**Episode 31 Transcript**

Kelly Jones:

Those who go through maybe childbirth and breastfeeding and perimenopause and menopause. There's these periods in life where estrogen levels affect our ability to maintain our muscle and bone mass. So the more strength training we're doing and the more we're thinking about diet to support that strength training, the better we're supporting our bodies for those time periods.

Mary Purdy:

Welcome to The Good Clean Nutrition Podcast. I'm your host, Mary Purdy, integrative dietician and nutrition educator. So before we get started, we would like to share a new feature that will allow you to actively engage with the podcast. We would like to invite you to submit your questions about episodes past or upcoming, or to leave us a comment about how the show is relevant to you or has affected you, or simply make a suggestion on how to make the show better. We want to hear from you. So you can visit healthcare.orgain.com/podcast and record your voice message. We will review every submission and your questions. Your suggestion or comment could be incorporated into an upcoming recording. You could be famous.

Okay, now let's get into today's topic on nutrition and strength training for the health of women and those assigned female at birth. I am somebody who loves to be physically active and I tend to be more engaged when it comes to things like dancing and going hiking in nature and biking and walking, and if you're like me at all, you might look at a list of events or classes at a gym or a community fitness center and think; oh, bootcamp, strength training. Oh, weightlifting. Can I do that? Is that for me? Am I going to be bored? Am I going to be able to do that? And I tend to get more excited about the things where I'm actively moving my body or shaking my booty. And I know that building muscle is really important for me and for many others out there who may be having a variety of health goals or concerns.

This is why it is great that we have a guest today with us, who is going to share some really wonderful insights about the benefits of strength training. We are joined today by Kelly Jones, a registered dietician who is a board certified specialist in sports dietetics and owner of both Kelly Jones Nutrition and Student Athlete Nutrition. Kelly began her career as an associate professor of nutrition and exercise physiology while building her performance nutrition business and gaining notoriety in the media busting myths and showcasing the ease of incorporating nutrient dense foods and food products into busy, active lifestyles. Kelly has created medical fitness programs for internationally recognized fitness clubs and consults with national sports organizations, including Major League Baseball, USA Swimming and New York Roadrunners. And as a board certified sports dietician, a mom of two young boys and a former division one athlete who still loves to compete in races and weight train, Kelly understands the need to implement positive nutrition habits in practical and personalized ways. Also, Kelly is a valued member of Oregon's Nutrition Advisory Board. So welcome, Kelly.

Kelly Jones:

Hi. Thank you so much for having me. I'm excited to be here.

Mary Purdy:

I'd love to know to start off with, how did sports nutrition and performance nutrition originally draw you in?

Kelly Jones:

So I was an athlete growing up. I was involved in all the different sports. My parents told me it was too much and I had to choose when I was about 13 years old, and that took me down the road with swimming around the age of 13, when I really dove into swimming as my full-time sport, if you want to call it. My mom also ran into some health issues and through work with both a dietician and naturopathic physician, wound up really kind of healing herself with food versus going the route with a lot of different medical interventions that were recommended. So that was kind of an eye-opener for I think myself and my family given my age, started to recognize how, not just what I ate, but the timing of one I was eating was affecting my energy levels and my performance in the pool.

And I was so excited about all of those factors for myself and my mom that I wanted other people to know about this too and understand the power that food has, and knew at a young age, I was really lucky that I wanted to go the route of performance nutrition for a career. So through college and grad school, I learned that being full-time for a specific sports team or college wasn't really for me. I like to be doing lots of different things and have something different going on every day and traveling around that much for one team wasn't really what I saw myself doing. So I found my path in a different route and that's how I got where I'm today.

Mary Purdy:

Let's talk a little bit about strength training. We're going to get into the nutrition side of it, but I think it's important for us to understand why is strength training important? Why is it important for women or those assigned female at birth to actually build a little muscle?

Kelly Jones:

Yeah, so I think a lot of people miss this research that muscle mass is actually a known predictor of longevity. With that, we also see studies showing that a lower muscle mass is linked to all cause mortality. Knowing that, we want to build muscle, not necessarily for the now but for the future, that could be hard for people sometimes to think about these habits that I'm building now, this time and effort that I'm putting in now is going to benefit me as I'm aging. But I think those are some of the biggest things that we can get from strength training, and especially for women and those who go through maybe childbirth and breastfeeding and perimenopause and menopause.

