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Q&A With Dr. John Berardi

Paul Southern interviews nutrition expert Dr. John Berardi of PrecisionNutrition.com.

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All images: Paul Southern

Dr. John Berardi runs PrecisionNutrition.com, a “nutrition coaching” website where members pay to access nutrition information, online support, exercise programs and more. Dr. Berardi boasts an impressive list of academic credentials, and he’s also worked with Olympians and professional athletes.

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Paul Southern of CrossFit Pleasanton talked with Dr. Berardi about his website, his views on nutrition, eating for performance, the Paleo Diet, intermittent fasting and more.

Dr. Berardi, can you give us the two-minute commercial about who you are and what you do?

Well, to begin with, training has been an important part of my life for nearly 20 years now. Originally, I trained for football, rugby, and track and field—all sports I competed in at a fairly high level. Then, once my competitive sport days wrapped up, I began training for bodybuilding and powerlifting. I had pretty good success there too, eventually winning the NABBA Junior U.S.A. bodybuilding contest. My best lifts at the time were a 430-lb. bench press, a 600-lb. deadlift and a 650-lb. squat.

Throughout those competitive sporting days, I always wanted to know how stuff worked. I had lots of questions about physiology, biology, biomechanics and more, so those questions pushed me into academics. And over the course of the next 10 years, I earned a pre-med undergraduate degree, a master's in exercise science, and a Ph.D. in exercise and nutritional biochemistry. Nowadays, my focus is sport and exercise nutrition.

I'm an adjunct faculty member at both the University of Texas and Eastern Michigan University. I teach graduate-level courses in sport and exercise nutrition. And I run one of the largest nutrition-coaching websites on the Internet, PrecisionNutrition.com. Over 200,000 people subscribe to our newsletter, and we have over 500,000 people visiting our site each month.



A former competitive athlete, Dr. Berardi now focuses on fueling other athletes properly.

I once heard you say that the best coaches have three things in common: they've gotten an education in what they're coaching, they've successfully done what they're coaching themselves, and they've coached a lot of others to success. It's clear you're educated and have a lot of personal experience. What about your coaching experience?

I'm glad you asked that because, for me, that's what I'm most proud of. Through our website, over 60,000 people have followed our nutrition principles and discussed their results in our Member Zone. Further, myself and my team have directly coached over 7,000 clients in the last three years. Some are recreational exercisers looking to lose fat or build muscle. Others are high-performance athletes looking to win gold medals or world championships. So, if there's one thing I'm most passionate about, it's coaching.

You're not just about fat loss, right?

Right. I'm interested in helping people use nutrition and training to achieve their most ambitious physique, health and performance goals. And my team has worked with athletes at the highest levels of sport.

I've heard you work with quite a list of top athletes. Care to share any names?

Sure. At the professional level in the last 10 years, I've had the good fortune of working with guys like UFC welterweight champion Georges St-Pierre, St. Louis Rams running back Steven Jackson, Green Bay Packers wide receiver Greg Jennings, the Cleveland Browns organization, the Houston Rockets and the Toronto Maple Leafs. And at the amateur level, I've worked extensively with U.S. and Canadian summer and winter sport national teams like bobsleigh/skeleton, cross-country skiing, alpine skiing, canoe/kayak, and rowing. In fact, in the last two Winter Olympics alone, athletes I've worked with collected over 25 medals, 12 of them gold.

Impressive list. I think it's safe to say you've "been there, done that."

Although I've had an amazing career so far, I still feel like I'm a rookie!

One of my main goals, professionally, is to never stop researching, never stop learning. And to keep things fresh, I adopt the mental attitude that "I don't know anything." And sometimes I act like it. By continually reminding myself that I can learn everywhere from everyone, I keep making room to grow. And that keeps things fun. I have a hell of a lot of fun doing what I do.

Kelly Starrett believes that you don't need to be a physical therapist in order to work on your dysfunction. He is empowering the masses with MobilityWod.com.

I feel that you have done the same thing with PrecisionNutrition.com. You don't have to be a registered dietitian in order to eat well and help others do the same. You offer all the tools to get the Average Joe eating food that will improve health, decrease body fat and increase athletic performance. What are the basic principles?

Well, first of all, I think Kelly is doing some really cool stuff, and I applaud him for helping to make pre-hab, dynamic movement and manual therapy part of everyone's workout consciousness.

For me, the goal is similar: to demystify the eating process so that eating right for different goals is something everyone thinks about and something anyone can do.

My general principles are pretty simple and straightforward. If you want to improve your nutrition, you have to consider three things: food type (what you're eating), food amount (how much you're eating) and food timing (when you're eating). And truly, improving muscle gain, fat loss, sports performance or health is as simple as tweaking one or more of these variables.



