WEIGHT LOSS

ESCAPE AMERICA’S OBESITY EPIDEMIC

RESOLVE TO EAT RIGHT

NO VISIBLE SIGNS OF ACNE

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HOW NOT TO BECOME PART OF THE OBESITY EPIDEMIC: IGNORE THE USDA’S “MY PYRAMID”

Unless you’ve been camping out in the Gobi desert for the past decade, you probably know that Americans are the fattest group of people on the planet. And we’re getting even fatter. The U.S. governmental agency was given the responsibility to carefully track these numbers is the Centers for Disease Control and Prevention’s National Center for Health Statistics.

According to their statistics, 66 percent of all adults in the U.S. over age 20 are either overweight or obese. Of these, 32 percent are obese. Compare that to 30 years ago when only 47 percent of adults were overweight or obese and only 15 percent were obese. We are clearly in the midst of an obesity epidemic.

So, how did we get ourselves into this mess and is there any way out?

TWO GLARING OMISSIONS: PROTEIN AND THE GLYCEMIC INDEX

Perhaps the most blatant bit of failed nutritional advice for healthy eating to prevent weight gain and reduce chronic disease is that offered by the USDA Food Pyramid, now known as “My Pyramid.” The original Food Pyramid was offered up to a trusting American public in 1992, and told us we should eat less than 30 percent of our total calories as fat. Because no recommendations were made for protein (then about 15 percent of total calories), that would leave carbohydrates to make up 55 percent or more of what the USDA considers an optimal diet.

But since the original Food Pyramid Guidelines were implemented, the numbers of overweight and obese Americans have risen from 55.9 percent of the population to the current value of 66.2 percent. And all while dutifully following the high carbohydrate, low protein governmental dietary recommendations. In fact, carbohydrate intake has actually increased, particularly high glycemic index carbohydrates in the form of refined grains and sugars.

In both the original Food Pyramid and the current “My Pyramid,” absolutely zero mention is made of the glycemic index of foods, giving the message that dietary fat caused us to be fat and that replacement of fat with carbohydrate could prevent obesity and promote good health. Unfortunately, this message has now been shown in hundreds of peer review scientific journal articles to be too simplistic, incomplete, and even erroneous.

THE GLYCEMIC INDEX

The glycemic index, originally developed in 1981, is a relative comparison of the blood sugar (glucose) raising potential of various foods or combination of foods based upon equal amounts of carbohydrate in the food. In 1997, the concept of glycemic load (a food’s glycemic index ranking multiplied by the carbohydrate content per serving size) was introduced to assess a food’s blood glucose raising potential based upon both the quality and quantity of dietary carbohydrate.

Refined grain and sugar products nearly always maintain much higher glycemic loads than unprocessed fruits and vegetables.

For people interested in losing weight, the importance of the glycemic index and load is that the blood sugar response is closely related to the insulin response. An exception to this general rule is dairy products, which exhibit low glycemic indices and loads, but paradoxically elicit high insulin responses similar to...
white bread. So when you eat a bowl of cheerios for breakfast, not only do the cheerios raise your blood sugar and insulin levels perilously, but the milk raises your blood insulin levels even further.

Hundreds of scientific studies completed over the past decade show that high glycemic index carbohydrates cause hormonal and blood chemistry changes that increase the appetite and promote weight gain. That’s why you need to stick to low-glycemic foods if you want to lose weight.

You might think that the nutritionists who designed the revamped “My Pyramid” would be all over these exciting new developments. Not a chance. Highly glycemic foods are ubiquitous in the Western diet and now comprise 47.7 percent of the per capita energy intake in the U.S. Is it any wonder why 2/3 of us are now overweight or obese?

**PROTEIN: ANOTHER MISSING LINK FOR WEIGHT LOSS**

Governmental regulatory and advisory institutions are known to move slowly, but when it comes to dietary recommendations to prevent weight gain and obesity, they have not moved at all since 1992. Except for a superficial stab at including exercise as part of the new “My Pyramid,” major dietary recommendations remain virtually unchanged between 1992 and 2005.

The current “My Pyramid” recommendations for the three macronutrients are as follows: fat: 20 – 35 percent of total energy intake, protein: 18 percent energy, and carbohydrate: 55 percent energy. Actual intake of these macronutrients is: fat: 32.8 percent energy, protein: 15.4 percent energy, and carbohydrate: 51.8 percent.

As was the case with the glycemic index, there is absolutely no mention of the benefit of higher protein diets in promoting weight loss in the current “My Pyramid,” despite hundreds of well controlled scientific experiments verifying this phenomenon. The decades-old perception is that to reduce body fat, you must reduce dietary fat, replacing the fat calories with carbohydrate calories. The problem with this approach is that people experience constant hunger, and any weight loss is typically modest and hardly ever stays off.
for the long haul.

But contrary to this old belief system, you can reduce your body fat by limiting carbohydrate and increasing your consumption of protein.

Believe it or not, the first well-controlled scientific study that traded out dietary fat, not with carbohydrate, but with protein did not take place until 1999. Scientists at the University of Copenhagen put 65 overweight and obese men and women on one of two diets: 1) A reduced-calorie, high-protein, low carbohydrate diet, or 2) a reduced-calorie, high-carbohydrate, low protein diet.