There's these periods in life where estrogen levels affect our ability to maintain our muscle and bone mass. So the more strength training we're doing and the more we're thinking about diet to support that strength training, the better we're supporting our bodies for those time periods that really aren't working for us and more against us in terms of maintaining that muscle mass for longevity too. One of the things that I love most about strength training, I see it myself, I really pivoted after having kids to exercising more for mental health, is just the feelings of strength, the feelings of positive body image and confidence that we get from strength training too, and research also supports that, which is really exciting.

Mary Purdy:

Nice. And so this idea of muscle mass is one of the determinants of longevity. That's super cool to think about for those of us who have desires to live to be 100 and beyond perhaps, and then this idea of strengthening to support bone health and also during these times of hormonal changes. That's super interesting. So another incentive for a lot of folks out there, I bet. When it comes to just general fitness, we'll dive into the strength training, what are just some real benefits or basics around a fitness program for women and those assigned female at birth? What are we looking for?

Kelly Jones:

Sure. Well, for anyone, unfortunately we don't have nationwide guidelines specific to gender, but we know everyone is going to benefit. The CDC and American College of Sports Medicine recommend... and this is something many people might've heard already, the minimum 150 minutes a week of moderate intensity aerobic training is recommended. They say that we want to split that up into at least three days. So having it more spread out is going to benefit our body a little bit more than maybe consolidating it all in one to two days. But we forget the strength piece and sometimes even the flexibility piece too, I know that's a separate conversation. But for strength training, we want to be doing whole body movements or exercising all muscle groups at least twice a week, and that's outside of that 150 minutes.

Now, some people might be virtually sedentary and think that all sounds unrealistic. So to that, I always say we want to just incorporate whatever is realistic and works for you right now. We need to ditch that all or nothing mentality that can come about. Anything you can introduce is better than nothing, remember that, but that is kind of the minimum you want to work towards, is that twice a week of all muscle groups being trained for strength?

Mary Purdy:

And can you identify the difference between strength training and aerobic training just so that people are really clear about what those two things mean?

Kelly Jones:

Sure. So strength training is when you have your muscles working against or contracting against an outside force or an outside resistance. So that force is sometimes weights, maybe there's different forms of strength training, so it could be resistance bands. It could be your body weight or plyometrics. You're including explosive movements off of the ground, and your body weight. You can add weight to that. There's suspension training. If you've heard of TRX or where you have almost like ropes coming down from something and you're pulling your body weight up or against gravity, all of these different ways that you can build resistance against your muscles, that's going to be our strength training. And then our aerobic training, those are things that are going to be maintained, repetitive in nature where we're utilizing oxygen for longer periods of time to support energy production that supports that activity. So when your breathing rate is up for long periods of time, particularly over two minutes, that's where we know we're hitting that aerobic base and that's going to just challenge different systems in our body.

Mary Purdy:

And so does strength training not engage the heart in the same way? I mean, I know when I have lifted weights or even done yoga, or I'm doing that resistance training, my heart is up. So what's going on there?

Kelly Jones:

Absolutely. And that's why strength training really can be a very metabolically efficient workout. So it can fit into that aerobic training. I think the reason that we differentiate it in these recommendations and when we're talking about it versus aerobic training is a lot of people have this classic idea of weight training being; you're going to a gym, you're going to be doing a set of a movement with weights, you pump out some reps and then you're sitting around waiting for a couple of minutes. And that's really a very specific type of lifting, right? That's power lifting or Olympic lifting. And when we're lifting more for life and muscle mass and longevity and all these other benefits we're talking about. Most people are going to be more circuit style we call it, where you're not taking much rest, you're going from one movement to another, and you can build a little bit of an aerobic base doing that, especially if you're really challenging yourself in doing things at a higher intensity.

And like you said, you could see that in certain types of yoga classes, certain types of Pilates classes, anything that's stressing out those muscles, if you're keeping your heart rate up and you're moving consistently can contribute towards that aerobic activity too.

Mary Purdy:

Let's actually dive into some of the types of strength training. You mentioned a few things. You mentioned plyometrics, TRX. I've never heard plyometric, it sounds very exciting. Obviously there's yoga, there's lifting weights. Can you talk a little bit about what the difference is between those? If one is better, how long you have to do it for? Give us an overview.