What are you eating, when are you eating it, and how much are you eating?

How about some examples?

Well, let's start with fat loss. If you want to lose fat as your primary goal, you'll adjust your food type to include mostly lean proteins, green vegetables and healthy fats; you'll adjust your food amount by eating less food than normal; and you'll adjust your food timing by including your biggest, most protein- and carbohydrate-packed meal right after your workout.

On the other hand, if you want to gain muscle as your primary goal, you'll adjust your food type to include lean proteins, a wider variety of fruits and vegetables, a wider variety of fats, and additional unprocessed carbohydrates; you'll adjust your food amount by eating more food than normal; and you'll adjust your food timing by eating your largest, most protein- and carbohydrate-packed meals during breakfast and the post-workout time.

Of course, individual differences apply here; no two athletes or clients are the same. However, these general rules serve as a great starting point. From there, either on your own or with the help of your nutrition coach, you get to become your own science experiment, tweaking and adjusting until you reach your goals.

It's a lot of fun, actually. At any point in time, I'm running five to 10 mini-experiments with clients and athletes here at my own private training facility. Half the time, I'm a subject in these wacky experiments. And the results, for me, are pretty compelling. I'm nearly 40 years old and I maintain a body fat of about 5 percent while staying pretty strong and fit.



Dr. Berardi with UFC legend GSP.

How and why did you come up with your book, *Essentials of Sport and Exercise Nutrition*?

Well, for starters, our *Essentials* textbook is part of the Precision Nutrition Certification program, a complete nutrition education and mentorship program created to teach elite fitness professionals the art and science of nutrition coaching. It also happens to be the text for a master's-level sport and exercise nutrition course I teach.

The book is designed for, and meant to be used in, a personal-training or strength-coaching setting. In the program, we first teach the essential science of sport and exercise nutrition. Cellular biology, digestion, metabolism, macronutrients, micronutrients—if a coach needs to know it, we teach it. Then, we teach coaches exactly how to add nutrition coaching to their work in the gym to guide an exercising client to their optimal physique. In other words, students learn a system for influencing the nutrition habits of any client, with any goal, beginners and advanced alike.

The text comes in two parts. Unit 1 covers all the science you'd expect to learn in a nutrition certification and mentorship, and Unit 2 covers the practice of coaching, something you don't really find in other places. Further, we have a complete online learning module with video lectures and more. Again, (it's) all designed to help elite fitness pros begin to incorporate proper nutrition coaching into their practice.

There is no other educational program with that focus. I can tell you that, because if there was, I would have taken it myself. Because when I started out as a trainer, that's exactly what I needed. But nothing like it was available.

I'm curious as to your thoughts on Paleo eating? A lot of people are promoting the benefits of the Paleo Diet. What do you think of this way of eating?

To a certain extent, I love this way of eating.

For most of the population—including recreational exercisers—eating fewer grains and less refined food should be a way of life. I mean, how can you go wrong eating a diet rich in lean meats, a wide diversity of dietary fat, a rich buffet of vegetables, and a host of nuts and seeds? That's exactly how most of us should be eating, especially when we're not blowing through lots of carbohydrates with high-level athletic training.

However, some exceptions do apply. When we're not obsessively counting our calories—which most people shouldn't do anyway—there are some folks who have a really hard time eating enough total food with only meats, veggies, nuts and seeds. I've seen it time and time again with elite athletes training four-plus hours per day and with skinny ectomorphic guys who struggle to gain muscle. For their goals, the typical Paleo recommendations have to adapt a little bit.

This usually means we include more unrefined carbohydrates, often at breakfast and during the post-workout period. We also include a protein/carb drink during training. And the rest of the day can be more protein, veggies, nuts and seeds.

Speaking of protein/carb drinks, I know that you did your Ph.D. research on peri-workout nutrition. The CrossFit Games competition season is upon us. These are intense competitions and recovery is of the utmost importance. Can pre-, during- and post-workout nutrition be accomplished effectively with whole food or should athletes be using liquid nutrition for these critical meals and supplementing for optimal performance?

Basically, my graduate research focused on how we could use the right combination of protein and carbohydrate in liquid form to speed up recovery from endurance and strength exercise. We started out studying the effects of post-workout protein/carbohydrate drinks on muscle damage, fuel utilization, glycogen resynthesis and protein synthesis. And then we started looking at what happens when these drinks are consumed before and/or during training.



Different athletes with different goals require different fuel.

