

## Protein: Moving Closer to Center Stage

Until recently, protein got little attention. Like a quiet child in a classroom of rowdies, it was often overshadowed by fat, carbohydrates, and vitamins. That's changing. Lately there's been an explosion of interest in protein, largely triggered by high-protein diets for weight loss.

Around the world, millions of people don't get enough protein. Lack of protein can cause growth failure, loss of muscle mass, decreased immunity, weakening of the heart and respiratory system, and death. In the United States and other developed countries, getting the minimum daily requirement of protein isn't all that difficult.

Can you get too much animal protein? Digesting it releases acids that the body usually neutralizes with calcium and other buffering agents in the blood. Eating lots of animal protein, such as the amounts recommended in the so-called low-carb or no-carb diets, takes lots of calcium. Some of this may be pulled from bone. Following a high-protein diet for a few weeks probably won't have much effect on bone strength. Doing it for a long time, though, could weaken bone. In the Nurses' Health Study, for example, women who ate more than 95 grams of animal protein a day were 20 percent more likely to have broken a wrist over a 12-year period when compared to those who ate an average amount of protein (less than 68 grams a day). Remember half of your protein intake should come from a soy form.

### All protein isn't alike

Some of the protein you eat contains all the amino acids needed to build new proteins. This kind is called complete protein. Animal sources of protein tend to be complete. Other protein sources lack one or more amino acids that the body can't make from scratch or create by modifying another amino acid. Called incomplete proteins, these usually come from fruits, vegetables, grains, and nuts.

Vegetarians need to be aware of this. To get all the amino acids needed to make new protein - and thus to keep the body's systems in good shape - people who don't eat meat, fish, poultry, eggs, or dairy products should eat a variety of protein-containing foods each day. Try our Herbalife products to incorporate more soy protein into your daily regimen.

### Protein and chronic disease

The most solid connection between proteins and health has to do with allergies. Proteins in food and the environment are responsible for these overreactions of the immune system to what should be harmless proteins. Beyond that, relatively little evidence has been gathered regarding the effect of protein on the development of chronic diseases.

- **Cardiovascular disease:** One concern about the high-protein diet craze has been that eating diets high in protein and fat, and low in carbohydrate, would harm the heart. Recent research provides reassurance that eating a lot of protein doesn't harm the heart. In fact, it is possible that eating more protein, especially vegetable protein, while cutting back on easily digested carbohydrates may benefit the heart. A 20-year prospective study of 82,802 women found that those who ate low-carbohydrate diets that were high in vegetable sources of fat or protein had a 30 percent lower risk of heart disease, compared to women who ate high carbohydrate, low fat diets. But women who ate low-carbohydrate diets that were high in animal fats or proteins did not have a reduced risk of heart disease.
- **Diabetes:** Although proteins found in cow's milk have been implicated in the development of type 1 diabetes (formerly called juvenile or insulin-dependent diabetes), ongoing research has yielded inconsistent results. Later in life, the amount of protein in the diet doesn't seem to adversely affect the development of type 2 (adult-onset) diabetes, although research in this area is ongoing.
- **Cancer:** There's no good evidence that eating a little protein or a lot of it influences cancer risk.

## Protein and weight control

The notion that you could lose weight by cutting out carbohydrates and eating plenty of protein was once tut-tutted by the medical establishment partly because such diets were based on little more than interesting ideas and speculation. In the past two years, head-to-head trials that pitted high-protein, low-carbohydrate diets against low-fat, high-carbohydrate diets have given them a scientific leg to stand on. These trials show that high-protein, low-carbohydrate diets may work more quickly than low-fat diets, at least in the first six months. After a year or so, though, weight loss is about equal. Compared with a low-fat, high-carbohydrate diet, a higher-protein diet that goes easy on saturated and trans fats may decrease the amount of triglycerides in the blood, which is also good for the heart.

Why do high-protein, low-carb diets seem to work more quickly than low-fat, high-carbohydrate diets? First, chicken, beef, fish, beans, or other high-protein foods slow the movement of food from the stomach to the intestine. Slower stomach emptying means you feel full for longer and get hungrier later. Second, protein's gentle, steady effect on blood sugar avoids the quick, steep rise in blood sugar and just as quick hunger-bell-ringing fall that occurs after eating a rapidly digested carbohydrate, like white bread or baked potato. Third, the body uses more energy to digest protein than it does to digest fat or carbohydrate.