Kelly Jones:

Sure. So just to backtrack on the plyometrics, those are any types of explosive movements that your muscles are using. So think doing squat jumps versus just squats, that's going to be apply a metric type movement. So that's going to require more force, more energy to go through that movement than just do a squat where your feet are standing on the ground. So that can give you an idea of how to do something with plyometrics. But if we're thinking about what's best, I first want to say that as much as I'm a huge proponent of strength training and feeling confident, lifting some heavy weights, what is best is moving your body. So if you don't love strength training and you're not motivated to go do it, and there's another type of activity that can strengthen your muscles even a little bit, do that. It's better than not doing it at all.

So find things that are fun. I love dance fitness. I never thought that I would get into that, and it's so fun to go to a lot of those classes and that can involve some plyometric movements too. Sometimes we see these muscle strengthening activities pop up within some other aerobic things that we choose as well, but if we're looking at truly building muscle mass and trying to maintain that muscle mass for life and longevity, and really the reason we see it associated with longevity is it's supporting our functionality, our independence, to do things on our own for the long term. If we're going to support that, we want to be pushing our body a little bit when it comes to the resistance that we are engaging our muscles against. So that is where picking up some weights or doing something with a stronger resistance than just your body weight is going to be beneficial in the longterm.

In terms of how does that look, for me right now in this stage of life, it's at least twice a week for 30 to 40 minutes. It doesn't have to be anything crazy. And when we do these more circuit style strength training sessions versus waiting in between each set, that allows us to work different body systems, work different muscle groups, and again, get our heart rate up a little bit and mix up the types of activities we're doing. So I might go to a strength session with... I have a small group of women that I strength train with twice a week. We might go from doing heavy deadlifts with one little circuit and then the next circuit we might be doing that TRX suspension training, which isn't as heavy or as stressful, but is working some smaller muscle groups that also support the larger ones. And altogether, this also supports injury prevention. So within these timeframes that we're doing this, it doesn't have to be lifting really heavy weights and challenging yourself to that extent every single time that you're engaging in these type of activities.

Mary Purdy:

That's such a relief, because I think there's a lot of misperceptions, misconceptions around there. I love this idea of supporting a smaller muscles which will then support the larger muscles. I mean, I think of myself, I'm a slight person. If you're watching this on YouTube, you can see I have kind of small minimally strong wrists, and so I fear sometimes doing a lot of strength training, I'm going to break something, I'm going to injure something. So this idea of doing these smaller movements to build muscle in smaller areas, it sounds like it's a great approach.

Kelly Jones:

Yeah. And it all balances out. If you have someone... and this is where I really urge people to broaden what they're doing with strength training. If you're the type who can do a more monotonous workout and you tend to go to a gym and that's where you are comfortable already, but you're only using weight machines, we end up in these single plane movements where we're just moving our muscles in a certain direction. There's no balance, right? There's no flexibility involved. You can really overwork certain muscle groups and not support those other ones. So that's where it is really helpful to step away from things like that, unless it's physical therapy related and really targeted for a reason and do things with, even if it is lightweights to start. Again, that suspension training, maybe going to Pilates in addition to even if it's 15 minutes at home, lifting some slightly heavier weights for some of these bigger body movements.

So all of it works together, I think, to support our body and longevity. Unfortunately, the research, it's like strength training, flexibility training, yoga, Pilates, and it splits everything up when really we need to think about how one activity supports another synergistically.

Mary Purdy:

And it makes it so much more appealing to say to yourself, "Hey, I can do yoga one day. I can do Pilates one day. I can do those bandy things another day. I can take a weight and lift that up. I can do some squats. I can do some hopping up and down, maybe jump on a trampoline." I'm not sure if that counts.

Kelly Jones:

Exactly. Yes.

Mary Purdy:

Listen to some music while I do that. And there's a question for you because I know for myself, boy, I used to do those circuits and boy, did I get bored. And so for those who are maybe just starting out and look at the strength training circuit and go, maybe I could listen to a podcast or how do I make this more interesting for myself? What kind of advice or guidance do you have?

Kelly Jones:

Yeah, so I think it's important to have specific goals going into it. If you keep going back to the same circuit or the same style of workout, that could make you bored too. If it's okay, I'm doing bicep curls, okay, I'm doing these boring tricep extensions. Is there another way that you could do that type of movement to support those muscles? And also think, is this really worth my time? Is this super functional? I might do stuff that isolates my biceps sometimes, but in terms of my everyday activities, not standing around going like this and working those muscles specifically. So doing larger body movements can make it faster and more efficient, and can make you feel like you're reaching goals and challenging yourself a little bit more. One is having a specific goal. Maybe that's that you want to work up to deadlifting your own body weight.

