Michael J. Fox: This is Michael J. Fox. Thanks for listening to this podcast. Learn more about the Michael J. Fox Foundation's work and how you can help speed a cure at michaeljfox.org.

Speaker 1: Welcome. On this award-winning podcast, you'll hear from scientists and clinicians about the latest in Parkinson's research and care. And you'll also get practical advice on living well from people with Parkinson's and their loved ones. We hope you enjoy the discussion and that you'll share what you learned with your community.

Bradford Casey: Hello and welcome to the show. My name is Bradford Casey, and I'm so glad to be here with you and our esteem panelist today. As many of you know, April is Parkinson's Awareness Month. So for this month's episode of the Michael J. Fox Foundation's Parkinson's Podcast, we wanted to address some common misconceptions some people still hold about Parkinson's. Before we jump in, let me introduce our panelists. Richelle Flanagan is a registered dietician in Ireland. She was diagnosed with Parkinson's in 2016 and as the founder of My Moves Matter. Welcome, Richelle.

Richelle Flanagan: Hi, great to be here. Thank you.

Bradford Casey: Dr. Maria De Leon is a retired movement disorder specialist who was diagnosed with Parkinson's in 2008. She's a member of Michael J. Fox Foundation's Patient Council. Welcome, Dr. De Leon.

Dr. Maria De Leon: Thank you very much.

Bradford Casey: And Dr. Cyrus Zabetian is a movement disorder specialist at the Seattle Health Care System-Puget Sound Hospital. Welcome, Dr. Zabetian.

Dr. Cyrus Zabetian: Thanks. Great to be here.

Bradford Casey: Okay. So we wanted to kick off this conversation with a couple of myths that frequently come up when we get to engage with our community. And I'll just dive right into these, but just want to say as one of the great pleasures of our position is the opportunity to talk to our community and we always get interesting questions.

So the first one that I want to talk about is one that comes up frequently. "Why is it that women don't get Parkinson's disease as often as men?" Frequently, this comes up in the form of a myth that Parkinson's is really a disease that only affects old white men. Cyrus, maybe I'll kick that to you. Could you tell us a little bit more?

Dr. Cyrus Zabetian: I think in terms of who gets it, so it is true that if you are older, that's a major risk factor. If you are a man, that's a risk factor as well. But we know that 10 to 20% of individuals in the community are diagnosed with Parkinson's disease before the age of 50. The ratio of men to women who are diagnosed with Parkinson's disease is about 1.5 to 1. So it is certainly more common in men, but plenty of women of all ethnicities and races and plenty of men and all the ethnicities and races of a variety of different ages get Parkinson's disease.

Bradford Casey: And Richelle, maybe I'll kick it to you next. Could you tell us a little bit more about how this might affect patients affected by Parkinson's?

Richelle Flanagan: Well, I think my own experience of being diagnosed with young-onset was that I thought, "Are there other people who are like me?" And it was when I went to the World Parkinson's Congress that I met a lot of young women like me. And then I started doing research into it. I realized that actually the figure is not insubstantial. As Cyrus mentioned, it's actually 40% of people with Parkinson are women. But interestingly, in some countries like Poland, Japan, it's actually higher in women than it is men. So it might indicate that there's some kind of environmental difference, and that might be the reason why they have it more in those countries.

So I think the other thing is in terms of the negative image of just being an older white man, I think has affected possibly the research pipeline because it tends to be men that have been more in the research trials in the early stages, which means that we often have more side effects in the medications that are developed.

And also there's a lot of answers that maybe women's bodies actually have in terms of the neuroprotective aspects of our hormones that might be playing into the why women have a lower prevalence than men as well. So I think there's a lot to be gained from actually understanding the sex and gender differences between us in terms of both care and research.

Bradford Casey: So the next question that we wanted to discuss was whether there are tests that are currently available that actually test for Parkinson's. One myth that we've been hearing frequently recently is that there's still no test for Parkinson's disease. Maria, maybe I'll kick that to you. Could you tell us a little bit more about what it means to be tested for Parkinson's these days?

