Wait Before You Take Creatine Monohydrate with Kidney Disease Transcript

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Introduction to Creatine and Kidney Tests

Did you know that taking creatine supplements can actually make your kidney function tests look worse, even when your kidneys are perfectly healthy? This is something that caught me off guard early in my practice, and it's why I want to talk to you today about creatine.

Before you decide to add it to your supplement routine. This is doctor talks. Real talk from real doctors. Only issues that matter to you most. I'm seeing more and more patients coming in with elevated creatinine levels, panicking that their kidneys are failing only to discover they have started taking creatine supplement weeks earlier.

The supplement industry has made creatine seem like a magic bullet for fitness and performance, but there is so much more to this story, especially when it comes to your kidney health and what concerns me most is that many people are taking creatine without understanding how it actually works in their body, or how it can interfere with critical medical testing.

Let me start with what creatine actually is, because I think this will help you understand why this confusion happens. Creatine isn't some synthetic compound created in a lab.

Your body makes it naturally every single day from three amino acids arginine, glycine, and methionine. Your liver, pancreas, and kidneys work together to produce this compound through a complex biochemical process.

Once produced, about a 95% of it gets stored in your skeletal muscles as something called phos for creatine, with the remaining 5% found in your brain, kidneys, and liver.

What Creatine Is and How It Works

Think of creatine as your muscles instant energy backup system when you're lifting weights, sprinting, or doing any high intensity activity that last anywhere from a few seconds to about a minute, your muscles need immediate energy.

That's when creating steps and helping to rapidly regenerate ATP, which is essentially your body's energy currency. ATP stands for adenosine triphosphate, and it's what powers every cellular process in your body.

When your muscles contract. During exercise, they break down ATP into ATP, which is adenosine diphosphate, releasing energy in this process. Creatine phosphate can quickly donate its phosphate group to convert ATP back into ATP, giving you that burst of power you need.

This is why creatine is so popular among athletes and fitness enthusiasts. It can help you do that extra rep, sprint that little bit faster, or maintain high intensity effort for slightly longer periods.

The effects are real and backed by decades of research. Now you can get creatine and naturally from food. But here's what most people don't realize. It's only found in animal muscle tissue.

Plant foods don't contain any creatine at all. That is why vegetarians and vegans typically have 20 to 30% lower muscle creatine stores in people who eat meat regularly.

This isn't necessarily a problem for health, but it does mean that plant based eaters may notice more dramatic effects when they do start supplementing.

If you want to get creatine from food, some of your best sources are herring, which contains about 2 to 3g/oz. That's incredibly concentrated. Salmon provides around 1.3g/oz, beef and pork around 1.2 to 1 point 4g/oz, and chicken in Turkey about 1g/oz.

To put this in perspective, to get the equivalent of one five grams scoop of creating a supplement, you need to eat about four ounces of salmon or beef, or about two ounces of herring.

Now, four ounces of salmon is actually a pretty reasonable serving size. That's about the size of a deck of cards or the palm of your hand. So getting creatine from food isn't as impossible as some people make it sound.

The challenge is that you need to eat these food consistently, and the creating content can vary based on specific cut of meat and how fresh it is. For my patients who want to support their and natural creatine levels through food, I often recommend including herring or salmon once or twice a week.

Food Sources and Creatine in Diet

These fatty fish not only provide creatine, but also give you beneficial omega three fatty acids that are protective for your kidneys and overall health.

Omega threes help reduce inflammation, support healthy blood vessel function, and can even help lower blood pressure. All things that protect your kidneys in the long run.

Plus, cooking methods matter more than most people realize. Boiling can reduce creating content significantly since it's water soluble and can leach into cooking liquids.

You might lose up to 30% of the creating content to boiling, so grilling, baking, or even fan searing tends to preserve more of the creatine. If you do boil or to your meat, consider using the cooking liquid in soups or sauces so you're not losing those nutrients.