After six months on the low carb, high-protein diet, subjects lost almost 20 pounds, whereas subjects on the high-carb, low protein diet lost only 11 pounds. And these results weren’t a fluke– this type of experiment has been repeated and confirmed dozens of times in the past seven years.

A growing consensus in the scientific community is that high protein diets (where protein makes up 25 to 35 percent of total energy) are more effective at promoting weight loss than calorie reduced low carbohydrate diets because of their superiority in reducing hunger. Protein has a two to three times greater satiety value than either fat or carbohydrate, so people spontaneously eat less when they consume more protein. Of carbohydrates, fat, and protein, protein causes the greatest release of a gut hormone (PYY) that reduces hunger while simultaneously improving central nervous system sensitivity to leptin, another hormone that controls appetite and body weight regulation.

The scientific jury is in – high protein diets are the way to go. So, if you want to effectively lose weight, keep it off, and hold your hunger at bay, IGNORE the USDA’s “My Pyramid” and stick to high-protein and low-glycemic foods. Your body will thank you for it.

RESOLVE TO EAT RIGHT

This time of year, many people make a New Year’s resolution to “lose weight”. A better resolution might be to eat the right food. When we eat the foods we evolved to eat, our bodies naturally maintain a more normal body composition, and there is not the constant struggle of calorie counting and dieting. Let’s look at some recent studies examining this issue.

WHY GO HIGH-PRO?

A recent review paper published in the International Journal of Obesity1 cites numerous studies promoting higher protein diets as an effective body-weight management strategy. Several characteristics of protein and its metabolism contribute to this premise. Primarily, protein has a higher thermic effect than carbohydrates or fat, which means it requires more energy to metabolize than the other macronutrients. Following a meal, energy expenditure increases 0-3% for metabolism of fat, 5-10% for carbohydrate, and 20-30% for protein2. In addition, the greatest increase in diet-induced thermogenesis occurs from animal protein rather than from soy or other plant sources3.

Another study demonstrated a low-glycemic index, low-fat-high-protein diet resulted in a spontaneous 25% decrease in caloric intake compared to a high-carbohydrate-low fat diet. The metabolic profile was also ‘considerably improved’ in the subjects of the study4.
So from these studies we’re seeing that high protein diets burn more calories while simultaneously reducing total caloric intake, by inducing satiety. We end up feeling full, eating less, and expending more energy in digestion and metabolism. Almost sounds like a weight-loss gimmick too good to be true!


CRITICAL ROLE OF PEPTIDE YY IN PROTEIN-MEDIATED SATIATION AND WEIGHT LOSS

Conceptually, we know meals rich in protein enhance satiety and weight loss, as compared to those high in carbohydrate and/or fat, but a metabolic explanation for the effect has not been fully understood. In a two-part study, researchers discovered the hormone peptide YY (abbreviated PYY) acts ‘anorectically’, or induces satiety, post prandially in humans and mice. Researchers measured the release of PYY following protein, carbohydrate, and fat-rich meals, and found that high-protein intake stimulated the greatest release of the hormone.

Secondly, researchers discovered mice fed a high-protein diet over a long-term period experienced increased levels of circulating PYY, decreased food intake, and significantly lower weight gain and fatty tissue accumulation than mice on higher fat or carbohydrate diets. The researchers confirmed the influence of PYY by ‘generating’ mice without the PYY gene, and observed that they were prone to over-eating and obesity, regardless of the type of diet they consumed (high protein, carbohydrate, or fat).

This paper suggests that our appetite control centers work more efficiently under lower carbohydrate and higher protein dietary conditions, similar to what our hunter-gatherer ancestors were adapted to, and in direct contrast to USDA food pyramid suggestions. This study verifies high protein diets make us feel full and more satisfied, thereby decreasing the total number of calories we consume, and begins to shed light on the physiological mechanisms acting to induce satiation and promote weight loss.


HIGH PROTEIN DIET WINS OUT

A randomized trial comparing three diets, high fat, high-protein, and high-fiber/carbohydrate, demonstrated that diets high in protein confer a greater advantage in terms of weight loss, body composition, and blood lipid profile.

Ninety-three overweight, insulin-resistant women were divided into each of three dietary regimes and interviewed at six and 12 months after commencement of the program. Participants in the high-protein group experienced clinically significant improvements in waist circumference, body fat mass, fasting insulin and triglyceride concentrations, and total body mass above either the high-fat or high-fiber/carbohydrate groups. More importantly, these benefits remained after 12 months, whereas participants in the other groups noticed improvement within the first 6 months, but had relapsed to some degree by the 12-month check-up. Despite the fact that participants in all three groups strayed considerably from the recommended macronutrient composition for their respective diet, members of the high-protein group experienced the most favorable outcome.

