

# OFF-SEASON

*“Pro football tends to be a year-round sport now. Guys are just as intense about workouts and eating right in the off-season as they are during the season. It is such a competitive world that not even the elite athlete can take much of a break. It’s a much more professional and scientific approach these days.”*

— John Offerdahl,  
former NFL Linebacker

**T**raditionally, the off-season was the time to kick back and relax. Players didn’t train much and certainly didn’t worry about following a nutritional plan. They assumed preseason training was enough to get them in shape for games. But now we know better.

At all levels, coaches want their players training in the off-season—and with good reason. Off-season weeks and months are the perfect time to reach new training goals. At the elite levels, almost all players use the off-season to get stronger, leaner, and more powerful, and athletes at other levels should follow suit. Ultimately, good preparation in the off-season establishes the cornerstone for success in terms of preparing for pre- and in-season work.

We also now know that nutritional plans should be developed hand-in-hand with training plans. It can be tempting to fall back into a pattern of eating fast and fried foods, potato chips, desserts, and other high-calorie, fattening foods, but that will definitely

## PERFORMANCE NUTRITION FOR FOOTBALL

hinder a player's strength goals. In fact, the off-season is the perfect time to really concentrate on nutrition and implement nutritional goals into your training plan.

Some of the goals I have helped football players reach in their off-seasons include gaining weight, losing weight, getting lean while developing as much mass as possible, gaining strength that will carry over into the season, changing body composition for a position change or better overall performance, and understanding the role of rest and recovery fuel.

### PERIODIZATION & TIMING

Overall, the emphasis during off-season training is on strength and cardiovascular building. The first phase of the year is when coaches are trying to develop as much strength, speed, and power as they can. According to the experts, players who start early hold up better because they have a stronger base. They are able to add lean muscle mass and better endure the additional training to come. It is the ultimate preseason predictor of who will do well and who will not.

For this phase, training usually includes at least four days a week lifting weights, with agility and acceleration drills also emphasized. For teams involved in spring practices, weightlifting is de-emphasized during this short time period while speed and agility drills become more important. After that, muscle mass recruitment is developed by concentrating on strength and size, according to some coaches, because when players get back from a short summer break, training gets extremely intense.

With weightlifting, University of Miami Head Strength and Conditioning Coach Andrew Swasey says you need to “shock the body” in order to continually adapt to higher training levels. Since muscles have memory, coaches use that memory to repeatedly build strength.

## OFF-SEASON: PERIODIZATION & TIMING

How does this off-season training correspond to nutrition? Because building lean muscle mass is a primary goal, protein needs are greater than during the season. In looking at our nutritional periodization chart, we can see that protein is adjusted to build mass and carbohydrates are decreased in percentage. See box below.

In addition, calorie needs are great, as is obtaining a wide range of vitamins and minerals. Just like during preseason and in-season, players need to concentrate on eating a wide variety of healthy foods, making sure they are consuming enough calories and the most important nutrients.

That's the big picture. But there is also a small picture called nutrient timing, which breaks down the fueling needs of athletes throughout the day. It advises eating certain foods at certain times to maximize opportunities for building endurance, recovering from training, and enhancing muscle growth.

According to renowned exercise physiologist Dr. John Ivy, there are three distinct phases of nutrient timing in a 24-hour period: energy, anabolic, and growth. For each phase, there is a unique set of metabolic features that can be impacted by nutrient composition.

