



SPORTS AND NUTRITION: FUELING YOUR PERFORMANCE

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Abstract:

Introduction:

A balance of carbohydrates, proteins, fats, minerals, vitamins, and water will give our body what it needs for peak performance. Consuming the right balance of food and drink is important for everyone. Yet those actively participating in sport on a regular basis need to be aware that it can also affect their performance. During the past 20 years there have been great developments in the scientific understanding of the role of nutrition in health and physical performance. Epidemiological and physiological studies have provided evidence that certain forms of dietary behaviour may be linked with an increased risk of developing disorders such as high blood pressure, coronary artery disease and some cancers. This has resulted in dietary recommendations that are intended to reduce the incidence of these disorders in the community. The science of nutrition in relation to sports performance has progressed from empirical studies investigating the effects of dietary manipulations, such as restriction and supplementation, to the direct investigation of the physiological basis of the specific nutritional demands of hard physical exercise.

Sports performance and energy

Fats, protein and carbohydrates all provide our body with fuel to maintain energy. Carbohydrates are the primary fuel used by working muscles. Adequate intake is essential for preventing muscle fatigue. While you should monitor your fat intake, you should not remove it from your diet

completely. Fats provide fatty acids that can be used as a source of energy - especially if your exercise sessions last longer than one hour. Fats also provide the building blocks for hormones and formation of cell walls. Protein can be used as a source of energy and is critical for building new muscle tissue. If you are taking part in resistance training, your body will require additional protein. It's crucial to stay hydrated when you are taking part in sports. Inadequate fluid intake leads to dehydration. This affects your performance and can be dangerous for your health too.

Healthy eating tips for athletes:

- **Eat a variety of foods.** Because different foods have different nutrients, you should eat a variety of foods to get all the nutrients you need to stay in peak condition. For example, oranges provide vitamin C and carbohydrates, but not iron or protein. A piece of grilled chicken provides iron and protein, but not vitamin C or carbohydrates.
- **Eat regular meals and snacks.** Skipping meals will hurt your performance. Eating regular meals and healthy snacks is the best way to fuel your body for athletic events.
- **Eat enough calories.** Calories fuel your body for exercise and replace energy that is used up during sports performance. Cutting calories keeps you from performing your best. As exercise and athletic training demands energy above and beyond your body's day-to-day needs, it is essential to meet these needs in order to compete at full strength and recover quickly after a workout.

- **Drink plenty of fluids.** Athletes need more fluids than non-athletes. Do not wait until you are thirsty to start drinking water, because thirst means that you are starting to dehydrate. Remember to drink even more in hot and humid weather.

- **Before exercise:** The food you eat before you exercise greatly affects the quality of your athletic performance. These tips will help you plan your pre-exercise meals to prevent low blood sugar, to keep you from feeling hungry, and to fuel your muscles for training and competition.

- Eat a larger meal if you have 5-6 hours before you begin your exercise. Smaller “mini” meals are better if have 2-3 hours before your workout begins. Meals that are high in complex carbohydrates (foods rich in carbohydrates for long-lasting energy power) are best because they fuel your muscles. Pasta, bagels, baked potatoes, rice, and fresh fruit are all good sources of complex carbohydrates.

- Avoid high-bulk (high-fibre) foods such as broccoli, baked beans, or bran cereal right before exercise. These foods may cause stomach pains during exercise due to their passing more slowly through your digestive system. However, high-fiber foods are loaded with good nutrition, so be sure to include them at other times of the day.

- Sugars and sweets (especially soda and candy) don't provide lasting energy, and therefore aren't recommended to fuel your exercise.

- Limit foods that are high in dietary fat such as fast food, eggs, meat, and cheese for your pre-exercise meal. These foods take much longer to digest and may make you feel sluggish and tired if you eat too much of them.

- Don't try new foods before a competition. You may have trouble digesting a food you have never eaten before. Choose foods that are familiar to you.

During exercise: Fluid needs during exercise depend on how intense and long your workout is, weather conditions, and how much you sweat. If you will be exercising for less than 60 minutes, drink ½-1 cup of fluid every 15-20 minutes during

your workout. If you are going to be exercising for more than one hour, it is recommended that you drink ½ -1 cup of a fluid every 15-20 minutes.

After exercise: It's very important to refuel your body after a hard workout. Because your body replaces glycogen stores in your muscle within the first few hours after exercise, it's important to eat carbohydrates and some protein soon after your workout.

Follow these tips when planning your post-exercise meal:

- Even if you aren't hungry, try eating a snack that contains carbohydrates (such as a yogurt or half a sandwich) within 30 minutes after a workout. This will help your body recover quickly.

- You should eat a larger meal that's high in carbohydrates and has some protein within the next 2-3 hours to replace muscle glycogen stores that were used up during exercise. This will help you be in top shape for the next time you exercise.

Conclusion:

As per the above discussion it can be concluded that a balance of carbohydrates, proteins, fats, minerals, vitamins, and water will give our body what it needs for peak performance. Fats, protein and carbohydrates all provide our body with fuel to maintain energy. Fluid is also very important it's crucial to stay hydrated when you are taking part in sports. Inadequate fluid intake leads to dehydration. This affects your performance and can be dangerous for your health too. So that every coach, trainer and player have to know about the nutrients and their uses.

References:

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