This is actually why vegetarians and vegans often see more dramatic benefits from creatine supplementation then meat eaters. They are starting from lower baseline levels.

Studies have shown that vegetarian who supplement with creatine can see improvements in muscle strength, power output, and even cognitive function that are more pronounced than what omnivores experience.

That is, the meat eaters. It's not that the creatine works differently in their bodies, it's just that they have more room for improvement. But here's where things get tricky.

And this is the part that many people don't understand. When you take creating a supplement, or even when your body produces it naturally, or you get it from food, some of it inevitably breaks down into a waste product called reactant.

This happens spontaneously at a fairly steady rate, which is actually why creatinine is used as a marker of kidney function in the first place. And here's the problem.

Creatinine is exactly what your doctor measures in your blood. Test to check how well your kidneys are working. Your kidneys are supposed to filter creatinine out of your blood and excreted in your urine.

If you are creating, levels are rising. It usually means your kidneys aren't filtering as efficiently as they should be. This is why an elevated creatinine level is typically a red flag.

That's something might be wrong with your kidney function. But when you are taking creating a supplements, you are essentially flooding your system with extra creatine, which means more of it breaks down into acne.

Even though your kidneys are working just fine. So if you are supplementing with creatine, you're creatinine levels

may rise not because your kidneys are failing, but simply because you are taking the supplement.

Why Creatine Can Raise Creatinine

This can create what we call a false positive, making it look like your kidney function is declining when it's actually fine. This false positive can have real consequences.

It might lead to unnecessary additional testing. 24 hour urine testing, referrals to a specialist, anxiety, stress, and even changes in your medications or treatment plans that actually aren't needed.

I actually had a patient in his early 40s who came absolutely terrified because his routine bloodwork showed his reac Nin had jumped from 1 to 1.6 in just three months.

For context, a normal reaction level is typically between 0.7 to 1.1, so his new level of 1.6 was outside the normal range. He was convinced his kidneys were failing and was already researching dialysis, looking up for life expectancy with kidney disease, and worrying about how this would affect his young children.

When I dug deeper into his history during our appointment, I discovered he was taking creatinine supplement right around the time his labs changed. He'd been trying to get back in shape, joined a gym and a trainer, had recommended creatine to help with his workouts.

He'd been taking five grams daily for about three months right when his labs started looking concerning. We stopped the creatinine, repeated his labs in a month, and his creatinine was back to baseline at one.

His kidney function hadn't declined at all. The relief in his voice when I called with those results, I'll never forget, he told me he'd been losing sleep, had stopped exercising because he thought it was making things worse, and had even started looking into getting his affairs in order.

All that anxiety and stress from what turned out to be a false alarm. This is especially problematic for people with borderline kidney function. If your estimated GFR that is glomerular filtration rate, which is calculated from your creatinine levels, is around 65 or 70, you are right on that edge between normal function and stage two chronic kidney disease.

Adding creatinine can make your lab monitoring much more complicated, because you can't tell if changes in your labs are from actual kidney decline, or just from the supplementation.

In these situations, I often recommend using a different test called stat and see, which gives us a much more accurate picture of kidney function because it is not affected by creating intake muscle mass, or diet.

A Patient Example of a False Alarm

So statin C is a protein produced by all cells in our body at a constant rate, and it's filtered by the kidneys just like creatinine. But it's not influenced by the same factors.

It's actually a more accurate marker of kidney function, but it's more expensive and not as commonly ordered, which is why creatinine remains the standard test. Now, I don't want you to think I'm completely against creating a supplementation.

The research on its benefit is actually quite impressive, and it's one of the most well studied supplements out there. We have literally hundreds of studies spanning decades that have looked at creatine from every angle.

Studies consistently show that creatine can improve strength and performance in resistance training by about 5 to 15%. That might not sound like a huge amount, but in the world of athletic performance, that's significant.

