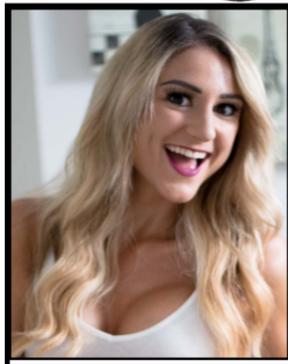


MEDICAL FILES



Healthy Living Healthy Eating

from Marissa Liana
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What You Should Know About Following A Ketogenic Diet

What is a Keto diet?

A keto diet is a diet composed of high fat, moderate protein, and very low carbohydrates.
What does this look like in terms of macronutrients?
Generally, high fat means that 60-75% of calories are coming from fat, 15-30% of calories from protein, and 5-10% of calories from carbs. The purpose of the ketogenic diet is to convert the body from using glucose from carbohydrates to provide energy, to ketone bodies which are supplied from breaking down fat and used as an alternative energy source. Free fatty acids and glucose from gluconeogenesis are the main fuel sources during ketosis. Although the emphasis is placed on little to no carbohydrates during a keto diet, there is often a misconception on how much protein you can eat while sticking to the strict keto diet. A common misconception is that protein can still be eaten in high amounts, however, this is simply not true. Here's why:
Protein can actually be converted to glucose through the process of gluconeogenesis. This is when new glucose (sugar) can be formed from substrates other than carbohydrates such as from certain amino acids (from protein), lactate and glycerol.
These metabolic pathways are used to keep blood glucose levels from dropping too low (hypoglycemia), and is triggered during periods of fasting, starvation, low carbohydrate diets and during intense exercise.

Steak
Is weight loss more effective on a keto diet?
Another important point to note is that people typically follow a keto diet because they have been told it is a quick and effective way to drop weight fast. Initially, this looks true but is often due to the body losing large amounts of water and glycogen (the storage form of carbohydrates).
Your body can typically store about 2 pounds of glycogen, and with that comes another 7-8lbs of water bound to glycogen. This can explain why people may initially experience a somewhat rapid 8-10 pound weight loss while following a ketogenic diet, however, this is not fat loss.
But won't keeping insulin low (our fat storage hormone that is spiked when we consume carbohydrates), result in weight loss?
Unfortunately, carbohydrates are not the only macronutrient that spike insulin. Protein also has an insulin boosting effect. This is another reason protein should not be consumed in excess on a keto diet. Additionally, in terms of fat storage, a person can still gain fat on a ketogenic diet. This is due to the hormone, Acylation Stimulating Protein, or ASP. This hormone's role is to stimulate fat storage in a caloric surplus, so if you are eating more than you are burning off on a keto diet, your body can still gain fat.

So what ARE the benefits of a ketogenic diet?
Firstly, I want to say that ketogenic diets do a good job and promoting satiety, as fat is naturally satiating. This can be a benefit of someone looking to lose weight who may have trouble in the first place with overeating and portion control. The downside is that since ketogenic diets are often limiting in carbohydrates and protein, fibre, which is abundant in fruits and vegetables, and protein, which is limited, can also do a great job at promoting satiety. This means that we can get the same satiating effects on diets that do not limit carbohydrates and protein. Protein also has the highest thermogenic effect when eaten, meaning our basal metabolic rate is actually very much increased with protein consumption and metabolism.
Another reason why a ketogenic diet may 'work' for weight loss is that it is very limiting. By removing foods that would typically trigger cravings and poor food choices, you will naturally put yourself in a calorie deficit resulting in weight loss.

There are, however, specific populations that have been shown to benefit from a ketogenic diet. Literature shows that subpopulations including those with neurological conditions, those who suffer from seizures and individuals with diabetes can benefit from low insulin, ketogenic diets.

Why is a ketogenic diet not for everyone?
Firstly, I should state that I am not a fan of dietary extremes, that is on any level. I believe the best diet, for the most amount of people, is one that is balanced, rich in colours, phytonutrients, and health-boosting foods. The idea behind improved energy levels from a ketogenic diet comes from the idea that you will not have sugar crashes. However, with a proper, balanced diet this should not happen.
Secondly, Ketogenic diets limit the intake of many carbohydrate-rich foods that contain a number of benefits including vitamins, minerals, phytonutrients and FIBER!
Cruciferous vegetables, for example, contain indole-3-carbinol that helps to detox our liver and remove excess hormones from the body

