

Weighing In

February 2018



Hey Doc How Much Weight Can I Lose?



Patients often ask us, "How much weight can I expect to lose on the Weigh Station program?" Honestly, it can vary greatly from person to person. Weight loss depends not just on how your particular body works, but also your starting weight, your caloric intake, and ultimately your weight loss goal.

However, one study found that subjects on a high-fat, low carbohydrate diet limited to no more than 50 to 60 grams of carbs per day and approximately 150 grams of fat per day lost an average of 0.3 kg or 0.66 pounds per day over a forty-five day period. Keep in mind that for some patients, weight loss may be slower if they have insulin resistance or other underlying metabolic conditions.

In fact, several months ago we had a newsletter about insulin resistance and weight loss. In the article, researchers were able to show that people who were overweight and insulin resistant had an impaired mitochondrial function and fewer mitochondria overall. Mitochondria are the work horses within the cell that are responsible for breaking down fat for fuel and play a very significant role in the formation and utilization of ketones. So, problems with the mitochondria automatically put the individual at a disadvantage for becoming keto adapted.

Fortunately, following the dietary recommendations provided by The Weigh Station appears to improve both the number of mitochondria and their function, so the disadvantage can be overcome!

We know from research and clinical experience that overweight or obese individuals are likely insulin resistant and would likely see benefits from decreasing their carbohydrate intake. This is why we recommend a ketogenic approach to eating for these patients. Ketones are actually an alternative source of fuel to carbohydrates.

If you have ever wondered why a friend of yours who has been skinny all their life can eat a piece of cake every night and stay lean it's because they are more than likely insulin sensitive (not resistant). Their metabolic system is working efficiently and they would likely do well on any diet as long as he/she can digest, absorb, and metabolize their nutrients properly. This means they more than likely could tolerate any ratio of macronutrients and maintain healthy body composition.

However, keep in mind the process of adapting to the Weigh Stations diet takes a little time. If you're overweight and you are insulin resistant, the actual metabolic advantages of the Weigh Stations program likely will not manifest itself until you have been on a diet for several weeks. You can accelerate that time by staying on stage one for longer. The notion that it takes an overweight insulin resistant person about 2 weeks or more to adapt to the Weigh Station eating plan was recently supported in a study of obese individuals ranging from 18 to 55 years of age. An eight-week trial consisted of two phases: for the first four weeks, the patients were placed on a low-fat, high carbohydrate diet. Although researchers attempted to set caloric intake for maintenance the subject lost approximate 2 pounds during that time indicating they were consuming about 300 fewer calories a day than usual. For the second four week period, the patients were placed on a not well formulated ketogenic diet for fat loss research said "not well formulated" because protein intake at 15% of total calories or 1 g per kilogram of body weight was suboptimal for maintenance of muscle mass.

The recommendations to prevent muscle wasting is 1.6 g of protein per kilogram of body weight according to the study done by Dr. Steve Finney in 2004. In addition, fiber

intake was far less than what is recommended for health roughly around 12 g per day (instead of 25-30 grams per day respectively), what the researchers found when the subject switched from a high carbohydrate - calorie restricted diet to a ketogenic diet, their metabolic rates increased by a hundred calories in the first week and then returned to normal. Their main research study conclusion was that "there was no metabolic advantage of the ketogenic diet compared to low-fat diet." However, the researchers found there are some problems with this statement, principally it was entirely impossible to compare a diet that restricts calories for four weeks to subsequent dieting period.

