Going for the Gain

For most of us, gaining weight is pretty easy. But for the still-growing, on-the-go student-athlete, putting on some extra pounds can be a battle. The following provides a comprehensive plan to help even your skinniest athletes bulk up.

By Heidi Skolnik & Andrea Chernus

Heidi Skolnik, MS, CDN, FACSM, is President of Nutrition Conditioning, Inc., in Fort Lee, NJ. Her clients include the N.Y. Giants and the Princeton University athletic department. Andrea Chernus, RD, MS, CDN, is a registered dietitian who works extensively with college athletes in the New York City area.


It seems simple. Ask an athlete to add 500 calories to his or her plate every day while engaged in a strength-training program, and three months later, voila, there will be an individual 12 pounds heavier in front of you.

Science tells us that 3,500 excess calories leads to a gain of one pound, which means a person must consume an extra 500 calories per day, above his or her needs, to put on one pound per week. This translates, theoretically, to a 12-pound increase after three months.

But, for many athletes, gaining weight is not so simple. Despite all efforts, the scale doesn’t move. And the process starts to become daunting.

Especially for growing athletes, weight gain requires a more strategic plan than eating two slices of pizza before going to bed every night. A weight gain plan needn’t be complicated or elusive, but it does have to be realistic and thoughtfully outlined.

ASSESS THE ATHLETE

Before discussing calories and food choices, you need to talk to the athlete about why he or she wants to gain weight. Is the directive from the coach or the athlete him- or herself? And what is the motivating factor?

If the athlete says he or she wants to look more muscular, watch for any warning signs of distorted body image. Body dysmorphia, an inaccurate perception of one’s body, is becoming increasingly evident among male athletes. This disorder involves thinking one’s body is small and weak, when in fact it is quite muscular. Many people afflicted with dysmorphia are obsessed with gaining mass and spend hours in the gym.

It is very important to help athletes develop realistic body images and expectations of themselves. If you feel the athlete may have dysmorphia, you can help by getting him to focus on improved function, not just aesthetics. You may also want to alert his parents or coaches, and possibly refer him to a psychologist.

On the other hand, if the athlete wishes to increase mass to improve sports performance, then you should assess his or her goals more specifically. Whether or not the coach was the initiator of the idea, it’s good to get him or her involved.

Is weight gain needed because the football coach wants to switch the athlete from wide receiver to tight end? Is it because the basketball center is getting pushed around by opponents under the basket? Is it because the soccer athlete has grown two inches over the summer and his new lanky build seems to be leading to balance and coordination problems?

The first thing to assess is if weight gain will solve the problem at hand. For example, the soccer athlete mentioned above may need more proprioceptive training, not more bulk or weight training. However, the basketball athlete may truly need 10 more pounds of muscle on his body to improve his rebounding and scoring.

After evaluating why the athlete wants to gain weight, you’ll need to assess his or her body type and anything that
might hinder weight gain. Often body type is a genetic trait, and some people are predisposed to being long and lanky. In addition, taller athletes lose more body heat due to a greater body surface area and thus need even more calories to gain weight. It’s important that these athletes be reasonable in their expectations—gaining weight may take longer for them, and it certainly won’t change their body type.

Also consider whether the athlete is still growing. Often college-aged males won’t have reached their full size yet. Calorie needs for gaining mass are going to be greater in athletes who are still growing. Those who haven’t reached maturity may also have lower levels of testosterone, which inhibits muscle building.

The third area of assessment involves taking an overall look at the athlete’s diet. From our experience, there are two types of athletes trying to gain weight. The first, who we’ll call Athlete A, is simply not eating as much food as he or she thinks. Their eating is not consistent, they may become full quickly at meal time, and occasionally they skip meals. Their appetite just isn’t as large as they perceive. In fact, they can hardly imagine eating more. But, in closely examining their diet, there is room to boost their intake. These athletes need help understanding their nutritional needs and support in how to meet them. It’s a re-learning process.

The other type, Athlete B, is already a well-trained athlete, with a high amount of lean body mass. These athletes are close to their genetic potential, but would like to add mass. A large amount of lean body mass requires a large amount of calories. Athlete B is already eating a lot of food, but in order to gain weight, he or she needs to take in even more. The process for this athlete may take longer than for Athlete A.

SETTING GOALS

Weight-gain goals should be determined at the beginning of the program, based on the above assessments (i.e., their performance goals, body type, and whether they are an A or B athlete). Goals should also be based on the athlete’s expected compliance. Strive for success, even if it is minimal, to get the athlete on the right track.

We frequently hear about athletes’ unsuccessful weight-gain attempts. Often the problem lies in their overly ambitious expectations. When their results aren’t as they imagined, they feel defeated. Setting realistic goals can help keep the athlete focused.

Most important, weight gain should be attempted over a period of time. At the high end, one-half to one pound a week is the most to be expected. Any gains above this are very difficult to achieve, due to the exorbitantly high calorie intake required.

