



## Adding Weight What It Takes To Put On Muscle

There are four fundamentals essential to adding lean body mass:

1. **Eat more calories.**
2. **Get and stay well-hydrated for clear, pale urine. Drink throughout the day.**
3. **Get 7-8 hours restful sleep regularly**
4. **Follow a rigorous program of resistance training.**

Simply eating **more calories** assumes that you will get them from a variety of **carbohydrate, protein and fats**. But many athletes believe that they only need to add lots of protein to build muscle. While strength- and muscle-building athletes do need more protein than non-athletes, you will not gain mass most efficiently by overeating protein. Muscles respond to hard work by using dietary **protein** to set structure and **carbohydrate** to provide the energy to do the repair and building work. Healthy **fats** are needed to provide healthy hormone (testosterone, growth hormone) and nervous systems, and a strong immune/recovery function to optimally drive the process of adding muscle. Vitamins and minerals in foods are like the oil in your car's engine. They don't provide power, but you need them to produce the power from your food. Additionally, **fluids** are critical because muscle is about 70% water and all muscle-building reactions in the body take place with water as a solute. **Sleep** is essential since it is during deep sleep that growth hormone, a key element to building mass, is at its peak.

What you eat, and when, seems to be the most complicated of the four fundamentals, so here are some guidelines to **help build lean mass and strength efficiently**.

1. Set realistic goals
  - a. It takes time to gain weight. Most athletes can gain  $\frac{1}{2}$  to 1 pound a week if they eat enough food to meet their calorie needs and train properly.
  - b. A note to "hard gainers." Genetics has a lot to do with the amount and speed with which you can expect to gain mass. If you come from a family of naturally thin parents and siblings, you may have difficulty transforming your inherited slender physique into a more brawny profile. Do not become impatient to bulk up. You can make significant gains in strength even though you may not add bulk at this time.
2. You will need **500 to 1000 extra calories per day** to gain lean weight.
3. Eat 3 meals per day consistently, if you aren't already.
  - a. Even if you are on the run, make meals and snacks a priority. **PLAN**.
  - b. Get up in time to eat breakfast, or plan ahead to have something on hand and take it with you.
  - c. Eat larger than normal portions.
  - d. Select higher calorie foods.
4. Add an extra snack.
5. Drink plenty of fluids that supply calories like juice, milk, milkshakes, and sports drinks.
6. Take a multivitamin/mineral daily as an insurance policy against gaps in your diet.

## Basic guidelines for Carbohydrate, Protein, and Fat:

Carbohydrate: Wt in pounds  $\times$  3 or 4 = number of grams of carbohydrate per day

Protein: Wt in pounds  $\times$  0.7 to 0.9 = number of grams of protein per day

Fat: Wt in pounds  $\times$  0.45 = number of grams of fat per day

Example: a 170# athlete needs:  $170 \times 3 = 510$  grams carbohydrate ( $\times 4$  calories/gram = 2040 cal from carbs)  
 $170 \times 0.9 = 153$  grams protein ( $\times 4$  calories/gram = 612 cal from protein)  
 $170 \times 0.45 = 77$  grams fat ( $\times 9$  calories/gram = 693 cal from fat)

Total calories = 3300 (rounded) + 500-1000 calories for wt gain = 3800-4300 cal./day

## Specific requirements include:

### Carbohydrate - Timing

*Pre-exercise:* 50-100 grams 30-60 minutes before exercise. For example: a bagel, 2 granola bars, juice or sports drink.

*During exercise:* 30 - 75 grams per hour. Sources may include sports drinks, gummy candies, diluted juice.

*Post-exercise:* 75 grams within 15 to 30 minutes after working out. (Eat full meal within 2 hours.)

*Weight workout:* Have a snack that contains both carbs and protein (15-40 grams) like half a turkey sandwich, tuna and crackers, cottage cheese and fruit, bean/cheese burrito or breakfast burrito, Gatorade nutrition drink.

*Other conditioning and practices:* A carb-only snack is optimal.

(See additional lists of meals and snacks from carbohydrate values of common foods you eat.)

### Protein

Eat some with each meal and snack throughout the day. It's not hard, and much cheaper, to get most of your quality protein from foods than from protein supplements.

The following foods have 6 to 8 grams of protein per amount indicated:

8 ounces (one cup) of milk or yogurt (any kind),	1 egg or 2 egg whites
1 ounce of meat, chicken/turkey, fish	1½ ounces cheese
1 ounce of deli meat (chicken, turkey, ham, roast beef	¼ cup cottage cheese
½ cup of beans	¼ cup nuts

The following starches have about 3 grams of protein per amount indicated:

1 slice bread	½ cup of rice or pasta
½ bagel	1 small potato (~3" long)
½ hot dog or hamburger bun	3 cups popcorn
½ pita bread	1 granola bar
1 cup dry cereal	6-10 crackers
½ cup cooked cereal (oatmeal)	15 tortilla, or 30 potato, chips

Vegetables have 1 to 3 grams of protein per ½ cup cooked or chopped small, or 1 cup leafy or irregularly shaped (like broccoli, etc.).

### Fat

Fats that are used for good nerve conduction, hormone production, immune function, and for every cell wall are primarily monounsaturated and polyunsaturated fats. These are called "healthy fat." Saturated fats and hydrogenated oils ("trans fats") are only used in small amounts by the body and have negative health implications if used in excess over time.

The following are sources of these fats, each has 5 grams of fat per amount indicated:

<u>Monounsaturated Fats</u>	<u>Polyunsaturated Fats</u>	<u>Saturated Fats</u>	<u>Trans Fats</u>
Nuts	Safflower, corn oil	Dairy products -reg.fat	Packaged foods like
Olive, canola, peanut oil	Walnuts	Animal products:meats	cookies, crackers,
Avocados	Flaxseed	Fried foods	mixes, some
	Fish, fish oil		margarines