



PROPER FUELING & WEIGHT CONTROL

PART 2

but was never overly hungry and was often teased by his friends who were incredulous that he could exercise so much and be satisfied with so little. Some of the older kids and adults in the weight room talked a lot about protein powders and weight-gain supplements. Greg was curious, but because he didn't have a lot of money to spare and his parents weren't keen on these products, he decided to increase his food intake by eating more frequently and eating a larger amount at each meal.

Although his weight didn't increase quickly and several weeks went by where he stayed the same weight despite lifting and eating, he was able to achieve his goals. At the end of his freshman year soccer season, he weighed 120 pounds (54 kg) and was five feet, five inches (1.65 m). By August of the following year, he had grown two inches (5 cm) and had put on 20 pounds (9 kg), to 140 (63 kg). The growth spurt, increased eating, and weight training paid off. He felt great on the field, the coach was delighted, and his performance didn't suffer at all!

### *When you finish reading this chapter, you should be able to explain*

- what an athlete needs to have or do to increase muscle mass,
- how to determine the athlete's current weight and body composition and the number of calories needed to gain mass,
- where to get help in developing an exercise regimen,
- how to create an action plan to increase muscle mass,
- how to determine what and when your athlete should eat, and
- when supplements can help increase muscle mass.

If your goal is to increase athletes' weight, the more specific goal is to have them increase lean muscle mass. The last thing you want is for athletes to pack on body fat. If the increase is done right, when an athlete gains weight, he or she may gain a little bit of body fat in the process but the weight increases primarily because of an increase in muscle. It's going to take much more than Cheetos, Krispy Kremes, and milkshakes for your athletes to get the body they want.

### **How Can Athletes Add Muscle Mass?**

1. enough testosterone is available,
2. the muscles work maximally, and
3. the athlete consumes enough fuel through food and beverage to support everyday activities plus extra calories for weight gain.

Most athletes have very little body fat. The team physician or the athlete's pediatrician can help you determine each athlete's stage of growth and developmental progress.

Second, your goal is for the athlete to work on gaining strength. To accomplish this, athletes who cannot devote a lot of time to lifting weights during the season will need to put in some quality time in the weight room after the season is over.

Third, you need to know the athlete's current weight and body composition. To use these calculations to formulate a goal that is appropriate for your athlete and to get a baseline of the athlete's current weight and body composition in order to measure progress toward that goal, you and a qualified health professional need to do some assessments.

## Determine a Starting Point

When an athlete is interested in adding mass, he needs to begin with baseline measurements. Measurement of weight and body fat and the determination of metabolic rate and daily energy expenditure give the athlete a clear picture of his own body composition and caloric expenditure so that a plan can be customized to reflect his specific needs.

## What Is the Athlete's Weight and Body Composition?

Appoint a health professional to weigh the athlete and assess her body composition. Body composition yields valuable information on the percent body fat and fat-free mass. As mentioned in chapter 5, many methods are used to assess body composition, from relatively inexpensive skinfold calipers, handheld scales that assess body fat (such as Tanita), and bioelectrical impedance analysis (BIA) to the state-of-the-art methods such as air displacement (e.g., the BOD POD), hydrostatic or underwater weighing, and dual energy X-ray absorptiometry (DEXA). Table 6.1



Have a health professional assess the athlete's weight and body composition. (Activities for Athletes Who Want to Gain Mass)

lists the most common and least expensive methods used to assess body composition.

Although skinfold calipers, body fat scales, and BIA machines are not exact, they are inexpensive methods that are generally available. They provide a baseline and can be used periodically to assess progress.

As mentioned in chapter 5, another way to assess athletes is to have an athletic trainer or other health professional measure body mass index (BMI). The BMI charts can help to determine whether your athletes are underweight. For most people, a BMI less than 18.5 is considered to be underweight.

When an athlete expresses interest in increasing mass, he needs to realize that if he has a small frame, he may not be able to put on a lot of mass. ~~For a~~ ~~smaller~~ ~~frame~~ ~~is~~ ~~probably~~ ~~not~~ ~~going~~ ~~to~~ ~~gain~~ ~~as~~ ~~much~~ ~~weight~~ ~~as~~ ~~someone~~ ~~with~~ ~~a~~ ~~larger~~ ~~frame~~ ~~can~~ ~~because~~ ~~he~~ ~~has~~ ~~a~~ ~~smaller~~ ~~frame~~ ~~and~~ ~~therefore~~ ~~has~~ ~~less~~ ~~bone~~ ~~mass~~ ~~to~~ ~~support~~ ~~the~~ ~~weight~~ ~~of~~ ~~his~~ ~~body~~ ~~parts~~ ~~and~~ ~~therefore~~ ~~has~~ ~~to~~ ~~be~~ ~~more~~ ~~selective~~ ~~about~~ ~~the~~ ~~foods~~ ~~he~~ ~~consumes~~ ~~and~~ ~~incorporate~~ ~~strength~~ ~~training~~ ~~into~~ ~~his~~ ~~weight-gain~~ ~~program~~.