The energy phase makes up most of the day, from the time you wake up until your last afternoon workout. Because you are preparing your body for training, carbohydrates are the primary energy source, and should make up a good portion of your diet

### OFF-SEASON NUTRITIONAL PERIODIZATION

	Preseason	In-Season	Off-Season
<b>Carbohydrates</b>	50-60%	55-65%	45-50%
<b>Protein</b>	15-25%	10-15%	15-35%
<b>Fat</b>	25-35%	20-30%	20-35%

## NUTRIENT TIMING MENU

Phase	Corresponding Nutrition	Meal/Snacks
Energy (throughout the day)	Carbs: 60-65% Protein: 15% Fat: 15-30%	Breakfast: cereal, milk, one egg, toast or a muffin, banana, juice  Snack: apple with yogurt  Lunch: Mexican salad with veggies, beans, corn chicken strips, light dressing, bean burrito, 12 oz. apple juice, pear  Snack: fruit smoothie with whey protein
Energy (pre-workout)	Carbs: 60-65% Protein: 15% Fat: 15-30%	High carbohydrate energy bar or shake
Anabolic: (post workout snack)	≈ 50% of calories expended 3:1 ratio carbs to protein	3:1 ratio carbs to protein recovery shake or beverage
(dinner)	Carbs: 25% Protein: 40% Fat: 35%	Dinner*: All-American salad, no huddle pork chops with orange scented carrots, green beans (see recipes in Appendix F), and 2% milk
Growth	Carbs: 30% Protein: 70%	Pre-sleep high-protein shake

\*Depending on weight gain/loss goals

Adapted from Dr. John Ivy's College Sports Dieticians conference presentation, May, 2010

(60 to 65) percent during that phase. The proper loading of carbohydrates—and staying hydrated—during the energy phase will fuel muscle contraction, muscle endurance, help your body maintain blood sugar levels and muscle glycogen to prevent fatigue, and even later on, reduce post-workout muscle damage while accelerating recovery. Eating breakfast is critical, as is snacking throughout the day.

Next comes the anabolic phase, which begins immediately after training and continues until the hours before bedtime. At this point, you want to help muscles recover and rebuild. Also think about replenishing specific amino acids such as leucine and antioxidant vitamins.

Immediately after the workout, both carbs and protein are important, so it's best to consume a meal or snack with a 3-to-1 ratio of carbs to protein. That ratio is key, research has found. Eating an energy bar and other snack with about a 3-to-1 carbohydrate to protein ratio immediately after your workout is ideal.

Then it's important to continue a high-protein diet during this time frame, so a hearty dinner is key. Look to get about half of meal calories from protein during your dinner or meal, with healthy sides of veggies, salad and fruit.

Finally, the growth phase occurs while you're sleeping. To help promote muscle recovery and growth while you're getting your z's, a high protein snack before you hit the hay is recommended.

How do you take these windows of opportunity for energy, anabolism, and growth to the table? The “Nutrient Timing Menu” on page 120, which is based on a late-afternoon training schedule, will get you started on practicing nutrient timing. You can also

**Immediately after the workout, both carbs and protein are important, so it's best to consume a meal or snack with a 3-to-1 ratio of carbs to protein.**

## PERFORMANCE NUTRITION FOR FOOTBALL

read more about nutrient timing in recently released books on the topic—they are listed in Appendix F on page 260.

### NUTRIENT NEEDS IN THE OFF-SEASON

One big challenge is that some players believe what's good during the season is also good in the off-season. According to Cheryl Zonkowski, University of Florida Director of Sports Nutrition, player “buy in” to a different eating schedule, higher or lower calorie intake and nutrient adjustments during the off-season is

#### AT THE VENDING MACHINE

##### Choose these:

SOYJOY, low-fat granola bars,  
NutriGrain or Fig Newton bars

Baked chips, pretzels,  
soy crisps, Sun Chips,  
Smart Food, reduced fat or  
Pirate's Booty popcorn,  
Fiber Gourmet Lite  
Cheese Snacks, Pop Chips

Plain or chocolate low-fat milk,  
sports drinks, 100% juice or low  
sugar drinks like Vitamin Water,  
Life flavored water

Trail mix

Beef jerky

##### Instead of these:

Candy, candy bars, fruit pies, breakfast tarts

Regular chips, Combos, or cheese puffs

Soda, fruit punch

Nut candy bars

Pork rinds

difficult because the next season is so far off. But players should know that the off-season is often the most important time of year for nutrition.