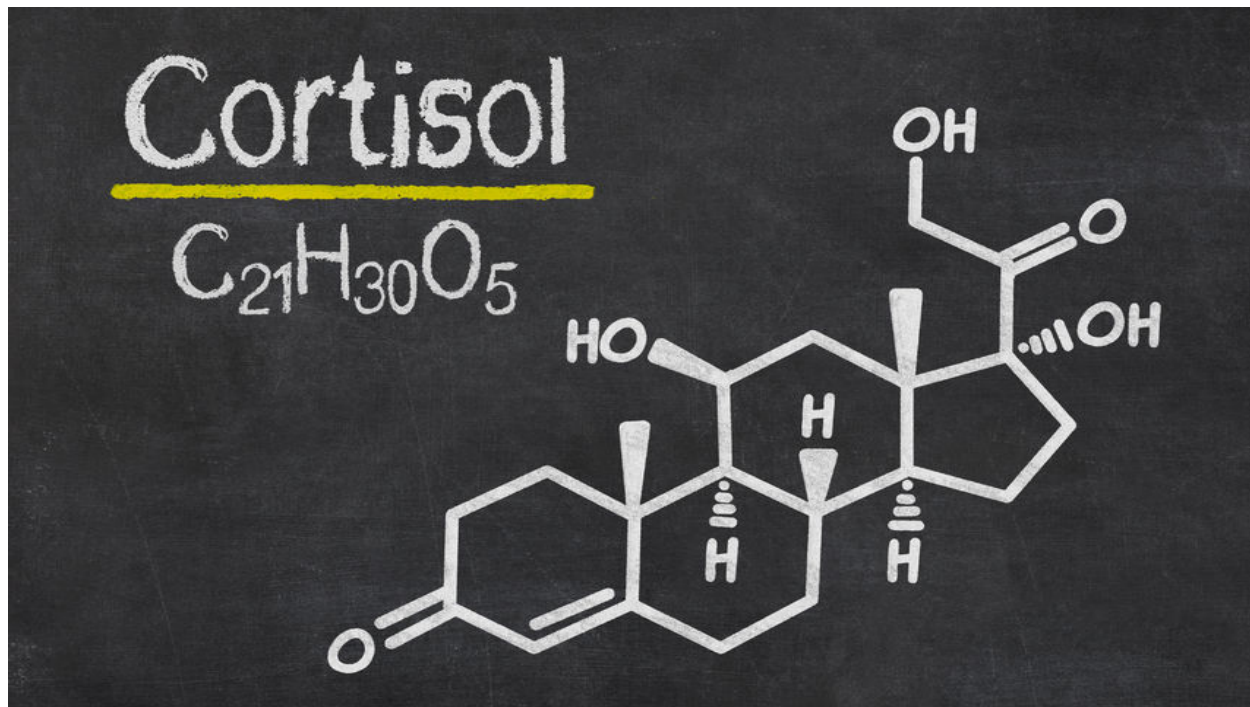
The initial diet will likely result in adaptations that hinder fat loss. This comes from what's known as the respiratory quotient values which represent the ratio of the volume of carbon dioxide produced to the volume oxygen consumed on a cellular level.

When we utilize glucose for fuel, the respiratory quotient equals 1.0 because we are consuming six O₂'s (Oxygens) and expelling six CO₂'s (Carbon Dioxides) when we're burning pure fat, the respiratory quotient drops to 0.7 as more oxygen is required oxidize or burn fat. Lastly the diets metabolic advantage may be indicated not by their total resting caloric expenditures per day but by the long-term metabolic change.

Now I don't want to underplay the challenges that many of my patients face in attempting to implement the Weigh Station eating plan, there are often trials and hurdles to overcome. However, let's face it, every day we are bombarded with temptations from sugar-filled foods fast food restaurants on every corner. Our goal is to show you there are alternatives in this style of eating. It is sustainable for the long run once you're educated on how we do this. You will look at the food and nutritional labels much differently. That's why we refer you back to each newsletter to learn what you can eat and what you can't. So the average weight loss for the person who follows the Weigh Station program correctly has an average of 50 to 60 pound loss in 90 days.

So, if you're looking for new recipes, all the newsletters have a new item each month. You can also email Tricia, and she can help you organize a method that your whole family can enjoy. Remember you're on a journey this is not a one-stop shop.

Blessings to all of you,
Chuck Shaffer, MD



by [Tricia Foley, MS, RD, CLT](#)

While most have heard of it and the potential for it to affect our waistline, few understand the direct relationship between Cortisol and weight. In this article I will present the latest research on cortisol and how it relates to your waistline.

We all know that stress levels are on the rise, in fact our stress today is 30% higher compared to 30 years ago! This has also raised questions into whether or not there is a direct correlation between stress and weight gain since obesity is also on the rise. Since cortisol has been coined the “stress” hormone, many are starting to wonder if this hormone is to blame. But what is the literature actually finding?

As previously mentioned, cortisol is a hormone and belongs to a group of steroids known as “glucocorticoids”. It’s made by the adrenal gland and in response to stress (both physical and emotional) it can raise blood sugar, insulin, blood pressure and suppress the immune system. Adrenaline is also in the glucocorticoid family and aids in the release of fat cells to increase energy during times of stress (particularly in fight or flight responses).