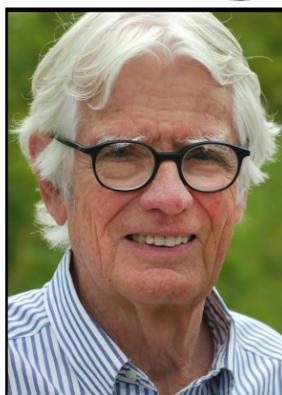
Sweet potatoes - rich in vitamin A and fibre to help boost the health of our eyes and skin.
Apples - contain apple pectin that helps to lower cholesterol
Blueberries - contain antioxidants that help fight free radical damage in the body, which will help slow the ageing process and wear and tear on our cells.
Thirdly, Women, in particular, need to be especially careful when following a low carb or ketogenic diet, as ketogenic diets can disrupt hormonal balance and lead to infertility.
Adequate glucose is actually needed to convert our inactive thyroid hormone T4 into the active T3 form.
Low carbohydrates available can also be seen as stress on the body, which of course will increase cortisol levels. Cortisol is the stress hormone that we try so hard to manage and decrease. Cortisol's job is to INCREASE blood glucose levels when they are too low, or when we are in a state of stress. This places excess stress on the adrenal glands, which over time can become fatigued and disrupt our estrogen balance, which is also produced by the adrenal glands. Lastly, Gut health is also affected, as our microbiome, or our body's internal beneficial bacteria that keep us healthy, need a VARIETY of plant fibres and nutrients to support their biodiversity. When you limit your carbohydrate intake, this is not possible, and research has shown that high-fat diets can have a negative impact on our body's microbiome. If after all of these, you are going to try a ketogenic diet, there are a few things you should take into consideration:

1) Quality vs. Quantity
The problem I have with people jumping into kept diets is that some people don't understand how the QUALITY of foods affects our health, not just the quantity. People think high fat and they immediately begin eating large amounts of butter and animal fats, without considering where their food sources are coming from and what impact this is going to have on their health. The quality of these fats is way more important than the quantity of these fats.
For my clients, I ALWAYS recommend grass-fed animals, free run, free of hormones and antibiotics. Grass-fed animals have been shown to have a much higher omega 3 content, which is one of the most potent anti-inflammatory fats that is extremely health-protective. If we are consuming stick loads of butter or pounds of meat from a cow that has been eating GMO grains, injected with antibiotics and hormones, this is going to be even more detrimental to our health than good!

2) Your Gut Health: why it is so important to overall health. Our gut is actually our second brain. The enteric nervous system connects our gut to our central nervous system (brain and spinal cord) and is in constant communication with each other. This explains why mood and mental disorders such as depression and anxiety are actually gut-mediated, and not brain mediated. 70% of our serotonin production actually takes place in our gut. Serotonin is our body's feel-good neurotransmitter that allows us to feel happy and satiated. If you are limiting your carbohydrate consumption, which is rich in pre-biotics, or foods that feed our gut bacteria, you may notice negative impacts on your mood and sex drive. From a health perspective, 70% of our immune system is actually in our gut! When our gut's beneficial bacteria are in balance, we are better able to break down and absorb the nutrients we consume and ward off harmful pathogens that lead to illness. A balanced gut flora comes from eating an abundance of fruits and vegetables, which supply those pre-biotic foods for our probiotics - beneficial bacteria.

The Take Home Message: All in all, I am not a fan of ketogenic diets. There is simply not enough evidence to support any metabolic benefit in terms of fat loss or evidence to support that it does the best job at elevating our health, especially for women. I think the best way to elevate health and promote fat loss is to truly address any underlying issues you may have FIRST. There is a saying that always stuck with me and it is, "get healthy to lose weight, don't lose weight to get healthy". Working with a health professional to ensure your hormones are in balance, your liver, gallbladder and digestive system are functioning optimally, and you're at a good place mentally will do so much more good to your body than jumping into a limiting dietary extreme. Eating a balanced diet, supporting your gut flora, addressing any health imbalances and being in a consistent caloric deficit, is truly the best way to elevate health and lose fat.

Chicken and Vegetable Salad
If you are interested in working with me one-on-one to develop a diet plan that suits your health and dietary needs, check out the 'shop' section of my website for the various ebooks and one-on-one consultation packages I have.
Until next time, Stay well. Marissa Liana www.marissaliana.com



The Doctor Game W. Gifford-Jones M.D. Exercise Can Kill You

The Earl of Darby once remarked that "Those who don't take time for wellness, will eventually have to make time for sickness." Like many doctors, I too have advised patients and readers to exercise as part of a healthy lifestyle. Now, Dr. Maureen Brogan, Associate Professor of Medicine at New York Medical College, reports that intense, repetitive, motion exercise can cause rhabdomyolysis. And in rare cases it can kill.
Brogan explains that when muscle is damaged, it dumps myoglobin, an iron and oxygen-binding muscle protein, into blood circulation. Excessive amounts of myoglobin can obstruct the kidney's filtration system and cause serious damage.