Most of my best work as a nutritionist is done during the off-season. Some of the university's best players worked on their long-term goals starting in the off-season. Establishing vitamin and mineral needs and correcting player deficiencies should also be attended to at this time.

**Calories:** For off-season training, getting enough calories is imperative for keeping up with energy demands and for building muscle mass and strength. Off-season calorie needs are similar to preseason, with players needing 50 to 80 calories per kilogram of body weight per day unless weight loss is desired.

An energy deficient diet during off-season training can lead to significant weight loss, loss of muscle mass, illness, and the onset of physical and psychological symptoms associated with overtraining and performance issues (see Chapter Three for more on these symptoms). So how do players ensure they get enough “good” calories, especially if they are busy with school and other responsibilities?

The first step is to make sure you are eating healthy meals and snacks throughout the day. A full breakfast, a thoughtful lunch (instead of whatever looks good at the cafeteria that day), and a hearty dinner are critical.

If calorie needs cannot be met at mealtimes, in-between snacks like fruit and yogurt or energy bars are essential. Snacks between meals also offset excessive hunger at mealtime so you don't end up grabbing the easiest dinner meal just because you're famished.

**If calorie needs cannot be met at mealtimes, in-between snacks like fruit and yogurt or energy bars are essential.**

## PERFORMANCE NUTRITION FOR FOOTBALL

At school, players who do not prepare in advance are at the mercy of vending machines and cafeteria lunches. What are the best choices when this happens? Foods that are baked instead of fried, with the least amount of preservatives, are okay. Players should also look for foods with some type of nutritional benefit, such as high complex carbs, lean protein, good fats, and additional vitamins and minerals. Some of the better choices you can make at a vending machine at school can be found in “At the Vending Machine,” on page 122. And here are some additional tips for the lunch line.

- Go for the salad bar, and include a variety of veggies. Strive for at least five different colors of foods.
- Add protein to your salad and either skimp on the dressing or using low-calorie dressing.
- Choose grilled chicken, turkey, or fish over fried meats, chicken, or pork.
- Take a side of vegetables (unless they are swimming in butter or oil) instead of fries.
- Grab milk or 100-percent juice over soda or a juice flavored drink.
- Skip the cookies or ice cream for dessert.

### LOWERING YOUR SNACK'S GI

#### **Change these high glycemic index choices:**

Plain bagel

Tortilla chips

Pretzels

Pancakes

Vanilla wafers

#### **To these lower glycemic index choices:**

Whole grain bagel and yogurt

Tortilla chips and bean dip

Pretzels and chocolate milk

Pancakes and low-fat milk

Vanilla wafers and apple

**Carbohydrates:** Players can typically meet their off-season training nutritional needs with a diet consisting of about two to four grams carbohydrates per pound of body weight to maintain muscle and liver glycogen stores for workouts. Complex carbohydrates are found in whole grains, vegetables, and fruits, or can be added to soups, casseroles, and smoothies. Important compounds found in these foods, called phytonutrients, along with vitamins and minerals, help build a nutritious base and are also assets for performance and recovery.

The glycemic index (GI) is one tool to help you make better carbohydrate choices. A measure of how your body responds to the sugars in foods, GI is impacted by the type of sugar in the food (some sugars metabolize slower than others), the amount of sugar in a food (called the glycemic load) and the presence of protein, fat, and fiber. Low glycemic carbohydrates provide a longer lasting fuel to maintain energy levels throughout the day, while high glycemic foods are better for getting quick fuel back to muscles after your workout.

The GI number is the effect of individual foods on blood sugar during the first two hours of consumption compared to the same response of pure sugar during the first two hours of consumption. Pure sugar has a GI of 100. All other foods have less. The idea is to select the healthiest food choices so that blood sugar levels will remain steady and energy levels will stay consistently high. Knowing the GI of your favorite foods helps you to combine lower glycemic foods with your favorite foods to make the energy last longer. So if you like graham crackers for a snack, have a glass of milk to reduce

The glycemic index (GI) is one tool to help you make better carbohydrate choices ... Low glycemic carbohydrates provide a longer lasting fuel to maintain energy levels throughout the day.

