

Nutrition for bodybuilding

If you weight train for sports, weight lifting competition, bodybuilding or even as a way to maintain fitness or appearance now that you've reached ideal weight, you will probably be more interested in gaining muscle and maintaining low body fat.

The dietary specifics will be different in each case. In this article we're emphasizing bodybuilding diet and nutrition so let's take a look at what's required.

Muscle Building, Bodybuilding Diet

To build extra muscle you need to eat in excess of what you currently eat and to work out with weights on a regular basis. How much muscle you can gain, how quickly and with what definition is largely determined by your genetics and age. But everyone at almost any age should be able to gain some muscle and strength with weight training. Proper nutrition is a crucial element in the muscle building process.

That overeating is not a good idea if you are already overweight is surely something you already know. Get fit first.

The Pre-exercise Meal

Weight trainers don't usually expend the amount of energy that an endurance athlete does in training, so one doesn't have to be as acutely aware of the intake of carbohydrate required to fuel such effort. For example, a heavy-training marathoner or triathlete may require 7-10 grams of carbohydrate per kilogram body weight per day (3-5 grams/pound/bw/day). Take it from me that this is a *lot* of carbohydrate – more than 32 slices of bread equivalent for a 150 pound (70 kilos) athlete minimum.

Even so, here are some principles for meals prior to exercise as generally supported by sports nutritionists and modified for the strength athlete. Remember, this is for eating before you train or compete.

- Experiment and find your tolerance for various foods before and during exercise. This is important because many of us react differently to fiber, foods like beans, milk, various fruits and so on.
- Eat meals low in fat and fiber with some protein and carbohydrate. Fiber can and should be part of a healthy diet in other meals.
- A main meal should be eaten 3-4 hours before exercise.
- A smaller meal can be taken 1-2 hours before exercise.
- Within an hour of activity, liquids such as sports drinks and gels, or protein shakes or foods that are not too heavy may be best.
- A very small percentage of people get a reactive blood glucose drop if they eat a high carbohydrate meal, so this may not be suitable for some people near to exercise. The number of athletes that

suffer from this condition, called hypoglycemia, is much lower than once thought. Adding protein to the meal can prevent this.

- Running type sports seem to churn the gut up and produce discomfort more than stationary or supported sports like weight training, swimming or cycling; so the pre-meal variety can be greater if you're not a runner.
- Consume around 10-20 grams of quality protein within 30-60 minutes of the weights session. Research has shown that an intake of 6-12 grams of essential amino acids, which is equivalent to 10-20 grams of a complete protein, promotes enhanced muscle protein recovery and rebuilding after the workout. One gram per kilogram body weight (about 0.5 grams/pound) of carbohydrate taken with the protein may assist this anabolic boost. Some trainers call this a protein 'shooter'.

Here are some foods and combinations that provide at least 10 grams of protein and 50 grams of carbohydrate.

- Flavored low-fat milk, 17 fl. ounces (500 ml)
- 1 cup fruit salad with 7 ounces or 200 grams flavored yoghurt
- A large glass of skim milk and two slices of bread and honey or jam (no butter)
- Various protein bars and protein shakes and powders – check the labels for percentages and quantities.

Refueling During a Weights Session

Unless you do extreme sessions for considerably longer than an hour, include intense cardio or strength-endurance weights programs, or ate poorly in the hours leading up to the session, you probably don't need anything other than water to get you through in good shape. And good shape means not letting your blood and muscle glucose get too low at which point cortisol and other hormones will be looking to break down your muscle.

It's a fine point but one that's worth considering. You don't need expensive and probably useless supplements to protect you from catabolic cortisol surges, all you need is some carbohydrate from a sports drink, gel or bar.

The Post-Exercise Meal

How you eat to recover from exercise is one of the most important principles in exercise nutrition. If you don't refuel sufficiently after each session, your glucose (glycogen) stores in muscle can get depleted leading to tiredness, poor performance and even immune system suppression and infection. Glucose is the athlete's and exerciser's main fuel. You get it from carbohydrate foods and drinks. What's more, inadequate refueling after your session won't take advantage of that hard muscle work by giving those muscles an anabolic boost that repairs and builds.

Weight trainers do not use as much glucose fuel as the higher intensity or higher duration aerobic sports like track and endurance running and cycling, but even so, it pays to keep those glycogen stores topped up if you want to be at your best in training. You will notice glucose depletion more after muscle-endurance and hypertrophy programs where higher repetitions, perhaps to failure, are slated rather than the low-rep strength sets where direct ATP (adenosine triphosphate) is likely the main fuel. Low numbers of repetitions with heavy weights are used to develop strength, whereas lighter weights and more repetitions are used to build muscle size and muscle endurance. The latter is likely to expend more energy.

Here is how to recover after your workout.

- **Commence recovery nutrition** within 30 minutes of completion of the weights session.
- **Consume protein** as soon as possible: 10-20 grams of quality protein, the same as recommended for the pre-exercise meal.
- **Consume carbohydrate** as soon as possible: one gram per kilogram body weight (0.5 grams per pound body weight) is a useful starting point. Consume carbohydrate according to the intensity and duration of the workout, including whether you did any aerobic exercise in the session.