I have mentioned in previous columns that, in rare cases, prolonged use of high doses of cholesterol-lowering drugs can cause rhabdomyolysis. I have also stressed that excessive exercise has been associated with fibrosis of cardiac muscle. But I was never aware it could cause rhabdomyolysis.

According to Dr. Brogan, over-exercising triggers the problem. This can occur when you push yourself too far in cycling, running, or lifting weights. For instance, Brogan cites the case of professional snowboarder, Amy Purdy, who in 2016 was hospitalized after participating in a CrossFit class for the first time. So why was hospitalization needed when she was well-conditioned? The problem was she had not done pullups for several months. So the high intensity pullups during class caused her medical Waterloo. She remarked, "It wasn't until 72 hours later that my arms would not straighten out all the way. I also had swelling of my elbows on both arms. Tests showed I had rhabdomyolysis. It shows if you push your body to failure, and keep going, you're at risk. Listen to your body as it knows best."

Other possible symptoms of rhabdomyolysis are nausea, vomiting, fever, intense shivering, confusion and fainting. And urine can be scant and dark.
When I read this report I thought about friends who routinely run several miles every week. And others who participate in long distance cycling races. Some who exercise regularly are quite surprised when told of this diagnosis. So I wondered if any might be suffering from mild forms of rhabdomyolysis without realizing it.

We also know this condition can result from accidents that injure muscles, prolonged immobilization, drug side effects and genetic disorders.
Brogan claims that high intensity cycling has produced dozens of cases of rhabdomyolysis, particularly among "newbies", just beginning the sport, and pushing their bodies beyond capacity. One New York City hospital reports 29 cases of rhabdomyolysis during a four year period.

She adds that no one is immune to rhabdomyolysis, as there is a fine line between exercising to capacity and overexerting yourself.

So what's the message? Like many medical problems, prevention is better than cure, particularly when there's a small chance of dying. Cycling seems to be one of the major hazards. Brogan says that when she started to research this matter, 42 of the 46 cases of rhabdomyolysis involved patients attending cycling classes for the first time.
These patients are at big risk as they are often not conditioned and using untested muscles at an intense rate. But if you're a runner and decide it's time to switch to cycling, remember, you will be using a different set of muscles for the first time, which could result in rhabdomyolysis unless you gradually increase the intensity overtime.

Insufficient physical training, along with severe dehydration and/or extreme body temperatures, also increase the risk of rhabdomyolysis regardless of the type of exercise.
Always start slow. Take frequent breaks, keep well hydrated, and listen hard to what your body is telling you, as no one is immune to rhabdomyolysis. Brogan reports that 7 to 8 out of 100,000 military recruits are affected every year. Even professional athletes suffer its consequences. The mortality rate is five percent, but can be higher if kidney function fails.

Of course it's not the intention of this column to worry people about exercising, have them become couch potatoes, nor to make time for illness. Rather, the best advice is to keep moving, but stress that moderation in most aspects of life usually wins the day.

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HEALTHY LIVING

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5 Ways to Avoid Backache While With Your Newborn

You were up all night. The baby is crying. The telephone is ringing and the kettle is boiling. For most parents, this is a daily scenario. Parents are also continually faced with strenuous physical demands such as lifting, feeding, comforting and chasing after children.

Consider the fact that parents may be lifting a 7-10 pound baby 50 times a day. By 12 months, your baby weighs approximately 17 pounds, and at 2 years, that child has become a 25-30 pound toddler. The repetitive lifting of your child may put you at risk for back problems.

What's a parent to do? Well, here are some simple tips that can help parents avoid some common aches and pains.

Lifting
Stand with your feet at least a shoulder width apart.
Keep your back in neutral position and bend your knees.
Bring your baby as close to your chest as possible, and then lift using both arms.

Carrying
When carrying your little one, pivot with your feet instead of twisting your back.
This will ensure that you're turning with your hips, which will reduce your risk of back pain.
Lower your child into the crib or onto the floor by bending at the knees, with a neutral back.

Holding
Hold your child in an upright position, directly against your chest.
Carrying a child on one hip creates postural imbalances that can lead to low back pain over time.

Feeding
Always sit in a chair with back support and avoid leaning forward to reach your newborn's mouth.
Instead, use pillows or blankets to support and position your baby closer to you.

Exercise
Exercise can help increase muscle support for your aching back.
While your baby is enjoying tummy time, join them on the floor and do some exercises to help strengthen your core.

There is no time for back pain in parenthood. Talk to your chiropractor about specific exercises to stretch and strengthen your muscles so that you can stay on your toes and a step ahead of your toddler.
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