## GLYCEMIC INDEX CHART

Very Low Under 39	Low 40-54	Moderate 55-69	High 70-100
Peanuts	Orange juice	Figs	Gatorade
Skim milk	Grapes	Raisins	Grain crackers
Pears	Low-fat ice cream	Condensed milk	Pancakes
Peaches	Special K cereal	Bran Chex	Cheerios
Apples	Old-fashioned oats	Grape-Nuts	Corn flakes
Cherries	Brown rice	Muesli	Puffed wheat
Grapefruits	Oat bran bread	Quick oats	Bagels
Plums	Pumpnickel	Honey	Pretzels
Yams	Rye bread	Shredded wheat	White bread
Strawberries	Apple muffin	Rye crackers	Instant potatoes
Sugar-free fruit	Corn tortilla	Pita bread	Rice cakes
Yogurt	Chocolate	Sourdough bread	Rice Krispies
All Bran cereal	Parsnips	Pizza	Melba toast
Lima beans	Green peas	Bran muffin	White rice
Barley	Bananas	Whole wheat bread	Saltines
Egg fettuccine	Oranges	Angel food cake	Water crackers
Chickpeas	Sponge cake	Beets	Graham crackers
Kidney beans	Black beans	Corn	Vanilla wafers
Lentils	Black eyed peas	Potatoes	Clif Bar
Navy beans	Apple juice	Mangos	PowerBar
Soybeans	Sushi	Papayas	Jelly beans
Butter beans	Lentil soup	Pineapple	Life Savers
Chocolate milk	Carrots	Potato chips	Cantaloupe
Smoothie with protein added	Soba noodles	Popcorn	Broad beans
	Split pea soup	Couscous	
Fresh or dried apricots	Kiwis	Wild rice	
		Mac and cheese	
Whole wheat spaghetti		Tortilla chips	
Uncle Ben's rice (converted)			

Chart adapted from Food Nutrition & Diet Therapy, 12th edition (2008) and The Tropical Diet (2004)

## OFF-SEASON: BUILDING MUSCLE MASS

the total GI and make your energy last longer. See “Glycemic Index Chart” on page 126 for a look at where some foods fall in the glycemic index and “Lowering Your Snack’s GI” on page 124 for how to boost the energy value of some popular meals and snacks.

**Protein:** As mentioned earlier, protein needs during the off-season are elevated due to heavy weightlifting and muscle building. A range of 1.5 to two grams per kilogram of bodyweight with pre- and post-workout snacks providing 20 to 25 grams of protein for most players is recommended. This can be easily met through whole food protein choices like meats, chicken, eggs, fish, and dairy. When protein needs cannot be met through whole foods, supplemental shakes, bars, and beverages can help.

If an insufficient amount of calories or protein is consumed, players will lose mass and not achieve their off-season goals. This will cause players to start preseason in a negative building state. Once preseason begins the risk for illness and injury will be greater, training tolerance will be reduced and muscles will waste away.

**Fat:** The amount of fat players need to eat daily during the off-season depends on body composition, season goals, and energy needs. Since fat provides a dense, long-term fuel source, it helps the body to absorb fat soluble vitamins A, D, E, and K, which provide the essential fats called omega 3s and omega 6s. A minimum amount of 20 to 30 percent of total calories, or approximately one gram of fat per kilogram of body weight, is recommended. For those who need to gain weight, or have higher calorie needs, additional servings of nuts, avocados, nut butters, and whole milk dairy products can be added as needed.

## BUILDING LEAN MUSCLE MASS

Many football players have the same question for me while compiling off-season goals: How do I gain weight that will make me stronger, but not slower? While research suggests there are a number of factors that impact building muscle mass (including genetics, your muscle and hormonal profile, nutrient timing, training type, time,

intensity and frequency), we also know that consuming enough protein at the right times can help.