Getting the Carbs Right

Move the carbohydrate quantity up or down as you assess your weight and energy levels as you train or compete. Modify carbohydrate intake according to how often or intensely you work out. A one-hour session of combined weights and cardio at moderate to high intensity may require at least 5 grams of carbohydrate per kilogram body weight per day (2.5 grams/pound).

Here are estimates of carbohydrate requirements with weight training the focus. Intensity of exercise over time increases quantities required. If light exercise, choose the lower numbers; only applies to days of exercise; choose higher rates if you mix solid cardio sessions with weights. Estimates only.

- Casual activity - 3-4 grams/kilogram/bodyweight/day (divide by 2.2 for pounds)
- 30-60 mins exercise/day - 4-6 gm/kg/bw/day
- 60-90 minutes exercise/day - 5-7 gm/kg/bw/day
- 120 minutes or more/day -- 6-9 gm/kg/bw/day

If you do more than one session each day, the post-exercise snack should be continued for each hour until regular meals resume. This is important to get you up for the later session. Few weight trainers choose to do two weights sessions a day, but some do an early session of cardio and a later session of weights or vice versa.

If you're serious about this and want to take a precise approach, it's worth buying one of those little calorie counter books or jumping onto calorieking.com or a similar site to check out how much protein or carbohydrate is in any food.

Getting the Protein Right

You definitely don't need to consume excessive quantities of protein in any form to build muscle and support your weight training or bodybuilding activity. Try not to exceed 1 gram per pound of body weight of protein daily. That may be a little more than what you will need but you don't need *more* than that.

Getting the Balance Right

You do need to eat sufficient food and carbohydrate to sustain your activities. Too little carbohydrate and your body will break down your muscle for glucose and reverse all those hard-gotten gains. Don't believe advice that says carbohydrates are fattening. Everything is fattening. Don't eat everything. Still, you can modify your carbohydrate intake for the better by avoiding refined flours, sugars, sweets and other quickly absorbed or processed carbohydrates when you are not exercising intensely.

The Least You Need to Know

Don't worry too much about the finer detail of calculating quantities if you don't wish to. The detail is there for those who can use this precision, but most people don't. **Experience and getting to know how your body works is probably more important**, as well as trial and error within the information provided here. Check out these main points.

- **Eat some protein and carbohydrate about thirty minutes before a session.**
- For sessions that proceed considerably longer than an hour at moderate to high intensity, and include cardio, take a **sports drink during the session.**
- **Eat some protein and carbohydrate immediately or within 30 minutes of the end of the session.**
- Don't use protein supplements excessively. You can get the required amount of quality protein from lean chicken, fish, soy, skim milk and some red meat.
- Some weight trainers **do better with six smaller meals a day rather than three larger meals.** Don't fret about this; it doesn't suit everyone. However, **always eat breakfast.**
- **Eat a healthy diet low in saturated fat and cholesterol and high in fruit, vegetables, beans, whole grains and quality monounsaturated and polyunsaturated fats in nuts, seeds and oils.**
- **Drink plenty of fluids to replace water lost. Beverages like tea and coffee contribute to this. The diuretic effect of these drinks has been overstated.**

Supplements in Bodybuilding Diets

Dietary supplements are big business. Some work, some don't, some affect performance negatively, some are hazardous and some are illegal and will get you banned in international sport. In fact, many are a waste of money and a con.

Protein powder supplements, particularly whey-based supplements, do have a place in supplementation for busy weight trainers, it's just that they're not used with precision and knowledge by many, and cheaper solutions may be available. More on that later.

The effectiveness and use of legal supplements in weight training is an extensive subject, which I will address in a series of articles at [About Weight Training](#).

Summing Up Bodybuilding Diets

Precision nutrition for exercise can be complex and that's why exercise physiologists and sports nutritionists are of great value to sporting teams these days. Even though we keen amateurs and weekend warriors don't have to worry too much about the split second in a race or the inch of bicep in a bodybuilding competition like the pros do, we can still eat well for our sport and activity. It helps no doubt.

Put these ideas into practice, see if it works for you and let me know if you have any questions or suggestions.

References

American College of Sports Medicine: American Dietetic Association: Dietitians of Canada. Joint Position Statement: nutrition and athletic performance. American College of Sports Medicine, American Dietetic Association, and Dietitians of Canada. *Med Sci Sports Exerc.* 2000 Dec; 32(12):2130-45.

Lambert CP, Frank LL, Evans WJ. Macronutrient considerations for the sport of bodybuilding. *Sports Med.* 2004; 34(5):317-27.

Burke L, Tipton K et al. [Nutrition for optimal recovery after training and competition](#). Special Report. Department of Sports Nutrition. Australian Institute of Sport, 2006.

Subject to change without prior notice. ©2012 Balanced Life Institute. All rights Reserved.