Although the research is complex, the conclusions are simple. We found that if your training is hard enough to stimulate protein turnover and glycogen depletion, your recovery will speed up if you take a protein/carb drink during the peri-workout period.

Whether you drink it just prior to, during or after training isn't that important. All of them work. So whatever you're most comfortable with. The most important thing is that you drink it.

Here are my recommendations based on one's natural body type: If you're skinny and usually have a hard time putting on muscle, take 45 grams of protein and 90 grams of carbs (520 calories) in 1,000 milliliters of water. If you put on fat very easily, take 15 grams of protein and 30 grams of carbs (180 calories) in 500 milliliters of water. And if you're somewhere in between, take 30 grams of protein and 60 grams of carbs (360 calories) in 750 milliliters of water.

The key here is to be honest with yourself. If your training is moderate, you probably don't need a recovery drink. And, for the sake of full disclosure, during most of my training phases I don't even use one, because I'm interested in maintenance for most of the year. However, when it's go-time and my training ramps up, that's when I'll add in a recovery drink. Again, be honest. If you're not training really hard, you probably don't need the fast-digesting sugars and proteins. If you are, they make a big difference.

I want to get back to the Paleo thing for a minute. I read one time that you didn't like that it was called "Paleo eating." Why not?

While I like the style of eating, the name does bother me a little because it implies that we actually know how our Paleolithic ancestors ate, and it implies that they all ate one way. Neither is true.

As new research comes to light, we're realizing that the reason we used to think our Paleolithic ancestors only ate meats, fats and fruits/nuts/seeds they could forage is because that's all we could find in the fossil records. However, I have a few good friends who are field archaeologists, meaning it's their job to actually go out and collect fossil records in Africa, Asia and the Middle East. Interestingly, new digs—and new scientific techniques—are finding that in some ancient cultures, unrefined wild grains were actually part of their diet, as were a host of tubers and wild potatoes.

With this new research, some of the basic Paleo assumptions are falling into question—and this is just the beginning. As we develop new techniques and find new civilizations, no one knows what we'll discover about the way our ancestors ate.

Of course, none of this invalidates the style of eating. Indeed, it's one that I generally embrace. Again, eating less processed food is very smart. As is eating more lean meat, veggies and nuts/seeds. With that said, I don't want to tie my eating style to a moving target. And I don't want to try to eat like a Paleo man. I want to eat like a modern man that's interested in health, body composition and performance.

I'd also imagine you take issue with Paleo purists and the anti-grain, anti-legume and anti-dairy campaign. What do you think about this?

To some extent, I do take issue with it because, for certain individuals with specific goals, unprocessed grains and legumes are a huge help. You just have to keep the amount in check and consider timing, and it all depends on your genes. Indeed, new research is showing that while

Paleo-type recommendations are a great baseline, further adjustments would need to be made based on someone's genetic heritage.

For example, in the last 10 years we've learned so much about nutrigenomics. This area of science studies our genetic makeup and how our genes impact our experience in the world. Obviously, our genes are linked to where our ancestors are from, and that's where it gets interesting. There's some fascinating new research showing that depending on where our family lineage is from, our nutritional tolerances could be completely different.

For example, there's something called "lactase persistence." It's whether or not our genetic line has preserved the ability to make lactase, the enzyme that helps us digest milk. In the U.K., for example, almost 100 percent of the population has lactase persistence. This means that dairy is well tolerated in nearly 100 percent of the U.K. The same is true in Scandinavian countries and Northwestern Africa. However, in Eastern Europe, Asia and Southern Africa, lactase persistence is less than 10 percent, meaning that in these areas almost no one can handle dairy.



Dr. Berardi stays away from blanket nutrition prescriptions and tailors diet strategies to each individual.



"I want to eat like a modern man that's interested in health, body composition and performance." —Dr. John Berardi

Knowing this, your thoughts on dairy consumption might need to change based on where your family comes from, but that's another discussion for another day. With dairy, we also need to consider a host of other things, from hormones and antibiotics to homogenization and pasteurization.

There's a similar relationship between our genetic heritage and our ability to digest and process carbohydrates. People from Northern Europe, the U.K. and Southern Asia make more salivary amylase and other carbohydrate-digesting enzymes because they've traditionally eaten a more carbohydrate-rich diet, while people from Africa and Northern Asia make fewer carbohydrate-digesting enzymes because of their traditional diet that's lower in carbohydrates. So it's the same thing as with milk. Your thoughts on grains would have to change based on where in the world your ancestors come from.

In the end, I'm not sharing any of this to confuse people. Rather, it's to point out that nutrition plans should always be a starting point for further experimentation, not rigid, immutable guidelines.