It can help with muscle recovery between sets, allowing you to maintain higher training volumes. It reduces fatigue

during high intensity exercise, letting you push harder for longer.

There's even emerging research suggesting it might support brain health and memory function. Your brain uses a tremendous amount of energy and creatine can help support that energy production.

Some studies have shown improvement in working memory, particularly in vegetarians who start supplementing this. There's also research looking for creating for depression, dramatic brain injury recovery and neurodegenerative diseases.

Though these applications are still being investigated, the clinical applications go beyond just fitness too.

When to Use Cystatin C Instead

We are seeing potential benefits from neuromuscular disorders like muscular dystrophy, where creatine supplementation may help preserve muscle strength and function.

There is research on its use for age related muscle loss, which is also called sarcopenia, a condition where older adults progressively lose muscle mass and strength, increasing their risk of falls, fractures, and loss of independence.

Some studies suggest creatine might help with bone health, particularly when combined with resistance training. There's even research looking at its potential role in managing blood sugar levels, though the evidence here is still preliminary.

So this isn't just a gym supplement promoted by bodybuilders and fitness influencers. It has legitimate medical applications that researchers and clinicians are actively investigating.

But like any other intervention, creatine comes with potential downsides that you need to be aware of. Beyond the lab confusion, I mentioned, it can cause water retention and my bloating in some people.

This happens because creatine draws water into your muscle cells. You might gain 2 to 4 pounds in the first week of supplementation, but remember that this is just water weight, not fat.

For some people, this is fine or even desirable. For others, particularly those in weight class sports or those concerned about appearance. This can be problematic.

High doses might lead to stomach upset, nausea, or even diarrhea. This is particularly common with the old loading protocol, where people would take 20g per day for the first week.

Benefits and Medical Uses of Creatine

Most people do much better with a steady 3 to 5g daily, which saturates your muscles over a few weeks without the digestive issues. Some people report muscle cramping when taking creatine, though the research on this is mixed.

The theory is that the water retention in muscle cells might affect electrolyte balance, but good hydration typically prevents this issue. And here's the big concern for me as a kidney doctor and people with preexisting kidney disease, or those taking medications that can stress the kidneys.

Creatine might add unnecessary burden to already compromised organs. When your kidneys are already struggling. Adding anything that increases their workload needs to be carefully considered.

There are also certain medications that can affect kidney function. We call these nephron toxic medications. These include some antibiotics and an inflammatory drugs like acids or painkillers, certain blood pressure medications and some diabetes medications as well.

If you are taking any of these, adding creatine requires extra caution and monitoring. So who should think twice before taking creatine? If your kidneys are perfectly healthy, creatine is generally safe at typical doses of 3 to 5g daily.

The research supports this pretty clearly. Healthy kidneys can handle creatine supplementation without problems, but if you have chronic kidney disease, stage two or higher, that means a GFR below 90.

If you are diabetic, have high blood pressure, or already have protein in your urine. This is where you need to be extra cautious. These conditions already put stress on your kidneys and diabetes and high blood pressure.

I actually the two leading causes of kidney disease in the United States. So if you have a family history of kidney disease, even if your current function is normal, that's another reason to be careful.

Kidney disease can run in families, and what seems like healthy kidneys now might be more vulnerable than you realize. I'm not saying creatine is automatically off limits for these people, but it definitely falls into the proceed only under medical supervision category.

The key is making sure your healthcare team knows you are taking it, so they can interpret your lab results correctly, and monitor you appropriately. They might want to check your kidney function more frequently, using stat and C instead of just creatinine and wash for any signs of declining function, including the urine test.

Side Effects and Kidney Safety Concerns

You want creatine monohydrate, which is the most researched form. There are other forms marketed as superior, which is creatine EPA ester buffered creatine, liquid creatine, but none of them have been shown to be more effective than plain old creatine monohydrate.

The other kinds are usually just more expensive. Of course, everyone's body is different, and what works for one might not be the right solution for the next person.

