



CICO

Seems like I spend a lot of my time researching the latest diet fads that are circulating. I have dedicated a lot of today's newsletter to the concept of intermittent fasting because I am fascinated by it. As I was coming to press, a colleague shared a few other diets that are circulating that include Optavia (a meal replacement plan), Noom (a 16-week, online program that uses a caloric menu plan and behavioral changes collaborated by a coach), and CICO.

Just like State Farm's "who burned down my she shed?" campaign, CICO's name is a good marketing approach because it sticks in people's heads. It stands for "Calories In, Calories Out," a concept many scientists continue to research for weight loss. Eating less calories than what you burn is nothing new, and physiologically speaking, you will lose weight if you take in fewer calories. But it's more than quantity of food-quality is important, too.

Fitness trackers are all the rage to gauge one's diet these days, and when used efficiently, they can critique the balance of meals via the macronutrient feature. You have to upgrade to the premium plans to get more information on micronutrients. Remember, it's just not a calorie goal that you are looking for at the end of the day-it's the balance. It's easy to choose foods unwisely and still meet a calorie number.

It's important to learn how to choose good foods to build a healthy plate that provides fiber and essential vitamins and minerals, as well as to practice good eating habits for the long haul. All too often, once weight goals are met, and guards are left down, the weight creeps back up. Beware!

Intermittent Fasting

I get a lot of questions about some of the trendy diets that circulate. I discussed keto in the last newsletter so I wanted to learn more about the fasting craze that's out there now. This is a long article, but I tried to make it as reader friendly as possible, because science is complicated!

I can thank one of my patients for sending me a copy of Dr. Michael Mosley's book *The FastDiet*. I had seen a special about him on PBS many years ago, so I decided to dust off the cover and review it again. But before I talk about that book, let's talk general information.

Fasting has been around since the BC era when Hippocrates practiced fasting for a variety of medicinal reasons. It is also suggested that fasting dates back to our primitive, evolutionary days when famine was a common occurrence and the body had to adjust to periods of time with no access to food. Today, advocates use basic physiology as their main stance, suggesting that fasting will decrease the demand for the hormone, insulin, and help stave off metabolic diseases like prediabetes. Insulin's primary role is to regulate blood sugar, but if your cells become resistant to it, the pancreas keeps pumping out more insulin to lower blood sugar. Insulin also stores fat in the body. Proponents say fasting improves insulin resistance and inversely decreases fat storage in the body, and hence can lead to weight loss.

It's very important to point out that people with diabetes should not be altering their diets without medical supervision. Many of the medications that lower blood sugars will continue to do so in the absence of food, so they put themselves at risk for hypoglycemia.

Ok, here comes more physiology! The body uses glucose as its primary source of energy. When that runs out (that can be in less than two hours during a fasting state) then it uses glycogen, a stored form of sugar found in muscles and in the liver. When these stores are depleted, the liver starts to break down fatty acids and turns them into ketone bodies (yes, back to the keto diet for a second there!). Your body prefers sugar so it needs to adjust to using ketones as energy sources, so some side effects like headaches and general malaise occur for many people.

There are different kinds of fasting programs:

- Alternate Days Fasting:** No calories one day and unrestricted calories the next...and so on.
- Modified Fasting:** Also known as 5:2. Five days week you eat a normal, unrestricted diet and then for 2 days you eat 25% of your normal diet's intake.
- Time Restricted Fasting:** Nighttime fasting for a prolonged period of time
- Today Fasting:** Eating nothing for 24 hours or more

Let's talk about my favorite type of research; evidence-based. The kind that science supports with validated studies behind it. Right now, a lot of the studies are rodent-based ones. And when humans were used, participants often dropped out before the trial was completed. There are no long-term studies to support evidence that intermittent fasting provides long-term success with weight

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loss. But does it help with decreasing oxidation and inflammation in the body and help promote cellular repair? It may. Dr. Valter Longo at UCLA is conducting research at its Longevity Center and Dr. Satchin Panda at Salk Institute for Biological Studies is looking at circadian rhythm. Both are researching the effects of fasting on the human body.

So, back to Dr. Mosley's book, as promised. He has popularized the 5:2 method of intermittent fasting, which is widely used in the United Kingdom. In his book, he promotes five days of a balanced diet and two days of eating *600 calories a day (approximately 25% of his estimated energy needs). There is a 12-hour fast between meals. He feels this works better than some of other fasting and keto diet plans because it is a doable program. Mosley discusses insulin but he also talks about another hormone called insulin-like growth factor 1, or IGF-1. Biologically, this keeps your body growing when we are young, but large amounts of it may accelerate aging and possibly cancer. Fasting keeps levels low. He also discusses a researcher who showed that fasting helps the body repair itself; partly with the help of stem cells. Stem cells have the ability to turn themselves into any kind of cell, which researchers believe play an instrumental role in our immune system.