Maybe it's that you just want to be able to do three pull-ups, and then you slowly work your way towards reaching those goals and it gets more exciting for you. And then the other movements you do that help you get there feel a little bit more intentional and there's more purpose behind them. Another thing, like I already mentioned, I love weight training with other people. I got into weight training a little bit in high school and definitely in college as a college swimmer, it was a big part of our training program, but you're in a weight room, you have a coach there. It's different every day. You have that spirit of people around you. And so while I continued to do it afterwards in grad school and I was limited for time. And it was something I did on my own, I find it much easier to get there when I have the accountability of these other women I'm lifting with and having their support too.

And when you're doing it together, you're chatting about this thing or that, and then you're excited for one another when you reach another goal, then that makes it a little bit more exciting too. So if you have the ability to, I always recommend trying to find a group of people if it seems like it's something that's boring for you. You could also look into outdoor fitness. I think that this really boomed during the pandemic where there's a lot more people hosting outdoor strength classes locally. We have someone who essentially has a mobile gym. They have this big trailer that they have and they take weights to people's houses and they do them in the park. And so it gives it a different environment. I was consulting for a corporation recently and I was onsite with them and on location outside, they have these big outdoor training facilities where they have barbells and TRX set up and it just gives it a different feeling when you are someone who prefers being out in nature and not in a gym with just metal around and everything.

Mary Purdy:

And I would imagine there'd be some additional health benefits just being connected to more green spaces at the same time getting a little more oxygen too.

Kelly Jones:

Yes. So much research to support that. Yes.

Mary Purdy:

I'm Mary Purdy and you're listening to the Good Clean Nutrition podcast. We're on with Kelly Jones discussing nutrition and strength training for the health of women and those assigned female at birth. Next, we will dive into nutrition for active women end dose assigned female at birth. But first, a word from our sponsor for this podcast, Orgain.

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Mary Purdy:

Now let's get back to our conversation with Kelly Jones. Okay, so Kelly, we've been talking a lot about the benefits of strength training, how to make it more interesting, how to engage people in the process. I want to actually now delve into the role of nutrition and how that amplifies or enhances the process. So what kinds of foods or perhaps specific nutrients should folks be thinking about including in their diet when they are trying to, let's say either preserve muscle mass or enhance muscle mass?

Kelly Jones:

Obviously protein. That's what everyone thinks of when they think of muscle. So we know that that's important. And maybe even more important than eating enough protein is our timing of our protein intake. So we see a lot of people have... a lot of Americans, a standard American diet. We're having super carb-rich breakfasts and then maybe snacking throughout the day or having inconsistent erratic eating patterns. And then we focus our dinner around a big piece of protein and there's a leaf of lettuce on the side and not enough plants. What we want to do is we want to shift our idea and spread our protein and take throughout the day into more moderate amounts. Research shows that having it every about three to four hours and moderate doses is actually going to be more supportive of its functions outside of muscle building too. But then of course, building and maintaining our muscle when we are engaging in physical activity and especially strength training.

So protein, obviously critical, but a lot of people over-focus on protein. And we end up having people who are like protein shake, protein shake, protein shake three times a day and they feel like they need to focus on meat only and they forget about all of these other important factors in our diet with number one being eating enough energy. So if you're under consuming calories, if you aren't eating enough carbs, your body's going to take that protein that you're eating and it's going to just try to convert it into energy. So you're doing yourself a disservice by not incorporating what really energizes your muscles and your brain for that matter, which is carbohydrates.

And in people's heads they hear carbs and they think sugar, pasta, bread only, but in fact, that's plant foods. So the more whole plant foods we can incorporate over the course of the day, the better, because it's going to provide you with the energy your muscles need, so you can use protein for the functions you want it to. And then again, if it's whole plant foods especially, we're getting vitamins, minerals, and very important polyphenol antioxidants that we're seeing more and more support this longevity that we're talking about, but also muscle recovery and even fitness performance.

Mary Purdy:

So I'm so glad you're talking about all these things. So the idea of having carbohydrates just to fuel the body so that we don't break down protein for glucose, and then this idea of needing different kinds of protein that we don't need to focus necessarily all on animal protein. And then lastly, this piece, which I think people do not think about, which is the role that polyphenols play in the recovery of reducing inflammation that is automatically enhanced, or is elevated after we have a really strong workout.