Of course, if you're new to all this, you need some guidelines to work from to put you on the right track. But after that, your best bet is to adopt the adventurous attitude of a physiological pioneer, to boldly experiment and tweak until you find what works for you.

That's what my whole nutrition philosophy is about. And sometimes a few unprocessed grains and chickpeas make for a great experiment.

Speaking of experimenting with yourself, I know that you have experimented personally with intermittent fasting. How does this fit into your thoughts on performance nutrition?

Like most eating and exercise practices that have been around for thousands of years, I think intermittent fasting can certainly have its place. The key is to consider all the variables—your goals, your dieting experience, your training program and more.

Personally, I do a 24-hour fast once per week. Sunday is generally my fasting day.

Here's how I do things:

10 p.m. Saturday—Stop eating.

9 a.m., 1 and 5 p.m. Sunday— 1 multivitamin, 5 BCAA capsules, half a serving of a greens drink in 1 liter of water, 1 cup of green tea.

10 p.m. Sunday—Eat a small protein, veggie, legume and healthy-fat meal.

I've been doing this for four months, all as part of a fat-loss experiment I'm working on. My goal is to lose as much fat as I can—and maintain this loss for a full year—while doing less than 90 minutes of super-intense exercise per week. So, my eating plan and my exercise plan is designed with this goal in mind, and it's all working very, very well. However, I wouldn't necessarily recommend intermittent fasting to everyone, in all circumstances, always.

For example, if you're trying to win an Olympic gold medal, I probably wouldn't recommend intermittent fasting during your peak training phase. Why? Well, you need the calories and the recovery. Also, if you're an ectomorph (naturally skinny) looking to build muscle, I probably wouldn't recommend intermittent fasting during a muscle-building phase. Again, you need the calories and recovery. Also, if you have a history of disordered eating, fasting can be a trigger, so don't risk it. Take a more moderate approach. Trust me, this is important.

Of course, there are different types of intermittent fasting, and going through them all is beyond the scope of this interview, so I'll leave you with this: just like with the Paleo thing we talked about earlier, it's easy to become a religious zealot for intermittent fasting—or any diet, for that matter—and that's a mistake.

When we take a single strategy and then try to convince others that this one thing is good for everyone in all circumstances always, we're taking it to far. Heck, even veggies and green tea should be avoided in certain conditions.

So my best advice, when it comes to nutrition, is this: if you're just starting out, stick with the best practices. Follow the rules. And then, once you know you can follow the best practices consistently, start tweaking things. Experiment. Become your own science project. Figure out what you like and don't like. Figure out what works and doesn't work.

In doing so you'll learn a lot about yourself, and, if you do it right, you'll really enjoy the process.

You mentioned that your coaching team works with thousands every year. I'm guessing they come to you, among other reasons, to look better naked. Although some won't admit it, I know a lot of CrossFit members want to look better naked too. Give me your single-serving nutrition advice for the look-better-naked crowd.

Looking good naked doesn't need to be as complicated as everyone makes it out to be. In fact, there are probably only five important things you need to think about. And everything else? They're just distractions.

First, to lose fat, you have to gradually decrease your calories. In other words, you have to start eating less.

Second, to support your muscle tissue, you have to gradually increase your protein. In other words, eat more lean meat, chicken, fish or whatever lean vegetarian source you choose. These foods help speed up your metabolism, help you feel full, and provide important amino acids.

Third, to create the right environment for fat loss, you need to gradually decrease your carbs. In other words, eat less sugar and starches—like processed grains. Eating too much of these foods can wreak havoc on your bloodstream, increasing hormones that lead to fat gain.

Fourth, to make sure you're healthy throughout the process, you need to gradually increase the amount of veggies you eat. You can think of it this way: start replacing your grains with greens. If you do this, you'll be getting more fiber, vitamins and minerals.

Fifth, to support your metabolism, you need to gradually replace your bad fats with healthy ones. By adding things like olive oil, avocados, nuts, seeds and fish oils, you'll speed your metabolism and lose more fat than ever.

That's really it. If you do those things consistently, along with a solid training program, looking better naked is a pretty simple process.



About the Author

Paul Southern, CSCS, owns and operates [CrossFit Pleasanton/Reactive Gym](#). He has been a coach for the last 13 years. Before that, Paul served as a Fleet Marine Force Grunt Corpsman and led his team of corpsman to the Pacific Fleet Corpsman Cup Championship (a physical performance and skill-based challenge for the best corpsman). Paul is a lifelong learner. He has a bachelor's degree in liberal arts (magna cum laude) and also studied pre-med at Hawaii Pacific University.