There's no need to go overboard on protein and eat it to the exclusion of everything else. Avoiding fruits, vegetables, and whole grains means missing out on healthful fiber, vitamins, minerals, and other phytonutrients. It's also important to pay attention to what accompanies protein. Choosing high-protein foods that are low in saturated fat will help the heart even as it helps the waistline.

## Straight talk about soy

One protein source that has been getting a lot of attention is soybeans. We've been told that regularly eating soy-based foods lowers cholesterol, chills hot flashes, prevents breast and prostate cancer, aids weight loss, and wards off osteoporosis. Some of these benefits have been attributed a unique characteristic of soybeans-their high concentrations of isoflavones, a type of plant-made estrogen (phytoestrogen). Have you tried Herbalife Soy Nuts?

- **Heart disease:** A 1995 meta-analysis of 38 controlled clinical trials showed that eating approximately 50 grams of soy protein a day in place of animal protein reduced total cholesterol levels by 9.3 percent, LDL cholesterol by 12.9 percent, and triglycerides by 10.5 percent. Such reductions, if sustained over time, could have meant a 20 percent reduction in the risk of heart attack, stroke, or other forms of cardiovascular disease. An updated look at the soy story, which includes several strong studies published since 2000, isn't so bullish on soy and cholesterol. According to this comprehensive update of soy research by the American Heart Association's nutrition committee, eating 50 grams of soy can lower LDL cholesterol. Keep in mind that 50 grams of soy protein is more than half the average person's daily protein requirement. Dr. Heber believes that half of your protein intake per day should be from soy protein.
- **Hot flashes:** Soy has also been investigated as a treatment for hot flashes and other problems that often accompany menopause. In theory, this makes sense. Soybeans are rich in phytoestrogens. In some tissues, these substances mimic the action of estrogen. So they could cool hot flashes by giving a woman an estrogen-like boost during a time of dwindling estrogen levels.
- **Memory and thinking ability:** A few studies have raised the possibility that eating soy could help prevent the age-related loss of memory or decline in cognitive function.

### The Bottom Line: Recommendations for Protein Intake:

- **Get a good mix of proteins.** Almost any reasonable diet will give you enough protein each day. Eating a variety of foods will ensure that you get all of the amino acids you need.
- **Pay attention to the protein package.** You rarely eat straight protein. Some comes packaged with lots of unhealthy fat, like when you eat marbled beef or drink whole milk. If you eat meat, steer yourself toward the leanest cuts. If you like dairy products, skim or low-fat versions are healthier choices. Beans, soy, nuts, and whole grains offer protein without much saturated fat and with plenty of healthful fiber and micronutrients.
- **Balance carbohydrates and protein.** Cutting back on highly processed carbohydrates and increasing protein improves levels of blood triglycerides and HDL, and so may reduce your chances of having a heart attack, stroke, or other form of cardiovascular disease. It may also make you feel full longer, and stave off hunger pangs. Too much animal protein, though, could weaken bones.

### Dietary Sources of Protein

Food	Serving	Protein grams
Hamburger, extra lean	6 ounces	48.6
Chicken, roasted	6 ounces	42.5
Fish	6 ounces	41.2
Tuna, water packed	6 ounces	40.1
Beefsteak, broiled	6 ounces	38.6
Cottage cheese	1 cup	28.1
Cheese pizza	2 slices	15.4
Yogurt, low fat	8 ounces	11.9
Tofu	1/2 cup	10.1
Lentils, cooked	1/2 cup	9
Skim milk	1 cup	8.4
Split peas, cooked	1/2 cup	8.1
Lentil soup	1 cup	7.8
Kidney beans, cooked	1/2 cup	7.6
Cheddar cheese	1 ounce	7.1
Soy milk	1 cup	6.7
Egg	1 large	6.3
Whole wheat bread	2 slices	5.4
Broccoli, cooked	5 inch piece	4.2
Baked potato	2x5 inches	3
Herbalife Protein Bar	1 bar	10
Herbalife Soy Nuts	1 Pack	11
Herbalife Soup Mix	1 Pack	16
Herbalife Drink Mix	1 Pack	15



# Water: Essential for Good Health



## **Why is water important for good health?**

The body needs water to function. Our bodies are 60 to 70% water. Most parts of the body contain water, including the brain, blood, and muscle. The body needs water to:

- Control body temperature.
- Remove wastes (through urine and bowel movements).
- Carry nutrients (food) and oxygen to cells.
- Maintain fluid balance and the delicate balance of minerals.
- Cushion joints.