Kelly Jones:

Absolutely.

Mary Purdy:

So I want to ask a little bit more about the protein. I think as you mentioned, this is really confusing for people and I think it really depends on the person, but if someone is doing a lot of strength training and they are looking to build muscle, we think about how much protein a typical person needs per day. But if someone is really working on wanting to build some muscle and not huge, I'm not talking about a weightlifter, bodybuilder, but just someone who's breaking down muscle doing strength training, how much protein would a typical person need or around how much more protein would they need on a strength training day?

Kelly Jones:

Yeah, so we're going to see that this obviously varies, but when we look at our minimum protein recommendations being 0.8 grams per kilogram, especially because I keep coming back to this aging process, we're seeing that in the elderly in particular, that's probably not enough. And to prevent things like sarcopenia, the loss of muscle mass and function, we want probably at least one gram per kilogram, maybe 1.2. And I think it's good to get in the habit of focusing on that earlier in life, so that we're not having to change these habits later in life too. But it also can support the average person, again, building and repairing from the stress that they're putting on their muscles no matter what type of activity that we're doing. We even see in endurance athletes like runners, we used to have this idea that their protein needs were a lot lower than those weightlifters or bodybuilders that we're talking about or strength athletes that we're talking about.

And in fact, we're seeing that because of that repetitive stress that there is, that they probably need the same amount that these more strength-focused athletes need too. So I'm going to say 1.2 grams per kilogram minimum. With my practices clients, we tend to be more around the 1.4 grams per kilogram per day. But what we find too is again, that spreading it out might matter even more than hitting these minimum protein goals. And I should say too, a lot of people are already hitting that amount of protein over the course of the day. It is the timing that we really need to consider. Having it at breakfast, not just at lunch and dinner or just post-workout and after dinner, making sure that we're thinking about pairing it with a carbohydrated snack.

Someone might just grab an apple, well, can we add peanuts? It's not a super high protein food, but there's some there, right, that we're getting in more consistently throughout the day. So I would urge people to think about spreading out that intake. Anywhere between 15 and 30 grams is ideal for the majority of people, I would say. Depending on your body weight is what's going to determine what end of the spectrum you end up on there.

Mary Purdy:

And you mentioned older individuals needing more like one gram per kilogram. In the United States, we don't really use kilograms so much when we think about our weight, so it can be kind of confusing, but a pound divided by 2.2 or whatever it is. But are there other variations as it relates to age? And then are there other variations as it relates to different ethnic groups? Certain people from certain racial backgrounds or ethnic backgrounds have a higher muscle mass, so how do we work differently with different people?

Kelly Jones:

Yeah, so first, we'll talk about other periods of life. I think especially when we're thinking of women and those assigned female at birth, we're thinking of pregnancy and postpartum. Those are times where protein needs are going to be higher. And if you are incorporating strength training, which is recommended, a lot of people shy away from it during that period, but recommendations during pregnancy are exactly the same as any other stage of adulthood. So keep that in mind in terms of strength training, but during that time period, your protein needs are going to be a little bit higher. There's actually a couple of studies showing that if you are exclusively breastfeeding in that first six-month period after having baby, your needs may be as high as that of a professional athlete at that 1.8 grams per kilogram, which is high and it makes sense. I know for me, my body changed a lot after having kids.

And while I did continue to prioritize strength training, and I am a dietician who thinks about protein and thinks more about food than the average mom who just brought a baby home, my muscle mass was a lot harder to keep up after having my kids too. I saw that shift personally, I see it in others. And since seeing these studies, it makes perfect sense. You're not only still recovering from childbirth, but you also are supporting another human's needs and then have this higher metabolism that might be relying on some of your muscle stores and protein that you're eating for energy. So I really urge people in that period of life to increase intake.

Also, perimenopause, menopause, and we see those hormonal shifts. A lot of research is pointing to protein and whole plant foods as being really key there to again, supporting muscle mass and bone mass, but also limiting inflammation so that we're having lots of different colors along with that protein there. In terms of different ethnic groups rather than... I don't know that there's much research to support ethnic groups in particular, but you mentioned how some people based on their ethnicity are going to have different body types, right? Someone might put on muscle a lot easier than others.