It’s also important to get the coach involved so that the weight-gain goals can go hand in hand with the strength training and other workouts. Increasing lean body mass is only one aspect, and should not be the sole focus of any plan. The athlete’s goals should be set in parameters of performance, such as improvements in speed, strength, power, and other functions specific to his or her sport.

It is also critical that you assess the athlete’s weight and body composition accurately and consistently. For example, if you decide to base improvements on body composition, instead of pounds gained, suggest to your athletes that they bypass stepping on a traditional scale. Or, if the coach doesn’t really know how to use the skinfold caliper, don’t allow him or her to do the assessments.

Goals should be determined with the athlete’s input, so he or she feels ownership of the process. Therefore, it’s important to educate the athlete about the process. The greater the understanding an athlete has prior to embarking on a weight-gain program, the more likely his or her compliance and satisfaction with the plan.

One key thing for the athlete to understand is that an appropriate lifting program is the only way to add lean body mass. If the athlete doesn’t weight train adequately, his or her gains will be seen as body fat. It’s usually okay for athletes to see some fat gains with muscle gains, but their percentage of body fat should not rise significantly.

The athlete should also know that a key component of a weight-gain program is building appropriate rest into their training. Adequate sleep is required for hormone production, particularly testosterone, which is required for muscle growth. The better the athlete sleeps, the greater the muscle gain.
Going for the Gain

building. Although many athletes become eager to engage in their training, rest must be encouraged to enable muscle repair.

A third factor in the program that athletes must understand is that high levels of aerobic activity require extra calories. If this type of training is inhibiting weight gain, periods of lower intensity, shorter duration exercise may be required to gain mass.

But what may be most important for athletes to understand is that gaining weight is not solely controlled by the amount of calories eaten. For some athletes, the “500-calories-per-day-equals-one-pound-per-week” equation does not hold. For example, an athlete who already has a large amount of lean body mass may require more than 500 additional calories daily to gain a pound a week. An athlete who is still growing needs sufficient calories to support growth and weight gain.

Another factor that throws the equation off is the thermic effect of food. This refers to the energy needed to digest and absorb food, which amounts to about 10 percent of the food’s calories. The more food a person eats, the more energy they burn. Additionally, the rate of muscle gain is not so predictable: one pound of food is not the same as one pound of muscle.

STRATEGIES

After the athlete understands the factors that contribute to weight gain, he or she also needs specific strategies. Young athletes are often confused about what types of foods will aid in weight gain, and what proportions of carbohydrates, protein, and fat will be helpful.

To gain weight, the excess calories may come from any food. However, the most desirable distribution of macronutrients for sports performance is 55 to 70 percent of calories from carbohydrate, 15 percent from protein, and 25 to 30 percent from fat. For weight gain, fat may comprise up to 40 percent, especially when a large number of calories is required.

Protein is often believed to be a magical ingredient for building lean body mass. In reality, sufficient protein must be available to repair muscle tissue, but large amounts are not necessary or desirable. Additionally, protein does not in and of itself create muscle. No more than 0.9 grams per pound of body weight is the amount of protein recommended daily for athletes trying to gain mass. For a 135-pound athlete, this amounts to 86 to 110 grams of protein per day; for a 175-pound athlete, 123 to 143 grams of protein per day. One pound of muscle contains 75 to 100 grams of protein—that amounts to eating just two ounces of meat daily for seven days.

Excessive protein can actually slow the body down. Because protein is not an efficient fuel source, the body uses extra calories to convert it to usable energy. High-protein diets also promote fluid loss, which may lead to early fatigue and dehydration. It is important for the athlete to fulfill the balance of his or her calorie needs with carbohydrate and fat to spare the protein from being used for energy. Taking in large amounts of protein often comes at the expense of other foods, crowding out important carbohydrates.

It is vitally important for athletes to include both carbohydrate-rich foods and fats. Carbohydrates are necessary for ready energy and glycogen storage. Some carbohydrate foods are bulky, however, and should be avoided if they prohibit sufficient calorie intake.

Fats are considered “calorie dense,” providing many calories in a small quantity of food. The challenge for many people is not in the quantity of fat they consume, but in making healthful choices. It is recommended that athletes obtain more of their fats from unsaturated sources, such as nuts, vegetable oils, and high-fat fish than from saturated fats. Found in animal-based foods such as high-fat meats and dairy products, as well as many processed snack foods, saturated fats may contribute to the development of many diseases, and should be kept to a minimum.

Creatine is a well-studied supplement, with its results published in many sports and medical journals. It has been shown to improve weight-gain attempts. However, it is not condoned by many in the medical community. Each coach and athletic trainer must decide his or her stance on this subject. Other supplements often used by athletes are protein...
powders. These are not necessary, as most athletes are able to meet their protein needs. High carbohydrate supplements may be more effective at delivering extra calories to athletes.

Athletes may also want suggestions on when to eat for maximal gains. Eating before, during, and after weight training may help with hypertrophy and weight-gain attempts.

It’s also a good idea to have different strategies for different types of athletes, especially for those in group A versus group B. Athlete A needs to focus on consistently meeting these types of goals:

• Eating three meals a day, every day.