## WEIGHT GAIN TIPS

*Gaining weight requires constant attention to making sure you add nutrient-dense calories to every meal and snack. Here are some tips on how to do that.*

- Add a glass of whole milk or whole milk yogurt to each meal and snack. If you are lactose intolerant, use whole soy, almond, rice, or hemp milk.
- Don't drink at mealtime until food has already been consumed, since beverages can be filling.
- Replace low calorie beverages like water with juice, high carbohydrate sports drinks, whole milk, shakes, and smoothies.
- Use weight gainer mixes as needed and approved by your sports nutritionist, athletic trainer, and/or coach. Remember that too much can lead to excess body fat and poor performance.
- Double your portion sizes of whole grain breads, pastas, brown rice, sweet or baked potatoes, beans, peas, and corn.
- Add the equivalent of about three ounces (21 grams) of protein daily to your dinner and pre-sleep snack. This looks like a deck of cards worth of chicken, fish, turkey, lean meat, or tofu for lean muscle gain.
- Snack between meals on high calorie choices.
- Use higher calorie condiments such as mayonnaise, cream sauces on pasta, regular instead of low-fat dressings on salads, and granola instead of plain flakes at breakfast.
- Eat a bar or shake both before and after training sessions, with at least 0.1 grams of protein per pound of body weight (20 grams for a 200-pound athlete) with a good source of carbohydrate (about one gram per pound of body weight, like a recovery shake, fruit smoothie with whey, or turkey sub).
- Consume a fortified shake before bed such as low-fat milk with a scoop of whey protein powder.

## OFF-SEASON: WEIGHT GAIN

Building muscle mass is possible when muscle protein is in a positive state called anabolism. The type, amount, and timing of protein intake all impact the rate and growth of new muscle. During training, especially more intense training, muscle protein breaks down at a faster rate than can be built called negative state or catabolism. Consuming adequate protein at regular intervals throughout the day, before, and after training can prevent catabolism. Both dietary protein and resistance training help to build larger muscles, but also stronger muscles, which are key to performance.

Players interested in increasing muscle mass need to consume approximately three to four ounces (21-28 grams) of protein every two to three hours and emphasize larger protein portions during the anabolic (after workout) and growth (sleep) stages. Eating protein periodically, especially after training, and with carbohydrates, takes advantage of higher insulin levels, which drives fuel back into muscles, repairing and building muscle tissue.

Within 30 minutes of training, players should consume a bar or shake with at least 10 to 20 grams of high quality protein and 35 grams of carbohydrates. A ratio of 3:1 carbohydrates to protein can accelerate muscle recovery and repair and stimulate muscle building. Consuming more protein than this will not be effective in building more muscle and can actually be converted to fat.

## WEIGHT GAIN

Getting back to the big question many players ask—how do I gain lean muscle mass?—is best answered in the off-season. And it's important that players look to put on weight by adding muscle and not fat. Putting more pounds on your body in the form of fat will not ultimately help you on the football field. Putting more pounds on your body in the form of muscle will.

Because more people in the general population are looking to lose weight, not gain weight, it can be hard to find good advice on this topic. In addition, many people don't realize that gaining weight

## WEIGHT GAIN CASE STUDY

*This wide receiver wants to gain 10 pounds of muscle over the course of his off-season.*

Profile: 21 years old, 165 pounds, 5-foot-9

Goal: To gain 10 pounds (muscle) to weigh in at 175

Current body fat percentage: 15%

Calories needed for training: 3,297

Current intake: 3,029 (47% carbohydrates, 13% protein, 40% fat)

Additional calories needed for weight gain: 250-350 calories a day

Off-season: 4 months (17 weeks), which equates to adding ½ to ¾ of a pound per week.