It is important to balance the amount of water going into the body with the amount of water being lost by the body. This is especially important if you are:

- very young
- elderly
- sick with fever, vomiting, or diarrhea
- taking medicines that cause the body to lose water
- exercising
- living in extreme climates: hot, humid, dry, or high altitude
- Traveling on a long airplane trip.

## **How does our body get and lose water?**

The body absorbs water through the stomach and gut when you eat and drink.

Water leaves the body through:

- breathing
- sweat
- urine
- bowel movements, especially if you have diarrhea
- Vomiting.

## **How much water should I drink?**

How much water you should drink depends on:

- your age and body size
- what you eat (food contains small amounts of water in it)
- your level of activity (the more active you are, the more water you need)
- the weather (the warmer the weather, the more water you need)
- your health
- whether you are a man or woman (men usually need more water than women do because they have more lean muscle)
- What medicines you take (some medicines cause your body to lose water).

Most of the time you will get enough water if you:

- Eat a healthy diet ~Drink water with each meal ~ Drink water between meals.

Drink more water during strenuous exercise and in hot weather. If you are taking certain medicines or you have a chronic disease, such as congestive heart failure or kidney problems, you may need to drink more or less water. Talk with your healthcare provider about how much water you should drink every day.

### **How do I know if I am drinking enough water?**

A healthy body can control the balance of water. if you o to the bathroom fewer than 4 times a day, you may need to drink more fluids.

# *Protein Snacks*

**By David Heber, M.D., Ph.D., F.A.C.P., F.A.C.N.**

**Chairman of the Herbalife Nutrition and Scientific Advisory Boards**

It is well established that the typical person eating a western type diet consumes more daily calories than he needs. High-calorie snacks filled with fats and sugars contribute to these extra calories. Protein packed bars, drinks, soups, and nuts are far superior to other snacks because of the inherent differences between protein and sugars and fats.

First off, protein is more satisfying than the other two macronutrients because of specific signals it sends to the brain. When we snack on protein instead of sugars and fats, the body feels more full which helps people control their appetite between meals, thus cutting calories and controlling their weight. Recent clinical research has supported this physiologic phenomenon.

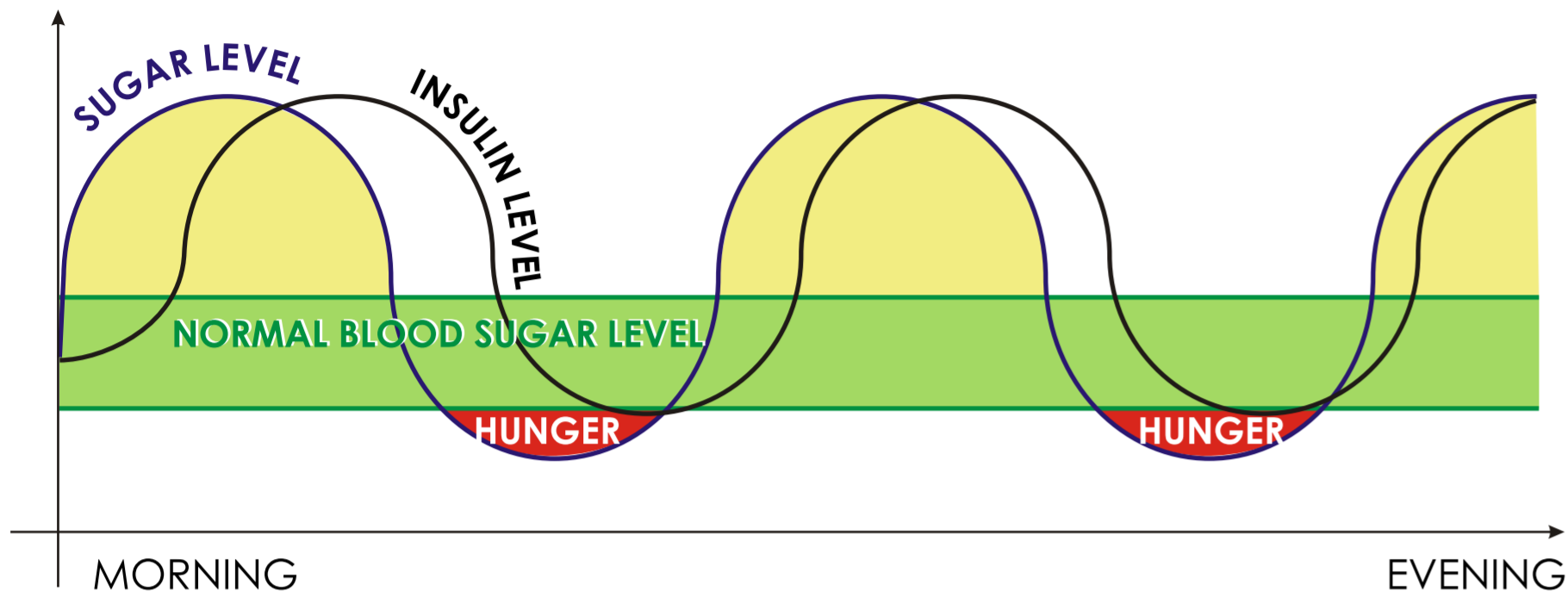
A second reason for choosing protein as a snack is its thermogenic effect. This refers to the metabolic tax a food puts on the body after we eat it. This metabolic tax for protein is much higher than sugar or fat because the body uses more energy to digest it. This means that when you choose protein over the other two, you are burning more calories during the process of digestion. Having this higher tax rate is good because protein tends to be low in caloric content, so the body is working harder on fewer calories.

