Support peak physical performance and satisfaction over the long term	20%	60%	20%

Each phase has 3 approaches.

There are three different approaches to ensure proper nutrition for all phases. The choice is left to the athlete as to which one will work best for him/her3. Keep in mind that you can stick with one approach throughout the entire program, or alternate based on your lifestyle demands.

The portion approach:

This approach is designed for those who don't have a lot of time or patience to prepare a meal that involves more than one or two steps. It's definitely better suited to those who don't like to cook or follow recipes. The Portion Approach was designed to allow anyone to mix and match the foods of their choice4. There are NO specific meal plans or recipes for this approach, along with identifying the right foods to buy.

The meal plan approach:

By following the daily meal plans, you'll not only take the guesswork out of your daily food preparation, but you'll also enjoy a variety of delicious, healthy5, and low-fat recipes that'll provide you with the proper amount of nutrition and energy to get the most out of your workouts.

The quick option approach

We all have days when it seems we can't find the time to eat, let alone cook. So include some quick food options that require minimal or no effort.

Body fat target

As your body fat percentage changes for every 90 days, here's where the numbers place you in terms of general targets. Using Body mass index formula BMI[6]

	Fit range	Athlete Range	Elite Athlete range
Men	14–17%	10–13%	4–9%
women	21–24%	16–20%	12–15%

Each approach has 3 nutrition levels:

First determine your daily nutrition and calorie needs. The data you provide will determine how much food you need (and how much you don't need)

1. **Calculate your resting metabolic rate (RMR).** This is basically the number of calories you need to breathe, pump blood, grow hair, blink—be alive.

Body weight (in pounds) X 10 = RMR (In calories)[7]

2. **Calculate your daily activity burn**, the calories required for daily movement apart from exercise. Keep in mind that all lifestyles aren't created equal. A construction worker will have a higher daily burn rate than a computer programmer, so this figure should be treated as an estimate. You'll probably need to do some personal adjusting to get it perfect. Don't worry; this will become more obvious than you think once you get going.

RMR X 20% = Daily activity burn[8]

3. **Add the calories required for your exercise needs**, which we have calculated at 600 calories per day for the Athlete range program. Add it all up and you've got your energy amount.

RMR+ Daily activity burn+600= Energy amount

Now use your energy amount to determine your nutrition level in the table.

Example: A 6-foot, 180-pound male athlete

RMR = 180 (body weight in pounds) x 10 = 1,800

Daily activity burn = 1,800 (RMR) x 20% = 360

Exercise expenditure = 1037 (2hrsx6.1cal/per kgx85)

Energy amount = 1,800 + 360 + 1037 = 3197

Nutrition level = II

Round down to the bottom of your level to create a slight calorie deficit (e.g., if you're at level II, your calorie target is 2,400 calories/day).

Your energy amount	Nutrition level	
1,800-2,399	1,800 calories/ per day	LEVEL - 1
2,400-2,999	2,400 calories/per day	LEVEL – 2
3,000+	3,000 calories/per day	LEVEL – 3
Your nutrition level		

General guidelines: While this plan is designed to meet each individual's nutritional needs, there are some general rules that should be applied to ensure positive results. Knowing what, when and how much to eat plays a vital role in your development. Following these guidelines and maintaining an eating discipline will optimize one's energy level and fat-burning ability throughout his/her workouts. Research shows that one of the most powerful ways to successfully change the eating habits is to keep a daily journal9. By logging your food intake as well as your exercise, you keep yourself accountable while also creating a space to express your thoughts and feelings. You'll no longer have to remember what worked and what didn't. You can look back on your log to track your journey and fine-tune your plan according to your personal experience and needs10. You'd be surprised how often bad moods are associated with bad foods.

Why diet matters: A large body of scientific evidence shows that diet and exercise work hand in hand to promote fitness and physical performance. One reason for this symbiotic relationship is the energy equation. When you expend more calories than you consume, you burn body fat (aka "stored energy") and build lean body mass—but because you need energy to exercise, every calorie you eat must be of the highest quality to get you over the hump. Another reason diet matters is metabolism. A nutrient-dense, interval-based eating program keeps your metabolic rate high to burn maximum fat, even when you're not working out. Finally, a healthy diet regulates blood sugar to balance hormonal secretions, promoting optimal fat burn and a steady fuel supply.

DRINK WATER:

Drinking enough water is a vital part of any conditioning program, as it aids every aspect of bodily function. You should drink at least six to eight 12-ounce glasses of water each day. The same has been given here in terms of measure and duration.[11]

Hydration schedule:

12 oz. water 2 hours prior to exercise

8 to 12 oz. water 15 to 30 minutes prior to exercise 4 to 8 oz. water every 15 minutes during exercise

Overall, reducing the Energy Desnse of the diet is more effective at lowering energy intake than is reducing portion size, without affecting hunger, fullness, or enjoyment of the food. For athletes trying to lose weight, this has important implications. It may be easier for an active individual to consume a similar amount of food and focus on changing the energy density rather than the portion sizes. This approach reduces hunger and increases adherence to the weight-loss diet plan.

IMPLICATIONS OF THE STUDY:

Finally, following a lower-Energy Dense diet could help the athlete maintain their weight loss. In summary, a key component of a low-Energy Dense eating plan is to increase the intake of foods high in water and fiber that promote satiation, while reducing both high-fat foods (i.e., potato chips, cheese, cookies) and low water and fiber foods (i.e., baked tortilla chips, pretzels). The low-Energy Dense eating plan also increases total fiber intake, which helps individuals achieve the recommended intakes.

Plan to Eat, Plan to Health, and Plan to Perform

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