Current Diet	Recommended Diet	Added Benefit
Early morning (pre-workout): nothing	Pre-workout shake, Post-workout shake (both 60 g carbs, 20 g protein)	More energy for workout, muscle building, preventing muscle breakdown
Breakfast: nothing	Egg omelet with cheese and veggies, 1 whole grain bagel with cream cheese, fruit salad, 1 cup milk	Energy from protein and carbs, added vitamins and fiber
Mid-morning: 7 chicken tenders, medium fries, 20 oz. Gatorade, medium bag corn chips	Grilled chicken sandwich w/lettuce, tomato, and cheese, Sun Chips, apple, 1 cup orange juice	More protein from dense, lower fat chicken choice, healthier chips, whole grains, carbs, fiber, potassium, and vitamin C
Early to mid-afternoon: nothing	Half of a six-inch sub at 1 p.m., other half at 2:30 p.m. (turkey, cheese, lettuce, and tomato)	Carbs and protein to prevent muscle breakdown, added energy
Late afternoon: six shrimp, medium fries	Shrimp parmesan, broccoli, green salad w/dressing, minestrone soup	Calories, carbs, protein, vitamins, fiber
Early evening: nothing	Grilled burger, 1 cup milk	Additional vitamins and a small amount of carbs for growth phase

can be just as hard as losing it. It requires constant attention to calorie intake, meal timing, and pre- and post-workout snacks. Here are the key areas:

**Intake:** The first step to gaining weight is to add calories to your diet. My advice is to add at least 700 to 1000 calories daily to accomplish a weekly 1 to 2 pound gain in lean mass along with heavy resistance training. The food should be timed to take advantage of the phases of the day described earlier in this chapter and overall, include a diet made up of about 45 to 50 percent carbohydrates, 25 to 30 percent protein, and 25 to 30 percent healthy fats.

While one to two pounds per week may not sound significant, it adds up over an entire off-season. Trying to gain too much weight per week is usually unrealistic for a teen and undesirable for players trying to gain lean muscle mass.

**Meal Timing:** In addition to heavy resistance training, the key to gaining lean muscle mass includes consuming at least five to six meals a day. Don't skip meals or snacks!

**Pre- and Post-Workout:** It is also important to eat before and after training. Find high calorie, high protein, portable fuel for pre- and post-workout snacks. PowerBar's Energy Bites have about 300 calories, 34 grams of carbohydrates (only 16 grams from sugar, so a low GI), and 20 grams of protein and are easy to "pop" in on the run—no appetite needed here. Additional shakes and bars can be found on pages 66-67.

**Weight Gainers:** If you choose a high calorie weight gainer, be careful not to get too many calories or too much protein or fat. Getting above and beyond what your body requires will only add additional fat. Check with your sports nutritionist, coach, or athletic trainer before consuming any new high calorie shakes or formulas.

## WEIGHT LOSS

Like weight gain, weight loss is also best accomplished during the off-season since there is ample time to modify calories and avoid

## WEIGHT LOSS CASE STUDY

*The following is a case study of an incoming college freshman offensive lineman who wants to lose weight.*

Profile: 18 years old, 349 pounds, 6-foot-3

Goal: Lose weight while staying healthy

Calories needed for training: 3,700

Current diet: 1,605 calories (181 grams carbohydrates, 80 grams fat, 53 grams protein)

Dietary deficiencies: calories, carbohydrates, and all major minerals and vitamins

Excesses: total fat and sodium

Recommended plan for weight loss: 2,800 calories (with adjustments as body fat decreases, muscle mass increases, and weight is lost)

Concerns: player is starving in an attempt to lose weight quickly, which will promote ketosis, decrease fat as an energy source, and break down muscle.