A third reason to choose protein snacks over sugars and fats is the body's need to replenish the building blocks of muscle tissue. Muscle is important for our daily activities and it determines our metabolism. So the more we maintain our healthy lean muscle mass, the higher we maintain metabolism.

So the next time you reach for a snack, choose a protein-rich bar, drink, or soup. Avoid high-calorie chips, cookies, candies and sweets. They are generally much higher in calories, and they offer little nutritional value to the body.

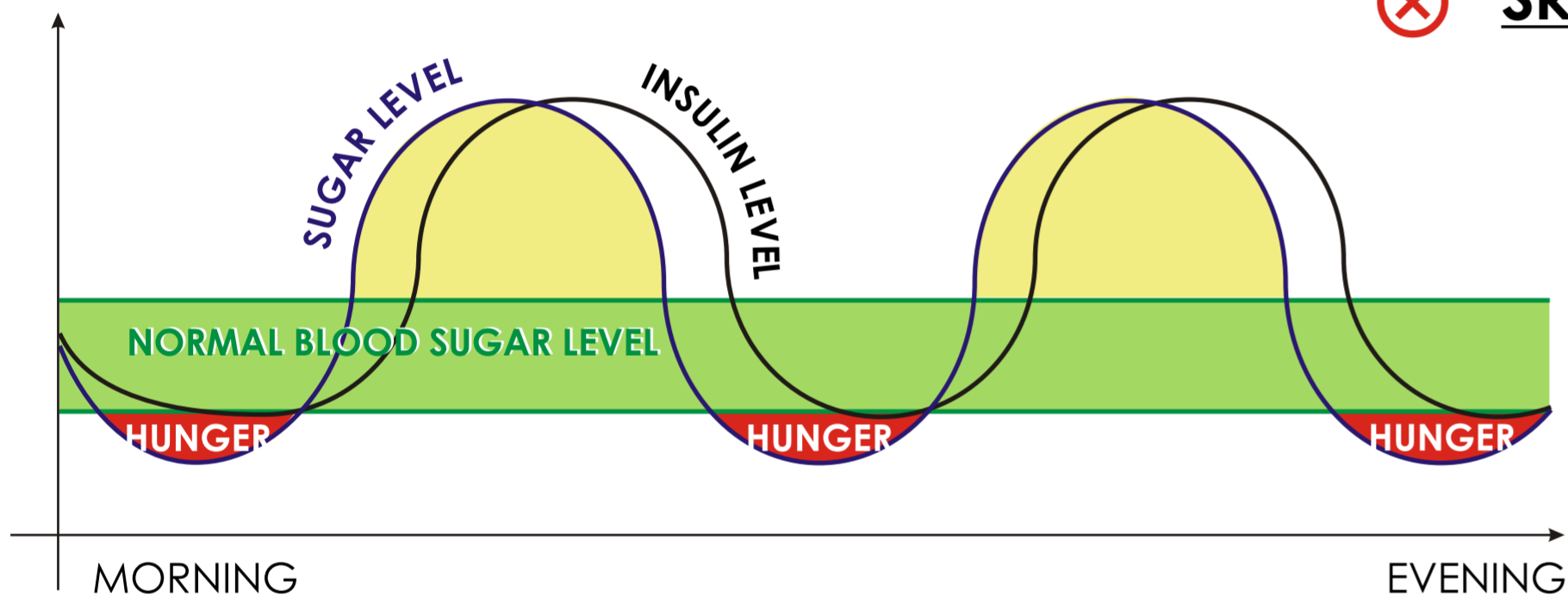
# HEALTHY BREAKFAST: FEEL GOOD AND CONTROL YOUR WEIGHT

