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Dietary Fat and Athletic Performance

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When someone hears the word "fat," they usually think of body fat. However, the fats we eat can serve an important role in our health and physical fitness. Fats that we eat (also called lipids) are more than just fried food and butter. Other sources can provide benefits that are especially important in athletic performance.

Why should I eat fat?

Fats control several functions in the body. These include growth, hormone production, absorption of certain vitamins, and an important source of energy for low-intensity activity. Fat can also make you feel full quicker and longer, which can help decrease overeating and help maintain a healthy body weight. However, certain types of fat are more beneficial than others.

What fats should I consume?

Unsaturated fats are the healthiest fats to consume. Unsaturated fat is liquid at room temperature and provides many benefits, such as improving brain health and nervous system activity. This could help, for example, baseball or softball players, who need good hand and eye coordination to compete in their sport. A particular type of fat called omega-3, an unsaturated fatty acid, also has been shown to decrease inflammation and help increase joint mobility. This can increase athletic performance by decreasing recovery time.

Sources of unsaturated fat:

- Fish (tuna, salmon, sardines, anchovies, fish oil etc.)
- Tree nuts (almonds, walnuts, cashews, pecans, etc.)
- Avocado
- Plant oils (olive oil, canola oil, etc.)
- Seeds (pumpkin, sesame, flax, sunflower)

How much fat should I consume?

The amount of fat an athlete should consume depends on two factors: overall energy (calorie) needs and macronutrient balance (amounts of carbohydrate, protein and fat in one's diet). To calculate daily energy (calorie) needs, look at Table 1. After daily calorie needs are calculated, you need to find the percent of each macronutrient (carbohydrates, protein, fat)

from the calories consumed. The Academy of Nutrition and Dietetics recommends that at least 20-35 percent of your daily caloric intake should come from fat. This fat should come from mostly unsaturated food products. Fat is also the highest in energy, as one gram of fat has approximately 9 calories, which is more than double the number of calories per gram of carbohydrate and protein. This also makes fat a good nutrient to eat a lot of if you are trying to gain weight.

What fats should I limit?

Other than unsaturated fat, dietary fat can be saturated fat and trans-fats. Saturated and trans are the types of fat that you should limit as these don't have the same beneficial effects for athletic performance. These fats can come from fried food, butter, full-fat dairy products, and most animal meats (especially red meat). Saturated fat and trans-fat are solid in room temperature and may decrease your athletic performance by increasing inflammation, which can cause muscles to be more sore and make it difficult to recover from exercise.

Table 1. Recommended amounts of calories per pound of body weight per day based on activity level.

Level of Activity	Energy expenditure for women (calories per pound of body weight per day)	Energy expenditure for men (calories per pound of body weight per day)
Sedentary (Activities of daily living [ADL] only)	13.64	14.09
Light activity (ADL + walking two miles per day or the equivalent)	15.91	17.27
Moderate activity (ADL + moderate exercise 3 to 5 days per week)	16.82	18.64
Heavy activity (ADL + moderate to heavy exercise on 6-7 days)	20	22.73
Exceptional (ADL + intense training)	23.18	26.36

Source: Marie Dunford, J. A. D. (2008). Nutrition for Sport and Exercise. Belmont, CA, Wadsworth Cengage Learning.

Sources of saturated/trans fats:

- Butter
- Margarine
- Fast-food products
- Fried foods
- Full-fat dairy products (cheese, whole-milk, ice-cream)
- Processed meat (hamburgers, hot-dogs, sausage, and bacon)
- Packaged snack foods (cookies, chips)
- Donuts
- Pastries (cakes, muffins, strudels)

Should I completely avoid saturated/ trans-fat?

Even though saturated fat may lead to health problems you don't have to completely avoid it. The Academy of Nutrition and Dietetics recommends saturated fat not exceeding 10 percent of your daily calories. However, this can't be said for trans-fat. According to the Academy of Nutrition and Dietetics, little to no trans-fat should be consumed.

References

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