So we hear about these different body types traditionally, those that are going to be a little bit more thin and lean, that just might be naturally your genetics. So if you genetically have always been a little bit more thin and lean, it might be a little bit harder for you to put on more muscle mass. And that's okay if you're doing the things that keep your muscles working. So we think about that sarcopenia, not just loss of muscle mass, but also strength and function. So if you keep stressing your muscles out to maintain their strength and function, that's more important than adding on the bulk that we talk about, right?

Same thing for someone who might have more of an athletic build naturally. You might have that more athletic build naturally even without doing much strength training, but is that functional for you, right? Do you actually have good muscular strength and function or do you just look that way? So we have to think more about that functionality, I think, when we think about supporting our body with strength training and food. So regardless of what your body type is, I think what's most important is incorporating these different movements and all these different types of fitness we're talking about whenever you can. And then also, again, structuring your diet in a way where you're prioritizing these nutrients spread out throughout your day.

Mary Purdy:

And you talked about spreading out protein throughout the day. I want to talk about types of protein. Again, you mentioned upfront a lot of people who are doing strength training feel like they might need animal-based protein. And I know that you focus a lot on plant-based protein, and all of us are trying to incorporate more plant-based proteins in general for the sake of having additional those polyphenols, but also more fiber and also healthier for the planet in terms of a lighter footprint. So how can people, and what can people include that are plant-based proteins and in terms of supporting building their muscle?

Kelly Jones:

When we look at the collection of research, technically we say that as long as you eat a variety of proteins or plant proteins over the course of the day and are eating enough calories, you don't have to pair your proteins together. And there was a lot of talk in the past about complimentary proteins. I will say that if you're trying to build muscle, we do need more research here, it is probably ideal to use these complimentary proteins. We're pairing different plant foods together, aside from if we're incorporating things like soy protein. We know soy protein is of "very high quality" or bioavailability because the amino acid profile is more similar and comparable to animal proteins. So I'm all for people incorporating soy protein where they can.

And then outside of that, if we're thinking about legumes and higher protein grains like farrow and quinoa and vulgar versus let's say rice. If incorporating more of those things, making sure again that we are trying to have them at one meal so that we reach those minimum not only grams of protein we might have as a goal, but also so that we're getting a good balance of different amino acids in our diet. We know that probably the most important amino acid for triggering what we call muscle protein synthesis or just the repair and rebuilding of our muscles in association with exercise, is leucine. And this leucine one of our branch chain amino acids is rich in animal products. We can get it from soy foods, but then also things like pumpkin seeds and zuki beans.

And again, by having just those foods, great, we're going to get some leucine and that's fine. But again, having these mixed plant-based meals not only makes it more exciting and gives us more polyphenols, but also increases our protein and our amino acid profile and our leucine content of our meals too.

Mary Purdy:

All right. Bring on the zuki beans and the pumpkin seeds. All right. Throw them in a smoothie if you want. Let's talk a little bit about timing. I know you mentioned that's really important and I want to talk about the idea of how do we time meals so that we are fueling for the workout, and then how do we time it so that we are recovering? And do we need protein before the workout or only after the workout? How do we pair carbs with proteins? It's a lot of questions all in one, but guide us here.

Kelly Jones:

And that can get so individualized depending on the time of the day that you're exercising, right? And maybe that changes day to day. For me, I try to be pretty consistent, but sometimes it doesn't happen, and then I need to blow off some steam and go out for a run at the end of the day. So you have to think about if you have some sort of a schedule, typically then think about, this is when I work out. Let me try between my workout and my life and whatever else I have on my plate to plan my meals to support that workout. Our pre-workout meals, if it's a full meal, we're thinking three to four hours in advance. This is going to just be a normal balance meal. We have our carbohydrates, our color, our protein, some nourishing fats, and it's going to be a normal meal.

As we get closer to our workout, the amount of protein and fat and fiber we eat is going to want to reduce because that helps us to avoid GI distress and be able to reach these intensities we want without some discomfort or feeling like we're weighed down. So as we get closer and closer, it's going to become more carb-rich and lower in those other nutrients. Post-workout, let's say that you ate two or three hours before your workout, it's time for a meal right now, right? If you ate a meal three hours before and then had a pretty decent snack an hour before, maybe you don't need a full meal right now, or maybe it's really just time for a snack based on when you have your meal plan for later. So we have all these things to consider, but generally speaking, it's easiest to focus more on carbs before focus, more on a combination of carbs and protein after. And the timing of that will vary. The volume of that will vary depending on if it's a snack or a meal or what type of day it is for you too.