### Current food intake

Morning: nothing

Mid-morning: nothing

Afternoon: three Buffalo wings, medium fries

Mid-afternoon snack: nothing

Evening: chicken sandwich

Evening snack: pint fruit salad

### Recommended replacement

1 cup scrambled egg whites with nonfat shredded cheese and veggies or spinach frittata, 2 slices whole grain toast with I Can't Believe it's Not Butter spray, 1 glass of 1% milk, 1 cup of Tropicana 50 orange juice

1 apple with 1 light string cheese stick

Grilled chicken sandwich on whole grain wrap with lettuce, tomato, and light mayo, 1 bowl fruit salad, 1 cup 1% milk

Recovery drink after practice

Grilled fish sandwich (not breaded), green salad with light dressing, bowl of peas and corn, 1 cup broccoli with parmesan cheese, 1 cup 1% milk

1 pint fruit salad with light yogurt

the consequences of starvation. Many athletes try to lose weight by drastically cutting their consumption, but that is absolutely the wrong tactic. There are several negative consequences of rapid weight loss:

**Lean Muscle Mass Loss:** The loss of lean mass (muscle) will accompany fast weight loss. The magnitude is related to the degree of calorie restriction.

**Mental Performance and Fatigue:** Calorie restriction and resulting blood sugar drops can impair mood and concentration levels. It can also increase a player's perceived exertion level during training so the workout will feel harder than it actually is, and training goals will not be accomplished. Reduced short term memory and altered mood with rapid weight loss has also been shown to affect the classroom grades of student-athletes.

**Physical Performance:** Numerous studies show that the endurance of athletes who restrict calories is impaired. This is typically due to lower carbohydrate intake and storage and low blood sugar levels. The athlete's  $VO_2$  max (the amount of oxygen players can move around at the peak of their training) can also be impaired as a result of fasting.

**Hormonal Changes:** Calorie restriction can increase the production of the stress hormone cortisol, a catabolic hormone that causes protein breakdown from muscles and impacts carbohydrate metabolism. Restriction also reduces the concentration of thyroid hormones that impact metabolism (the rate you use and burn calories). It can also reduce reproductive hormones. This is more obvious in females who stop menstruating, but could also have consequences for males.

**Dehydration:** Players who cut a ton of calories tend to also cut out drinks, upping the chance of dehydration. Some will look to lose weight through sweating or diuretics, which carries even greater risks, including a reduction in plasma volume, reduced circulatory performance volume during training, reduced kidney blood flow and electrolyte losses. These changes lead to susceptibility to heat illness

and muscle cramps discussed in Chapter Four.

Typically, players who want to impress and reach their goals faster than possible go to extremes. An example would be an offensive lineman who wanted to lose weight so fast that he literally starved himself. His dietary profile and subsequent makeover have been highlighted in “Weight Loss Case Study” on page 132.

Instead of rapid calorie restriction, players should aim for a safe reduction of about 500 calories a day, which should lead to a weight loss of one pound per week. In addition, weight goals should be based on body composition (see Chapter Two) and include a training plan rather than focus on diet and weight alone.

It’s especially important to stay away from fad diets when you’re a football athlete, including low-carb diets. If carbohydrates are eliminated from the diet as promoted by some popular weight loss regimens, about three times as much in fluid weight is lost since each gram of carbs holds about three grams in water. So while it’s not hard to lose water weight on a low carb diet, you gain it back just as fast when carbohydrates are reintroduced. In addition, without carbs, you cannot burn fat efficiently—so it makes no sense to be on a carb-free diet if you are trying to lose fat. Research also suggests that with a calorie deficit diet alone instead of training plus a slight calorie reduction, lean muscle weight loss can account for double the amount of weight lost versus fat lost. For an athlete, this is the opposite direction we want to be going in.

In the end, the best way to lose weight and get into great performance shape is by following a slow and methodical weight loss plan and engaging in regular physical exercise. If the exercise makes your heart work harder and longer (as in running, cycling and swimming), you are more bound to use the aerobic energy system discussed in Chapter Two and burn more fat as an energy source. However, if the training is weight training, then you’ll be more bound to build muscle—which burns more calories. Therefore, a combination of both types of training are best when trying to lose fat weight and build lean mass.

