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| Carbs | 340 g | 440 g | Carbohydrates provide the body with glucose, which is converted to energy used to support bodily functions and physical activity. It is well documented that endurance athletes need to replenish carbohydrate stores in the body, especially during periods of intense training. Consuming carbohydrates during workouts lasting over one hour can also benefit performance and delay onset of fatigue. Several recent studies have shown that athletes who participate in stop-and-go sports, such as basketball and soccer, may also need to focus on consuming more carbohydrates during training and competition. This is not surprising since it is well-known that carbohydrates, when compared to protein and dietary fat, are the most efficiently broken down and metabolized form of energy for the body. Athletes doing stop-and-go activities were found to have better speeds and delayed fatigue when consuming a higher carbohydrate diet. Depending upon the training routine, athletes should consume at least 50 percent, but ideally 60-70 percent of their total calories from carbohydrates. This percentage is only a guideline for estimating carbohydrate needs. Depending upon the length of training sessions, an athlete’s carbohydrate intake should be between 2.5-6.0 grams per pound of body weight, with longer training times reflecting the higher number of grams needed. | Work completed in the early 1980’s by David Costill at Ball State University showed that if athletes did not consume a diet high in carbohydrates on a daily basis, they would experience chronic fatigue and poor performance. | For a healthy diet, limit the amount of added sugar that you eat and choose whole grains over refined grains. Quality is as important as quantity:   The healthiest sources of carbohydrates—unprocessed or minimally processed whole grains, vegetables, fruits and beans—promote good health by delivering vitamins, minerals, fiber, and a host of important phytonutrients.  Unhealthier sources of carbohydrates include white bread, pastries, sodas, and other highly processed or refined foods. These items contain easily digested carbohydrates that may contribute to weight gain, interfere with weight loss, and promote diabetes and heart disease. |
| Fats | 80 g | 113 g | Fat is the primary fuel for light to moderate intensity exercise. Although fat is a valuable metabolic fuel for muscles during endurance exercise and performs many important functions in the body, no attempt should be made to consume more fat. With that said, some studies have shown, athletes that consume high-fat diets typically consume fewer calories from carbohydrates. The more efficient an athlete becomes in their respective sport, the easier it is for them to operate at a lower intensity while maintaining the same level of work or maintaining the same speed (metabolic efficiency). At this lower intensity, stored fat in the muscle can be used as a fuel source. The average 150-pound athlete carries 1,500-2,000 calories in the form of carbohydrates but up to 80,000 calories in the form of fat. The old saying, “Fat burns in a carbohydrate flame” holds true, as fat cannot be used without the presence of carbohydrates. Thus, for efficient endurance and ultra-endurance athletes, carbohydrates are still important, but stored fats help them reach the finish line as well. A research study looked at muscle biopsies of elite rowers who consumed either 40 percent of their calories from fat or 20 percent of their calories from fat, and also compared the power output and speed of the rowers. The following is a summary of the results. F The rowers who consumed the low-fat, high-carbohydrate diet had more muscle glycogen. F The rowers on the high-fat, low-carbohydrate diet had moderate levels of muscle glycogen, but were still able to complete the workout sets. F When it came to power output and faster speeds, those rowers who consumed the low-fat, high-carbohydrate diets had significantly higher power and speed. This has significant implications for athletes in muscular endurance sports that require a burst of power, such as rowing, swimming, gymnastics, figure skating, judo, boxing, baseball, basketball, or soccer, to have energy generated aerobically. It is important to recognize that there are many sources of hidden fat in foods. Fat is present, but not separately visible, in: F Dairy products such as cheese, whole milk, sour cream, and ice cream F Processed foods such as chips, crackers, granola bars, and french fries F Cooked meats and fish F Other food sources like nuts or avocados Other more obvious sources of fat are in products like margarine, butter, mayonnaise, salad dressing, oils, and meats with marbling or visible fat. Athletes should consume 20 to 30 percent of their calories from fat. Aside from decreasing overall calories, limiting consumption of dietary saturated fat is the first step toward losing excess body fat. Doing so eliminates excess calories, but not nutrients. Following a low-fat, high-carbohydrate diet is also important for health reasons, because diets high in saturated fat have been associated with cardiovascular disease, obesity, diabetes, and some types of cancer. | Healthy fats are necessary and beneficial for health. Not consuming the good ones will prevent you from achieving the bodily functions needed to perform optimally. | Quality is more important than quantity. “Good” unsaturated fats — Monounsaturated and polyunsaturated fats — lower disease risk. Foods high in good fats include vegetable oils (such as olive, canola, sunflower, soy, and corn), nuts, seeds, and fish. “Bad” fats — trans fats — increase disease risk, even when eaten in small quantities. Foods containing trans fats are primarily in processed foods made with trans fat from partially hydrogenated oil. Fortunately, trans fats have been eliminated from many of these foods. Saturated fats, while not as harmful as trans fats, by comparison with unsaturated fats negatively impact health and are best consumed in moderation. Foods containing large amounts of saturated fat include red meat, butter, cheese, and ice cream. Some plant-based fats like coconut oil and palm oil are also rich in saturated fat. When you cut back on foods like red meat and butter, replace them with fish, beans, nuts, and healthy oils instead of refined carbohydrates. |
| Protein | 132 g | 149 g | Protein has always been a particularly popular nutrient with athletes because of its role in building and maintaining muscles. Indeed, athletes need to consume a wide variety of high-quality protein foods in their diets. However, while protein is necessary, it is not the primary fuel for working muscles, and consuming more protein than what the body can use is not going to give athletes larger and stronger muscles. While research shows that protein requirements are higher for athletes to aid in muscle repair and growth, most athletes are already consuming more protein than the body can use. Use the following formulas as guidelines to ensure proper amounts of protein are included in your dietary intake. Type of Training Grams (g) of Protein Recommended Endurance 0.54-0.64 g of protein per pound of body weight Strength 0.72-0.81 g of protein per pound of body weight (to gain muscle mass) Strength (maintenance) 0.54-0.64 g of protein per pound of body weight Weight Restricted 0.63-0.81 g of protein per pound of body weight Proteins from animal sources such as meat, poultry, fish, eggs, milk, cheese, and yogurt provide all nine indispensable aminoacids and are referred to as complete proteins. Proteins from plants legumes, grains, nuts, seeds, and vegeables tend to be deficient in one or more of the indispensable aminoacids and are called incomplete proteins | It is important to get enough dietary protein. You need to eat protein every day, because your body doesn't store it the way it stores fats or carbohydrates. How much you need depends on your age, sex, health, and level of physical activity. Proteins from meat and other animal products are complete proteins. This means they supply all of the amino acids the body can't make on its own. Most plant proteins are incomplete. You should eat different types of plant proteins every day to get all of the amino acids your body needs. | Quality is more important than quantity. Red meat (and processed) is linked to heart disease, diabetes and cancer. Replacing it with beans, soy foods, nuts, fish, or poultry seems to reduce these risks. There is speculation about high cooking temperatures = higher risks of diabetes... https://www.youtube.com/watch?v=lsycTcjJz0M So rely more on fish and poultry... Processed meat is any type of meat that has been altered from it's natural status with added salitives? conservants, etc. |