## ⊗ Carbs-based breakfast



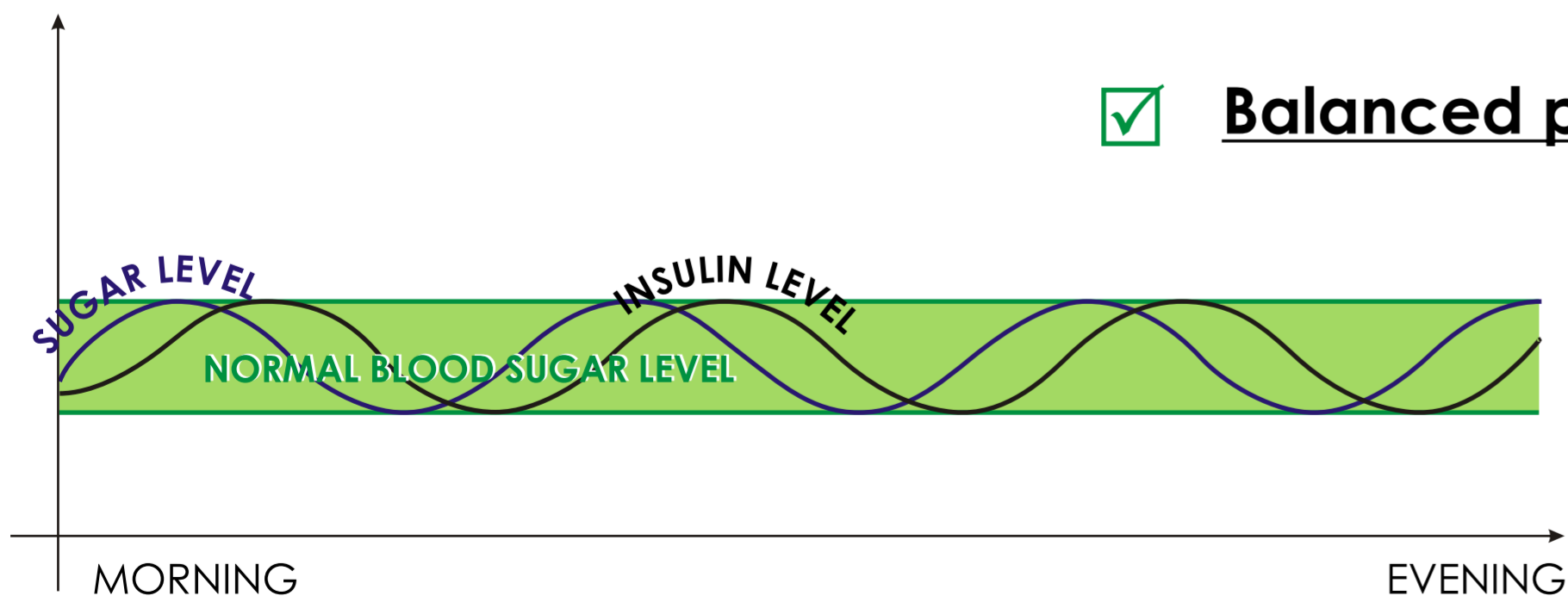
In the morning simple carbohydrates (*sugary refined cereals, white breads, toasts, etc*) cause an immediate surge of blood sugar level which results in a substantial emission of insulin. The insulin removes sugar from blood turning its excess into fat. The result is a decreased level of blood sugar, and thirst for more carbs. This cycle repeats itself 2-3 more times during the day. This vicious circle constitutes one of the major reasons for diabetes, high blood pressure and extra weight.

## ⊗ Skipping breakfast



When you skip breakfast, blood sugar drops below the normal level, you experience cravings and a drop of energy. You again revert to simple carbohydrates to achieve a quick surge of blood sugar and to overcome hunger and a drop of energy. Simple carbohydrates will cause an immediate surge of blood sugar level and a substantial insulin emission. The insulin removes sugar from blood turning its excess into fat. Then this cycle repeats itself 2-3 more times during the day. This vicious circle constitutes one of the major reasons for diabetes, high blood pressure and extra weight.

## ☑ Balanced protein-based breakfast



Such a breakfast supplies our body with all vital nutrients and energy without increasing blood sugar and insulin levels. It helps to avoid dependence on carbs during the day. In this way, appetite stays under control, cravings for carbs (*snacks, chocolate, pastry, junk, soft drinks, etc*) diminish and the body uses its own stored fats to get more energy.