The good news is that athletes can increase muscle mass ~~and~~ ~~lose~~ ~~fat~~ ~~at~~ ~~the~~ ~~same~~ ~~time~~ ~~by~~ ~~being~~ ~~selective~~ ~~about~~ ~~the~~ ~~foods~~ ~~they~~ ~~consume~~ ~~and~~ ~~incorporating~~ ~~strength~~ ~~training~~ ~~into~~ ~~their~~ ~~weight-gain~~ ~~program~~. An athlete who is trying to gain weight may also experience a slight increase in body fat as a consequence of a greater caloric intake. However, gains in body fat can be kept to a minimum by being selective about foods consumed and incorporating strength training into a weight-gain program.

TABLE 6.1

### Methods to Assess Body Composition

Method	What is measured	Advantages	Disadvantages
Bioelectrical impedance analysis (BIA) or Tanita scales	Conductivity of body tissues	Easy, convenient, inexpensive	Hydration status affects accuracy
Skinfold calipers	Subcutaneous fat as a predictor of total fat	Easy, convenient, inexpensive	Must use correct equations and proper technique
BOD POD	Air displacement	More accurate than calipers, BIA, or body fat scales	Expensive and not readily available
Hydrostatic weighing	Body fat and lean mass	More accurate than skinfold calipers, BIA, or body fat scales	Expensive and not readily available
Dual-energy X-ray absorptiometry (DEXA)	Body fat, lean mass, and bone density	More accurate than BODPOD, BIA, body fat scales, and skinfold calipers	Expensive and not readily available

## Veronica's Food Diary for Gaining Mass

Time	Food or beverage consumed	Amount	Calories
7 a.m.	Orange juice	6 oz (180 ml)	90
	White toast	Two slices	160
	Peanut butter	2 tbsp	190
9 a.m.	Cereal bar	One	140
12 noon	Turkey sandwich	One sandwich with three slices of turkey and one slice of cheese	560
	Chips	Small bag of chips	160
	Apple	Small apple	80
	Chocolate chip cookie	Large cookie	210
	Water	20 oz (600 ml) water	0
3 p.m.	Sports drink	20 oz (600 ml)	120
6 p.m.	Spaghetti with marinara sauce	3 cups (710 ml)	550
	Bread, Italian with butter	Two slices of bread 2 tsp of butter	160 90
	Salad with ranch dressing	1 cup of salad 2 tbsp of dressing	25 90
	Water	12 oz (360 ml)	0
9 p.m.	Chocolate ice cream	1 cup (130 g)	240
			Total: 2,865

FIGURE 6.4 Sample food diary for gaining mass.

add calories and protein: Reviewing the food diary is much more effective than just asking the athlete what she eats during the day. When the athlete takes the time to record food and beverage intake and calculate the calories consumed, she will be better able to identify areas where she can change her diet.

### Choosing Foods

People should eat foods that they like. If food doesn't taste good, it's going to be hard to get it down and hard to stay with the food plan over time. Your athletes need to build their plans around foods that they

like, but they will need to eat more of those foods to get the best results. ~~Remember that you need to eat more of those foods to get the best results.~~ ~~protein, carbohydrates, and fat.~~ ~~Remember that you need to eat more of those foods to get the best results.~~

Table 6.3 on page 92 is a chart of common foods that contain carbohydrate, protein, and fat. ~~Make sure that you eat these foods at least once a day.~~ ~~Remember that you need to eat more of those foods to get the best results.~~ Some foods are a source of more than one nutrient, such as nuts, which are a source of protein and fat, and beans, which are a source of carbohydrate and protein.

## *Increasing an Athlete's Calories by Meal*

Here is an example of how to increase calories meal by meal.

### **Regular meal**

#### **Breakfast**

Two eggs  
Two slices of toast with butter and jelly  
Two sausage patties  
Orange juice

#### **Lunch**

Two bologna sandwiches  
Chips  
Two cupcakes  
One can of soda

#### **Snack before practice**

Nothing

#### **Dinner**

Two Big Macs  
Large fries  
Large soda

#### **Evening snack**

Chips  
Cookies

### **Enhanced meal**

Three eggs  
Bagel with melted cheese and two slices of ham  
Large glass of juice  
12 ounces (360 ml) low-fat chocolate milk

Two roast beef sandwiches with four slices of roast beef and one slice of cheese on each Kaiser roll  
One large blueberry muffin  
12 ounces (360 ml) grape juice  
12 ounces (360 ml) low-fat milk

20-ounce (600 ml) sports drink  
One package of peanut butter crackers

One milkshake  
One quarter pounder with cheese  
One grilled chicken sandwich  
Regular fries

Bowl of cereal, a mix of flake type and granola with milk, fruit, and nuts

Here are some ideas for food substitutions to add more calories.

