



tennismd™  
health = performance™

## Your Best Tennis in 10 Weeks

### The TennisMD Fitness Challenge

The health and fitness experts at TennisMD have created this 10-week Fitness Challenge with two things in mind: Improving your health and your game. Each week features drills that focus on a specific aspect of your health. Therefore, each routine should be added to the previous weeks routine creating in a robust exercise program.

By accepting this Fitness Challenge you've committed to improving your health ultimately resulting in the best tennis of your life.

For more information visit [TennisMD.com](http://TennisMD.com)

*Note: Please consult your physician or health professional before starting this or any fitness program. If at any time during this program you feel pain, stop and if pain persists, consult your physician or health professional.*

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### Week 2: Nutrition

#### Carbohydrates

The pre-exercise meal is recommended 3-4 hours before the onset of exercises and it should be high in carbohydrates. 200-300 grams.

For exercise lasting longer than 60 minutes, eat carbohydrates within the hour before and also during the exercise to enhance performance.

Those who are sensitive to consuming carbohydrates within the hour prior to exercise, due to fluctuations in blood sugar, consume 70 grams of carbohydrates 1 hour prior in foods with a lower glycemic index. Low Glycemic Index foods are those that allow more sustained release of glucose into the blood stream during exercises, such as a banana or energy bar.

In hot temperatures energy drinks, which allow the rapid absorption of carbohydrates, sodium, potassium, should be consumed during exercises.

During exercise the athlete should consume 30-60 gm of carbohydrates throughout each hour. If this is not tolerated well 16 grams per hour would be sufficient.

Post exercise recovery period can be one of the most optimal times for athletes to benefit from sports nutrition

Immediately after the exercise 4.5-5.5 grams per pound of body weight and again 2 hours following exercises is recommended.

## **Protein**

The protein needs for the athlete are dependent on the type of exercise (endurance vs. resistance)

Protein is important for muscle maintenance, growth, and production of enzymes (catalysis for biomechanical reactions in the body), hormones (insulin and hemoglobin) and skin, hair, and bone.

Proteins – Two types Essential and Non-essential

Essential proteins are necessary for muscle growth as little as 6 grams of essential proteins are necessary before and after exercise to maintain or enhance muscle growth.

Essential proteins are not produced by the body, they must be ingested. The best source of essential proteins is from animal sources e.g. chicken, fish, meat.

Soy is the only vegetable source of essential proteins.

Adding protein to a carbohydrate has been shown to enhance muscle growth. The carbohydrates stimulate insulin production which reduces muscle breakdown after exercise.

1 cup of low-fat chocolate milk or low-fat fruit yogurt, before and after exercise, will provide an athlete with the amount of essential proteins and carbohydrates necessary to enhance muscle growth.

## **Fluid Needs and Intake Guidelines for Athletes**

Hydration is very important in the performance of any athlete. Slight dehydration causing a loss of 2% of body weight can have a negative effect on performance.

Proper hydration plan should include drinking cool fluids before, during and after exercises.

In addition, the athlete should make a habit of adding fluid rich foods such as, fruits, vegetables, soups to their daily meal and snack consumption.

Before Exercise – 2 cups ( 16-20 ounces ) of cool fluid 2 hours before and 2 cups of cool fluid 15-20 minutes immediately before exercise.

During Exercise – 5-10 oz. of fluid every 15 minutes during exercise. One ounce of fluid equals one normal adult gulp.

If the exercise is less than 60-90 minutes cool water is recommended

If the exercise is in hot temperatures and/or humid lasting 60-90 minutes choose a carbohydrate-electrolyte sports drink mainly potassium and sodium.

After Exercise- body weight loss represent water loss. Consumption of water after the exercise should be 3 cups or 24 ounces per pound of body weight lost.