Mary Purdy:

And is the combination of three to one, that ratio of three carbs to one protein, so 45 grams of carbohydrate to 15 grams of protein, is that still standing these days?

Kelly Jones:

So that really is based on research surrounding athletes. And this is something we thought for a while. It was ingrained in my head when I was in undergrad. It was just that was when it really became a big thing. And what we found over time is that that might be the ratio that works for a particular athlete, maybe especially endurance athletes and those who are pro-collegiate. But for the average person, we're probably going to have different needs. We may not need that many carbs. Maybe a two to one ratio is better for you, carbs to protein. Most people are likely not doing these high intensity activities for longer than an hour every day of the week. And if you fall into that category, then you might not need as much carbohydrate after a workout because you haven't completely depleted those glycogen or muscle carbohydrate stores.

Again, if we're just focused on a wide variety of whole plant foods and getting more fruits and vegetables and whole green starches and all of that, then we're probably going to hit the carbohydrate amounts that we need and we can think a little bit more about hitting those grams of protein. I'm not a big counter either. I like people to try to tap in more to their intuition to listen to their body. So it is helpful to have these ideas of what a good goal might be and to check in with that every once in a while, but at the same time, we need to listen to our body's cues. If at the end of the day you always feel like binging on carbs, you didn't need enough earlier, and maybe you do need to increase that ratio. If you're always feeling weak, maybe we really need to focus on your protein. But I think generally if we focus on finding this balance with the checklist of healthy starch, color protein, some healthy fat, then it all kind of comes together at the end of the day.

Mary Purdy:

And it's such a great testimony to the idea of number one, working with somebody so that the individualized recommendations can really be realized. And number two, this idea of tapping into your body. I've worked with so many patients who have such a varying response to the recommendations that we give them. And so when they are able to say, You know what? I feel my best when I have this before workout, or I feel my best when I have this after workout." Like, okay, that is you. That is your experience. You need to go with that, as opposed to listening to someone with a calculator saying, "This is how many grams of blank you need."

Kelly Jones:

Absolutely. You know your body best. Yeah.

Mary Purdy:

You sure do. One last question about the macros here, and if we could just be brief on this, talk a little bit about the role of fat in this picture here.

Kelly Jones:

Yeah, poor fat always gets forgotten, with sports nutrition. We think so much about the carbs and the protein, and it's really because I feel like a lot of mainstream sports nutrition information becomes pre and post-workout only, and we forget about the rest of the day, and we have fat stored in our body. It needs to be there. It's helpful. It's going to fuel our workout. We don't need to ingest it right before for it to be able to do that. So I think that's part of the forgotten piece. But we need, especially our unsaturated fats and omega-3s, in order to support healthy inflammatory responses, help with our recovery processes and all the other wonderful things fat does. Mental health, joint health. People forget about the role of joint health and fat. So that's clearly going to be important no matter what type of physical activity you're engaging in. I always tell people the simple tip is focus on plant fats and fish fats, and that'll help pull that together for you too.

Mary Purdy:

Excellent. I know folks out there are probably also wondering, all right, food. Got it. I understand proteins, fats, carbohydrates, polyphenols. What about supplements? I would love to get your take on the types of supplements that you have found to be effective, either pre-workout or post-workout. What's your take?

Kelly Jones:

Yeah, so thinking of pre-workout, a lot of people's brains just go directly to pre-workout supplements. They're marketed just as that, right? And unfortunately, our sports-focused supplements are those that probably have the highest risk of adulteration, and that means potentially containing anabolic steroids, prescription drugs, things we don't want, things that they're testing for at the professional and collegiate levels. So it's incredibly important that if you are choosing something like a pre-workout supplement that it's third-party tested, I always recommend NSF certified for sport or informed sport-certified so that we know that they're testing for those band substances and you're not putting yourself at risk there. Along with that though, even if something has that certification, there's a couple of energy drinks that happen to have one of those certifications just saying, "We don't have this added stuff that's banned by a sports organization in there."