#### **Instead of**

Corn flakes  
Cheerios  
Toast  
6 ounces (180 ml) juice  
Butter and jelly on toast  
Pretzels  
Cookies  
Water at practice

#### **Try**

Granola  
Frosted Mini-Wheats  
Bagel  
12 ounces (360 ml) juice  
Peanut butter and jelly on toast  
Nuts  
Muffin  
Sports drink

Besides changing the item eaten, the athlete can add something to the food, such as nuts, mayonnaise, butter and jelly, or cheese, or he can put the food or drink in or on a larger glass, plate, or bowl and increase the amount.

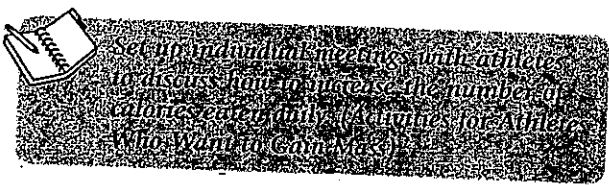
premixed fruit yogurt smoothies that go well with cereal or granola bars and take minimal time to eat. If athletes don't eat something in the morning, they have missed an opportunity for food, and they'll be playing catch-up the rest of the day.

For weight training, have the athlete consume protein before lifting to maximize the anabolic effect of protein. It may be that... Notice that... Muscle growth also occurs after lifting, but...

- 32 ounces (~1 L) Gatorade and a handful of nuts
- A PowerBar, Zone Bar, Clif Bar, Odwalla Bar, or Gatorade Nutrition Bar
- Yogurt with granola added
- Two handfuls of trail mix with cereal, dried fruit, and nuts

Remind your athletes to bring a carbohydrate-containing food to practice.

The high school athlete who has an early lunch period with practice right after school from 3 to 5 p.m. must have a snack before practice. It is hard to keep a sandwich in a knapsack or locker all day, but it is possible to have a package of peanut butter crackers, trail mix with some nuts added, or a sports bar that contains protein, carbohydrate, and fat.



Eating a lot more food may seem overwhelming to your athletes at first. They need to understand that sometimes they will need to force themselves to eat even when they are not hungry.

You may also want to recommend that your athletes implement the following strategies:

- Plan on eating something every three to four hours. This means no skipping breakfast or lunch, and it means including midmorning and midafternoon snacks and something at night after dinner.
- Aim to eat one fourth more food at every meal and snack, such as an extra slice or two of meat on a sandwich or an additional scoop of rice, pasta, or potato.
- During nontraining times (such as meals and snacks), make sure that what you eat or drink has calories. But during workouts, be careful to not consume too much sugar, because it can cause cramps and bloating. A sports drink is the best choice during workouts, because it provides some calories but not too much sugar.
- Aim for a gradual weight gain, because this is much more comfortable for your body than a rapid gain.

### What About Supplements?

It would be great if all your athletes had to do to increase muscle was to take a pill, drink some water, go to sleep, and wake up ripped. Nice theory, but I don't think so! There are several supplements on the market that claim to build muscle, and some have pretty creative and hard-to-resist ads. For the most part, their claims are too good to be true.

Although some athletes benefit from a protein powder or creatine, I always tell my athletes that... The dessert is sweet

### Example

I had the opportunity to work with a former Heisman trophy winner who decided that after his senior year, he needed to add some weight to be a more attractive candidate for the NFL draft. He told me that he had to triple his food intake and often felt like food was going to shoot out of his nostrils! He made it a point to add calories at every opportunity, both in food and beverages, and never took one supplement. He also increased the time and effort he put into strength training. He was able to add 10 pounds (4.5 g) in about three months, he felt strong, and the added weight didn't slow him down. Best of all, he was drafted in the first round!

## PONTIAC WRESTLING

**Challenge: Identify the three most significant issues that interfere with your teaching and construct solutions for these interferences.**

**Performance = Potential – Interference (P = p – i)**

As a wrestling high school coach and teacher, I see many different faces of interference for the athletes' everyday. Being able to understand and identify what these areas are will be different for each wrestler. I have found three main areas (attendance, stress, and communication) have a direct affect on the athletes performances on and off the wrestling mat. The challenge for me as the head coach is how will and how well will I facilitate the wrestler/s or team in the time of need.