Ninety-three percent of women in the high-protein group returned for the follow-up at 12 months as compared to 75% for the high-fat and high carbohydrate groups. Researchers believed this was significant; there seemed to be a preference for the higher-protein diet regime. Overall, participants in the high-fiber/carbohydrate group lost the least amount of
weight and members of the high fat group regressed so rapidly, that there remained little advantage over the high-fiber/carbohydrate group after 12 months.

This study provides strong support for higher protein diets as an alternative to the conventional high-fiber/carbohydrate approach to weight loss and as a means of improving blood-lipid and insulin profiles.


DOCOSAHEXAENOIC ACID (DHA) = WEIGHT LOSS?

A recent study published in the Journal of Nutrition has shown that Docosahexaenoic acid (DHA), the omega-3 fatty acid in fish oil, decreases body fat mass and fat accumulation in rodents. DHA achieves this in two ways: first, it acts during mitosis to inhibit differentiation of cells to preadipocytes (precursor fat cells), and secondly, by preventing the storage of fat in adipocytes, thereby increasing lipolysis (fat oxidation). Not only is the total number of pre-programmed fat cells decreased, but the ability of those cells to store large amounts of fat is also diminished.

This study continues along the current wave of omega-3 research and touches on previous studies showing decreased fat accumulation in fish-oil fed versus lard or corn-oil fed rodents.1,2 These data have important implications for us as humans, but also for our industrial food animals (i.e. corn fed, feed-lot raised beef). The average ratio of omega-3:omega-6 fatty acids in our diet is out of balance, and much of that is due to the fat composition of the animals we eat, and the fact that we no longer eat marrow, brains, and other organs. So since it can be difficult to eat a perfectly ‘Paleo’ diet in this modern world, current research supports DHA supplementation to bring us back into natural balance—in terms of both fatty acids and body composition.


TUSCAN WINTER CHICKEN VEGETABLE SOUP

4 chicken breasts, cubed
2 garlic cloves, peeled and crushed
3 medium celery stalks, chopped
3 medium carrots, peeled and chopped
1 large red onion, peeled and chopped
2 Tb. olive oil
2 bunches Swiss chard, cleaned
1/2 head Napa or Savoy cabbage
1/4 cup chopped Italian parsley
2 fresh rosemary sprigs, (leave on stem)
One 14 1/2-ounce can plum tomatoes, drained
6 cups boiling water or low-sodium chicken stock

1) In a large saucepan over medium-low heat, add a 1/2 tbsp of olive oil and sauté the chicken pieces until they are cooked through, then remove from pan to cool.

2) Add another 1/2 tbsp of olive oil to heated pan and sauté garlic, celery, carrots, and onion in the olive oil for about 10 minutes, stirring often so the vegetables do not brown.

3) Cut out the tough inner core of the Swiss chard leaves and slice them into 1/2-inch slices and add to in the saucepan. Tear the Swiss chard leaves and set aside.

4) Cut out the core of the 1/2 cabbage head, then discard. Place the cabbage, flat side down, on a cutting board. With a large chef’s knife, slice at close intervals down the cabbage, forming long, ribbon-like strips. Set aside with the Swiss chard leaves.

5) Add the parsley, rosemary sprigs, and tomatoes to the saucepan with the vegetables and cook at a low simmer for 15 minutes. Add cabbage and Swiss chard leaves and enough boiling water or stock to cover. Simmer for 10 minutes.

6) Add the reserved chicken to the pan and allow to simmer for 5 minutes and the soup is ready to serve. Season with pepper to taste.

Serves 8.
SUCCESS STORY

Dear Dr. Cordain,

I'm a nutritionist from Lisbon, Portugal.

I've been working as a clinical nutritionist for 1 year, and in the last 6 months I've been applying a version of your Paleo Diet to many of my clients and although I've been having tremendous results with the diet in terms of weight loss and Metabolic Syndrome, there is one case I would like to report, because the results were outstanding:

João

24 years

On May 1st, he suffered from severe acne (was on antibiotics), and his biochemical indicators were:

- Weight: 98 Kg
- BMI (kg/m2): 29.6
- Body fat (skinfold method): 26.7%
- Plasma Glucose (fasting): 99 mg/dl
- Total Cholesterol: 228 mg/dl
- LDL-Cholesterol: 191 mg/dl
- HDL-Cholesterol: 37 mg/dl
- Triglycerides: 163 mg/dl
- Blood pressure: 141/79 mmHg

He started a diet based on the Paleo diet, with lots of vegetables, low glycemic fruit (mostly berries and apples, and a banana after training), chicken, turkey, fish, flaxseeds, walnuts and almonds. He started drinking more water and green tea. He also engaged in a complete exercise program (cardiovascular training and weight training).

On October 18, here are the results:

- No visible sign of acne
- Anthropometric and Biochemical Indicators:
  - Weight: 73 Kg
  - BMI (kg/m2): 22
  - Body fat (skinfold method): 11%
  - Plasma Glucose (fasting): 90 mg/dl
  - Total Cholesterol: 169 mg/dl
  - HDL-Cholesterol: 64 mg/dl
  - Triglycerides: 52 mg/dl
  - Blood pressure: 118/71 mmHg

Sincerely,

Pedro Bastos, MA MS Ph.D.