This is where personalized medicine is so important to me. What might be beneficial for a healthy 25 year old athlete with perfect kidney function could be problematic for a 55 year old with diabetes and only kidney disease.

Their bodies are in completely different states, facing different challenges with different risk factors. This is something I talk about with my patients all the time at Kidney Institute.

We don't do one size fits all protocol. We look at your complete picture. Your labs, your lab work, your health history, your medications, your goals, your risk factors, and we create a personalized plan that makes sense specifically for you.

So if you have any kidney issues, diabetes, high blood pressure, or taking medicines that affect the kidneys, don't start creating without medical supervision.

This is non-negotiable. The potential risks outweighs the benefits. So remember, if you are starting, begin with three grams daily rather than jumping into loading doses.

The old advice was to load with 20g daily for a week. But this causes unnecessary side effects and doesn't provide any long term advantage. You reach muscle saturation whether you load or not.

It just takes a few weeks longer with the lower doses. Monitor how you feel. Pay attention to any digestive issues, changes in urination, swelling, or unusual symptoms.

Maybe keep a simple log if it helps you track patterns. Make sure your healthcare team knows you are taking it so they can interpret your lab results correctly.

Alternatively, consider supporting your natural creatine levels through foods including herring or salmon.

Who Should Be Cautious and How to Take It

Once or twice a week can provide a meaningful amount of natural creatine, along with other kidney protective nutrients. While you won't get supplement level doses this way, you are supporting your body's natural systems without the potential complications.

This is often my preferred approach for patients with borderline kidney function or multiple risk factors. You can also think about rotating. Maybe you eat creatine rich fish a few times a week and supplement on heavier training days, or you cycle your supplementation, taking it during intense training periods and relying on food sources during maintains phases.

There is no rule that says supplementation has to be all or nothing. Remember, supplements like creatine can be powerful tools, but they are not magic bullets.

The foundation of good health and healthy kidneys still comes down to the basics. A balanced diet rich in fruits, vegetables, whole grains and quality proteins.

Regular exercise that includes both cardiovascular activity and strength training. Adequate sleep for 7 to 9 hours per night. Stress management through whatever works for you.

Meditation. Yoga. Time in nature. Meaningful social connections and avoiding things that damage your kidneys like excessive blood. Painkillers like NSAIDs.

Uncontrolled blood sugar. High blood pressure. Smoking, and excessive alcohol. These fundamentals matter more than any supplement ever will. I've seen patients who take every supplement under the sun, but still have poorly controlled diabetes and high blood pressure.

And I've seen patients who focus on those fundamentals and have excellent kidney head without taking anything beyond a basic multivitamin. I always tell my patients supplements should supplement a healthy lifestyle, not replace it.

They should be icing on the cake, not the cake itself. Get your foundation right first. Sleep. Stress. Nutrition. Movement. Hydration. Then, if supplementation makes sense for your specific situation and goals, add it in thoughtfully and intentionally.

The bottom line is creatine can be beneficial and the research supporting its use is solid. But it's not as simple as the marketing makes it seem. Your kidneys are precious organs that deserve protection and careful consideration.

Lifestyle Foundations and Final Takeaways

They're working 24/7 to filter your blood, balance your electrolytes, regulate your blood pressure, produce hormones that affect your red blood cells and bone health, and maintain the delicate chemical balance that keeps you alive and thriving.

Take the time to understand how supplements might affect them. Ask questions. Get proper testing. Work with physicians who understand both the benefits and the risk, and always prioritize your long term health or short term performance gains.

Because at the end of the day, no amount of extra muscle or athletic performance is worth compromising your kidney health. Your kidneys have to last you a lifetime, and once they're damaged, that damage is often permanent.

Make choices today that your future self will thank you for. Thank you for tuning in to Doctor Talks. We hope

today's episode has enlightened and inspired you on your path to optimal health.

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