That still doesn't mean it's best for your body. Having high levels of caffeine and a variety of other stimulants mixed together right before a workout, it can put your heart at risk. And we want to, again, be able to look to food and fluid and our lifestyle patterns to give us the energy we need to support our fitness program. So it kind of pulls people away from listening to their body and correcting some of those other nutritional and lifestyle deficiencies they might have that affect their energy levels and looking for this as kind of the bandaid. So I'm big on if you want the caffeine, have a cup of coffee, it's effective, it's going to... yes, it does have some performance benefits, can reduce your perceived exertion, can help with strength and power and endurance, all of those great things.

And have the coffee or even the tea instead of those pre-workouts, because you never know. So that's my idea of pre-workout. There's also some evidence surrounding beetroot juice. If you hate the taste of beets, don't force it down. It's not worth it. But if you're at a more professional level and you want to try it out, then that's where I say that's something that we can talk about and go forward to. But those are the things I think about pre-workout, for sure.

Mary Purdy:

And the beetroot juice is based on the idea that it helps to increase the levels of nitric oxide, which makes oxygen more readily available to your muscles, your heart, that kind of thing?

Kelly Jones:

Exactly. Just like it helps with blood pressure, dilate those blood vessels, help the oxygen and carbohydrates get to those muscle cells for energy metabolism more quickly. Yes.

Mary Purdy:

And what about the Cs? Collagen, the creatinine or the creatine rather? Where do those fit into the picture? How effective are they?

Kelly Jones:

Yes. So collagen, first. Collagen for a while I was not on the bandwagon and I just didn't think there was enough research there. The area that we do have more research is for joint health. So this is where I'm not... it's not going to hurt to take it, but I also don't know that it's worth it for everyone. But my athletes or everyday exercisers who are injured, might have a joint injury, might have long-lasting joint injuries, might be going into or right out of a surgery. That's where I'm recommending collagen because it may have benefits for repair and supporting our joint health. So that's where I see the biggest benefit versus the beauty stuff that's out there. And that may be the case in the future, but I see that it can be valuable for joint health. When it comes to creatine, I'm a huge creatine fan. And creatine for those who don't know, it's a compound that forms phosphocreatine or creatine phosphate, whichever you want to call, it in the body.

And it actually provides the fastest way to replenish our energy for our muscles during exercise. But it's only going to support activities between five and 18 seconds, which we're exercising for longer most of the time, right? Most people think of creatine for power lifting and muscle building and strength. What I actually love it most for is the potential cognitive and mental health benefits that we're seeing in some studies. There's a lot of research being done just in the area of women's health, and then also specific to sarcopenia and maybe preventing the loss of, again, muscle mass and function with age. Obviously, it's going to work better if people are strength training, but there's some evidence showing that creatine might have these antioxidant effects in the brain, not just the muscle and power effects in the muscles. So a lot of cool stuff out there, and that's why I really love it.

Mary Purdy:

Okay. Mary Purdy [inaudible 00:40:39]-

Kelly Jones:

We can talk about this for hours.

Mary Purdy:

Well, I want to wrap up here, but I want to make sure, sure that listeners know where to find you. I know there's Kelly Jones Nutrition, there's Student Athlete Nutrition. Talk to us a little bit about those and how people can get in touch if they'd like.

Kelly Jones:

Sure. So Kelly Jones Nutrition, that's my main business. That's me, my dieticians or consulting on a business level, or one-on-ones or groups on social media. I'm @KellyJonesRD. And then Student Athlete Nutrition, as the name tells you, is very specific to high school and college athletes and low-cost resources for those that don't have access to full-time sports dieticians. So studentathletenutrition.com or studentathlete.nutrition on social media.

Mary Purdy:

Thank you for making that more accessible to those who might be in need of that. That's super generous. Well, thank you, Kelly, for speaking with us today. I feel like everyone's muscles are tingling and twitching and excited to get moving and lifting and resistance training in there, so I really appreciate your wisdom and thoughts today.

Kelly Jones:

Thank you for having me.

Mary Purdy:

Thanks for tuning into this episode of The Good Clean Nutrition Podcast. If you like the podcast, which we hope you do, we would so appreciate it if you give it a five star rating, or a review on your favorite podcast platform like Apple Podcasts or Spotify. Or, you could give it a thumbs-up on YouTube if you're watching right now. And if you would like to submit that voice message and be a star on the Good Clean Nutrition Podcast with a comment or a question about today's discussion with Kelly, please visit healthcare.orgain.com/podcast to record your message. And to stay up-to-date on the latest episodes of the podcast, be sure to subscribe. Thanks so much, and see you next time.