Research shows that cortisol has a two fold effect on fat, when there is a stressor, fat is broken down to supply the body with energy much like adrenaline does, it also suppresses appetite at first so that blood can get to the muscles as needed to “flee” from the threat at hand. Although both adrenaline and cortisol are released under stress, adrenaline dissipates quite quickly once the immediate stress is over while cortisol sticks around longer to help bring the body back in balance. One way it does this is to increase the appetite again so we can replace the energy that we should have burned while “fleeing” in response to the stressor.

The problem is that we are no longer in the caveman days where we are literally being chased by a bear and are running for our lives. Unfortunately, our bodies aren't very good at differentiating between a real bear and a "bear" of a deadline causing us to stress and inadvertently, the same cascade of hormones are triggered leaving us with a ravenous appetite when it's all said and done. If stress becomes chronic and isn't well managed, this can lead to increased insulin levels and increased hunger. This is a perfect storm for weight gain.

Interestingly, stress induced weight gain is often seen around the middle of the body which researchers suggest is due to the abundance of cortisol receptor sites present in that area. In fact, a recent study conducted at Yale pitted women with both apple and pear shaped figures and found that the apple shaped females reported more stress than their pear shaped counterparts.

On the flip side, other research is looking at what came first...the weight gain or the high cortisol levels. This research shows that cortisol alone may not be a major culprit in weight gain and that cortisol may rise in response to weight gain itself. Findings suggest that the group of glucocorticoids may merely be a part of a chain of signals associated with obesity.

Keep in mind too that glucocorticoids are not the only hormones dictating hunger. There are multiple controls in our body that control both weight and hunger. Therefore it's difficult to point fingers at just one hormone in isolation. According to Marci Gluck, Ph.D. from New York Obesity Research Center; "it is not a simple one to one relationship between cortisol and weight gain. There are so many different peptides and hormones involved. Cortisol might not be the primary one".

If you would like your cortisol checked the gold standard would be a measurement of your daily cortisol production rate (CPR) or measurement of 24 hour mean plasma cortisol concentrations. Therefore it's not practical to simply have a cortisol blood level checked. In addition, it is possible to have elevated cortisol in the fat cell but not in the blood.

Overall, since cortisol does appear to perhaps play a part in weight regulation, there are ways to control your levels naturally. If you suffer from chronic stress be sure to balance this with regular exercise and give yourself a few minutes to meditate or practice breathing exercises. Adequate sleep can also help your body manage day to day stress better. Research also shows that the way an individual responds to stressful situations is key...in other words, don't stress the small stuff- use stressful events as an opportunity to better yourself and take time to bring perspective to a seemingly stressful situation before reacting to it.

In good health- Tricia Foley, MS, RD, CLT.

Citation: www.project-aware.org

.....

Chicken and Cheese Crust Pizza (10 inch crust)

Makes 2 servings: 4 ounces of protein and 1 fat per portion

Ingredients

- 10 oz Canned Chicken
- 1 oz grated parmesan
- 1 large Egg

Directions: Thoroughly drain the canned chicken, getting as much moisture out as possible.

1. Spread chicken on a baking sheet lined with a silicon mat. Bake at 350 for 10 minutes to dry out the chicken.
 2. Once chicken is done baking for 10 minutes remove and place in a mixing bowl. Increase heat of oven to 500 degrees.
 3. Add cheese and egg to the bowl with chicken and mix.
 4. Pour mixture onto baking sheet lined with a silicon mat and spread thin. Placing parchment paper on top and using a rolling pin makes this easier.
 5. Optional: With a spatula press the edges of the crust in to for a ridge for the crust. This is beneficial is you're using topping that may slide off (i.e. eggs).
 6. Bake the crust for 8-10 minutes at 500 degrees.
 7. Remove crust from oven. Add desired toppings and bake for another 6-10 minutes at 500 degrees. Toppings will dictate final cook time.
 8. Remove from oven and allow to cool for a few minutes. Your life is now changed. Enjoy!
-

[READ MORE ON OUR WEBSITE](#)

The Weigh Station
Christiansburg: 540.381.2670
Roanoke: 540.982.0250