The author points out that eating patterns are often steered by emotions and social situations, and not always by hunger. He feels you will savor and enjoy the taste of foods much more when you come off of a fast day. He also notes that some other diet regimens deprive you of foods.

Socially, it's difficult to maintain very strict fasting programs so most people fall off of them easily. My experience is that people who deprive themselves will ultimately over compensate and comfort themselves with too much food, so it's a slippery slope. Having a sustainable program provides better long-term success. We all have heard of the term "hangry, " which is a combination of Hungry + Angry = mood changes; marginalized energy sources; low blood sugar. Irritability and difficulty concentrating are often side effects of restricted or delayed eating. Some professional organizations fear these types of programs will only incite disordered eating patterns, especially in younger adolescents who aren't able to process why healthy eating is so important for their growth and brain power.

Dr. Mosley (and I agree!) feels that a fasting program requires a lot of self-motivation and self-control. It also requires planning and prepping food ahead of time to thwart temptation. He recommends purging all foods from your cabinets before you begin. You also need a basic knowledge of calories in food; otherwise your fast days may exceed the limits. Eat with an awareness and mindfulness of fullness. It's most important is to stay well hydrated with liquids. Foods provide a great deal of water in ones diet-when you eliminate a huge chunk of food, you lose water intake, as well.

As always, be well informed and check with your physician before you begin any diet programs.

ADDENDUM NOTE:

*Dr. Mosley has since updated his regimen. While I have not read his latest book, *The Fast 800*, it appears he has increased his fasting day calorie allowance to 800 calories (for men) versus 600 calories, as suggested in his first book. He is also promoting a Mediterranean style diet on the non-fasting days. I'm not sure if he revised it because the 600 calories was difficult to manage? I'm guessing that because the science hasn't changed much since his first book.

Featured Recipe

Apple Cinnamon Chia Seed Pudding

There are so many great recipes for apples. Baked apples have always been a favorite of mine at this time of the year. They smell so good when baking in the oven. I chose a quick (no cook!) pudding recipe that anyone can make. Chia seeds are good sources of heart healthy omega 3 fatty acids, protein, fiber and magnesium. You can also top off the pudding with a variety of fresh berries, dried fruit, chopped walnuts or pecans, cacao bits, shredded coconut, or nut butter.

INGREDIENTS:

For the pudding:

1½ cups of unsweetened almond milk
1 Tbl. maple syrup
1 tsp vanilla extract
4 Tbls. chia seeds

For the Topping: (can be made ahead and warmed when ready to serve)

2 apples of choice, peeled and diced
½ tsp cinnamon
1 Tbl. butter or buttery spread like Olivio
1 tsp brown sugar

Instructions:

1. Mix the milk, maple syrup, vanilla, and chia seeds in a small bowl. Blend together well. Cover with wrap and refrigerate at least an hour; preferably overnight.
2. Mix the apples, cinnamon, and brown sugar in a saucepan. Add butter and cook on medium heat for 6-8 minutes until the apples become tender and caramelized.
3. Spoon on top of pudding, or layer in between. Top with apples and add in any other items noted above, as well.



Recipe makes approximately four ½ cup servings.
Each serving is 200 calories. You can also add a few tablespoons of cacao powder or unsweetened baking cocoa to the recipe if you want to satisfy some chocolate cravings! Pumpkin puree in between layers sounds yummy, too!

Greetings from Freeport, Maine

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Give me a whoopie pie over a piece of baklava any day! So when my sister and I made our annual trek to Freeport this summer, I was thrilled to see a bakery dedicated to the art of the pie. And they had two sizes! Mini for those of us that really only wanted a small taste and a quick burst of energy to tackle the rest of the outlet shops.

While I would like to consider myself a gastronome of whoopie pies, I prefer the classic one but they had a lot to offer: banana, red velvet, chocolate chip, vanilla bean, peanut butter, orange creamsicle, wild blueberry, coconut, mocha, and pumpkin to name a few.

Why am I writing about whoopie pies? Because I couldn't pass up the photo op of standing next to a stack of them, of course!

Happy Fall!
Sophie



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