Attendance is the first issue that I deal with. According to Culver and Trudel readings (CoPs), the athlete learns by participation. Obviously if the wrestler is not in practice he/she is going to miss out on instruction, techniques, practice of moves, conditioning, and game planning for the upcoming involvements. In wrestling so much can be missed in one day because of the multiple areas of instruction and techniques shown. In (CoPs) there are three dimensions of learning and wrestling is in dimension three (shared repertoire). In this dimension my athletes learn by the act of doing by explicit or codified knowledge and tactic or unarticulated knowledge. Here we see teaching strategies such as routines, actions, tools, stories, and ways of doing it. If the wrestler is not available for this instruction of repetition of teaching they are at a disadvantage because they miss out on the practice. Practice is defined by Culver and Trudel as doing in a historical and social context that gives structure and meaning to what we do.

The solutions' to this problem comes in a variety of different areas. First, at the beginning of the season parents meeting and team meeting it need to be clear that the wrestlers need to be at practice everyday. This means doctor appointments, vacations, extra school help, and homework/projects all need to be done at another time. I need to make it clear that if the athlete does not attend practice than he/she does not participate in the next "match". Whatever I do say, I need to back it up without any exceptions. If I allow a wrestler to wrestle after missing, I will lose credibility with everyone involved. This may have an impact on the result of the "match" but by sticking to the rule everyone knows what they need to do. On a regular basis I cover what we did in the previous practice/s but the day the athlete misses I could have taught a different way so "they" may have understood it better and the extra repetitions they needed to learn it. After a match situation has occurred of the area we covered that day of practice missed, I need to communicate to the wrestler that they did miss out that day and may have had the ability to come out in a better situation. This needs to be done in a positive manner so that the athlete will listen and understand how important it is to be present everyday. I want the wrestler to walk away with a good feeling of why it is important to help themselves and the team.

The second area I deal with is stress. Stress can derive from direct and indirect sources. The record of the team and/or individual, years of experience, or how is the season going are all direct factors. Family, schools, peers; relationships with a boy/girlfriend, weight loss, injuries, or sickness are all faces of indirect factors. Each athlete is going to respond differently to each and it is the job of the staff to identify each wrestler's way of coping. The wear and tare of the sport is hard enough without all the other factors, but it is reality the athletes are going to face these situations throughout the season. Due to stress of the wrestler/s this is going to play a factor at some point of the season, and how well the staff teaches stress management and handles these situations is going to be a factor.

Solutions for these factors are as followed. Teach and facilitate the team on different ways of problem solving. Teaching the ability to time manage and prioritize a day, week, or season. This will allow the athletes to see that there is time to get everything done if they have a plan and follow it. Allow yourself and staff to be approachable by the athletes to come to "us" for help or guidance. This is a matter of trust and if "the staff" is not approachable then the team will not feel they can come for help. The wrestlers need to know that they have someone other than family or friends they can count on for support.

The third area is communication. It is not all about what you have said that is important, in fact it is the message that was communicated that matters (ASEP). Whether it is showing a move or technique/s, strategies or game planning, expectations of the team or individual/s, or praise or disappointment is all identified or unidentified in your communication of the message. Only 20% of what is being said is taken in (ASEP). Therefore, it is vital that the message/s is clear and to the point. Emotion and tone are other aspect of communicating. By yelling a move rather than calmly speaking the move may impact a negative result of the wrestler. He/she may think that I am mad at them and shut down. On the other hand this tactic may work for another wrestler. 70% of non-verbal communication is the perception I have given with my message. This is done by my facial expressions, eye contact, body language, arms folded, or stance (ASEP). I may be telling a wrestler what a good job they did but the non-verbal message is telling them I am not happy with it. Presentation of teaching strategies and guided practice with proper communication skills will make or break the ability of the wrestlers to understand the messages taught.

By being clear and to the point messages have a better chance of being heard and understood. Being aware of proper tone and emotion for each athlete while communicating may increase the ability of understanding and performing the instruction/s. I need to remember that all the athletes are going to react differently, so it is important to identify each wrestler's way of coping with situations and tone. My non-verbal communication needs to be monitored and controlled to what it is I really want. Perception of the non-verbal actions may be a mixed signal to my athletes, parent, or anyone around of the message that really is wanted to come across. Keeping verbal and non-verbal, tone and emotion communication skills in check will allow myself and staff the ability to get the most out our wrestlers in multiple situations. This will also help in the presentation of tactics or instruction, teaching strategies, and guided practices. Always being positive and not allowing an athlete leave after a tough day without something positive said to them will allow "my staff" credibility then and in the future.