• Including at least two snacks a day in addition to their meals.

• Drinking a majority of their beverages between meals, to leave more room for calorie-dense foods at mealtime.

• Not filling up on low-calorie foods, such as salads and broth-based soups.

Athlete B, who may already employ the above strategies, may need to focus on:

• Including more calorie-dense foods at each meal, while maintaining the proper proportions of macro-nutrients.

• Increasing the number of snacks per day, or including a substantial bedtime snack.

• Incorporating a protein-carbohydrate snack into their daily diet.

• Cutting back on aerobic training to decrease calories burned. (Weight-gain may be more easily achieved in the off-season than during the season.)

For guidance in meeting these goals, see Sidebar, “Sneaky Solutions” at the end of this article. Additional tips and a sample menu are also provided. By combining a plan to boost intake of calories with a consistent weight-training program, athletes will be able to put on the pounds they need to succeed in their sports.

Sidebar:
Sneaky Solutions

Here are some ideas on sneaking nutritious calories into an athlete’s diet.

1. When making food selections:

• Add nuts, seeds, croutons, grated cheese, and/or raisins to salad, rice, pasta, or any other dish.

• Choose calorie-dense breakfast cereals like granolas, Grape Nuts, and muesli. Add dried or sliced fruit.

• Add jam, peanut butter, apple butter, or cottage cheese to toast or bagels.

• Add slivered almonds or grated cheese to steamed vegetables.

• Choose desserts that contain nutrients: oatmeal cookies, Fig Newtons, fruit cobblers, stewed fruit compotes, puddings, pies, frozen yogurt.

• Add honey, chocolate powder or syrup, bananas, wheat germ, and low-fat yogurt to skim milk to make a smoothie.
• Use carbohydrate supplements as a snack.

2. While preparing food:

• Sauté (but don’t fry) foods, using a little olive or canola oil, or other vegetable oil (safflower, corn, soy, peanut).

• Top foods such as fish, chicken, or vegetables with bread crumbs before baking.

• Try adding wheat germ and/or evaporated milk to soups, gravies, cooked foods, potatoes, and shakes.

• Prepare hot cereals and appropriate canned soups with milk instead of water.

• Add beans, corn, potatoes to soups, entrees, and side dishes.

Sidebar:
Modifying the Menu

Here is an example of how a few modifications can add up to an extra 1,600 calories in one day:

LOWER-CALORIE DAY

Breakfast
1 cup corn flakes
1 cup low-fat milk
1 English muffin with 1 pat butter
1 cup orange juice

Lunch
2 cups spaghetti with
1 cup tomato sauce
1 slice Italian bread
1 pat butter
2 Tbsp. Italian dressing
1 cola
1 apple
Small bag potato chips

Snack
1 Snickers bar

Dinner
1 cup chicken noodle soup
2 roasted, skinless chicken breasts
1 cup green beans
1 baked potato with 1 pat butter

Snack
4 chocolate chip cookies
1 cup low-fat milk (1%)

TOTALS
Calories 3,106
Protein 178 grams (23%)  
Carbs 414 grams (53%)  
Fat 84 grams (24%)  

HIGHER-CALORIE DAY  

Breakfast  
1 cup Grape Nuts with 1 cup low-fat milk  
1 cup low-fat chocolate milk  
1 English muffin with 1 pat butter & 1 Tbsp. jam  
1 cup orange juice  
Snack  
1 cup trail mix (1/3 cup each chocolate chips, nuts, raisins)  

Lunch  
2 cups spaghetti  
with 1 cup tomato sauce  
2 Tbsp. parmesan cheese  
2 slices Italian bread  
1 pat butter  
1 tossed salad with 1/2 cup kidney beans  
2 Tbsp. low-fat dressing  
1 cup cranberry juice  
1 apple with 2 Tbsp. peanut butter  
Snack  
1 low-fat yogurt  
1 banana  

Dinner  
1 chicken breast, breaded, baked  
1 hard roll with 1 pat butter  
1 cup peas & carrots  
2 baked potatoes with 1 pat butter  
1 cup minestrone soup  
Snack  
4 fig bars  
1 cup chocolate pudding  

TOTALS  
Calories 4,790  
Protein 196 grams (16%)  
Carbs 810 grams (65%)  
Fat 104 grams (19%)  

Sidebar:  
Weight-Gain Tips  
• Never eat “naked” bread—always “dress” your bread with peanut butter, olive oil, jam, honey, apple butter, hummus, occasionally butter or margarine, or any other topping you enjoy.
• Be sure your beverages have calories—juices, milk, smoothies, sports drinks are all great choices.

• Don’t fill up on low-calorie foods or beverages—leave room for more high-calorie foods.

• Have your soup or salad after your meal.

• Consistently eat three meals every day.

• Include regular snacks or mini-meals in between—especially after practice for recovery, and before bedtime.

• Carry snacks with you so that you are prepared to eat when on the run—peanut butter crackers, sports bars, granola bars, and trail mix are easy and caloric.

• Go for seconds—even if you don’t finish them.

• Try to eat just a little more than you normally are used to.