**What are some strategies for safe and effective weight loss?**

**Consider the following:**

- Maintain a well balanced diet. This means calculating an appropriate daily calorie program and creating a calorie deficit of 500 calories—ideally 250 calories in food and 250 as expenditure for additional exercise.
- Increase proportion of total protein calories, and reduce carbohydrate calories from breads, sweets, grains, potatoes, pastas, and juices by about 25 percent.
- Include protein at each meal and snack for satiation, but decrease protein portion sizes by about a deck of cards—two to three ounces.
- Limit fast and fried foods and select more grilled or baked options to save on additional fat calories. By selecting low-fat prep methods, you can save up to 500 fat calories for each main meal, especially if the entrée is loaded with fried breading, French fries, cream sauces, oil, butter, or cheese.
- Drink more water, lower calorie beverages, and skim or 1% milk, while drinking less soda, whole milk, and juices. Sweet drinks can account for an additional 200 calories and 10 teaspoons of sugar per serving over low-sugar versions.
- Use lower calorie shakes, bars, and snacks with 100 to 200 calories per serving such as Mix1 high fiber drink, Muscle Milk Light, EAS AdvantEdge, PowerBar Pure and Simple, or Eight Ball Recovery Bar.
- Cut back on condiments—mayo, oil, butter, dressings, and cheese unless fat free.
- Limit candy bars, desserts, and other simple sugars in muffins, cakes, and cookies. If you need something sweet, opt for gummy bears, low-fat frozen yogurt, or ice cream.
- Find portable, calorie controlled snacks or portions—control by separating the contents of large containers into mini baggies for snacks.

## PERFORMANCE NUTRITION FOR FOOTBALL

According to Leslie Bonci, RD, Nutritionist for the Pittsburgh Steelers, it can also work well to add foods that require more work (that is, need to be chewed, cut, or hot foods that take more time to eat) to reduce total calorie intake over the course of the meal (see book in Appendix F). Carrot or celery sticks with low-fat dip, chicken on a plate instead of a sandwich, and hot soup are three examples. Leslie also recommends starting meals with a liquid, like a large glass of water or a low-sugar beverage, clear soup, unsweetened applesauce, or chili, for a fill factor before the main entree arrives.

### MULTI-SPORT ATHLETES

Over the past decade, there has been a trend for athletes to concentrate only on one sport throughout the year. But most recently, experts are recommending we get back to promoting the multi-sport athlete. The well-rounded athlete ends up being a better athlete and also tends to avoid overuse injuries.

If your off-season includes playing on the basketball team, wrestling, or running track, you can still have off-season goals for football. While concentrating on the sport you are playing during football's off-season, follow the nutritional recommendations for in-season training, tweaking them for the current sport.

If you need to gain or lose weight while also playing your second sport, sit down with a sports nutrition expert before the season begins. Get your baseline muscle mass and body fat percentage measurements and calculate your daily calorie needs with the professional.

First and foremost is staying energized to keep up with the training and competition demands of the current sport is important. If weight loss is the focus, then use some of the tips and guidelines discussed earlier in the chapter. Rather than deducting 500 calories a day to lose one pound a week, pick a more modest goal of 250 calories less each day and a half of a pound of weight loss a week.

## OFF-SEASON: MULTI-SPORT ATHLETES

If performance is compromised, then assessing overall dietary intake for deficiencies such as carbohydrates may be in order. Deficiencies in minerals and vitamins like magnesium or antioxidant vitamins A, C, and E can also impact whole body oxygen consumption ( $VO_2$  Max), endurance, and strength. Lifestyle habits such as poor sleep patterns and a lack of post-workout recovery fuel are other areas to assess.

The off-season is the longest training phase, which affords players the opportunity to make significant weight, composition, and body fat changes. Players who need to gain weight have just as much of a challenge as players who need to lose weight. Calculating the appropriate weight, calorie, carbohydrate, protein, and fat formula and consuming the best balance of food at several intervals during the day can help players stay energized and meet personal goals.