Dr. Maria De Leon: Well, as most things in medicine still primarily is based on a history and a good examination, and movement disorders, Parkinson's is not the exception. However, there are tests that can bring in or support the diagnosis. So we can have tests like the DaTscan, but also slowly developing are some biomarkers. One of the things is the skin biopsy. You have alpha-synuclein and requires three spots, which I'm still not sure why it requires three spot, but I think because certain areas of the body have more alpha-cynical than others.

For instance, the neck has a lot more than the leg or the ankle. So people do this, but it's not, again, widely used, but I think in the future we may start resorting to that when we're thinking, especially if we have a question whether somebody may have Parkinson's or Parkinson-plus or their other familial history. Some places are using tears and that's something that is easy to collect and maybe it's going to be using more.

And of course, the foundation has found a way to do the lumbar puncture and get CSF fluid and diagnose it. And I think those all wonderful things that in the near future, we're probably going to be able to use them more commercially and more readily clinically and be able to get a definite diagnosis. But at this point, we're still relying, unfortunately, on a clinical diagnosis unless we have access to those specific testing.

Bradford Casey: These are great points. And as you highlighted, it's really important for people to work with a qualified physician to make those diagnoses. One thing that I think is really exciting is that we've seen a lot of progress in this space just during my career, and I'm sure during yours as well. You mentioned the DaTscan, the dopamine test that we have seen come into clinical practice. And this is a great opportunity for clinicians and researchers to look and see where that dopamine is actually found much in the way that we might look at an X-ray or an MRI.

But would highlight that there's also some really exciting advancements in terms of the biomarker that you mentioned, the synuclein amplification assay. Right now, this is a test that really does rely on lumbar puncture, but there's a lot of efforts, as you point out, to move this to not only more easily available biosamples, things like skin or other samples, but also to make this a quantitative test that's really going to allow us to understand a little bit more about where people might be in the course of Parkinson's. So I think there's been a lot of progress and we're really excited to see more.

So the next question that we wanted to cover today was whether changes in mood can precede Parkinson's motor symptoms. The myth here is that Parkinson's is really a motor dysfunction and that it's really just limited to that pathology. Cyrus, maybe you could tell us a little bit more about Parkinson's and what it means more holistically.

Dr. Cyrus Zabetian: Sure. So I think part of this has to do with the way neurologists were trained in the past few decades. So neurologists were trained to really focus on the motor symptoms, the stiffness, the slowness, the shaking. And our understanding of Parkinson's disease has really changed a lot in the past 20 years, and particularly the past 10 years. So we now realize that oftentimes those motor symptoms are the things that patients notice first, but as time goes by, there's lots of other things. And so what are those other things?

So people have problems with sleep, including something called REM sleep behavior disorder, where while they're in REM sleep, they act out their dreams, they thrash around. Depression, apathy, fatigue, anxiety are all things that are more common with people with Parkinson's. They can have autonomic symptoms. That means they can get dizzy and their blood pressure can drop when they stand up. They can get constipation, problems with frequently having to go to the bathroom, urinary urgency, and their sense of smell is affected.

And so actually as the disease progresses, those non-motor symptoms become as problematic, if not more problematic than the motor symptoms. And I think it's always a balance when somebody's diagnosed and you want to give them hope. And so you have to be careful about bringing up this long list of non-motor symptoms when you're first diagnose. And so I will generally have this conversation over a series of visits as the patient gets to know me and I get to know them. I'll bring these things up. I generally never bring all of it up at the first visit when they're first diagnosed.

Bradford Casey: Thanks very much. I think that's a really great introduction and I think really highlights the different and diverse symptoms that people may experience. With that in mind, I think maybe we'll move on to the next question, which is related. So another question that we often hear from the community is, "Why is Parkinson's so different for every person?" And the myth is that really every disease journey is the same. So Richelle, maybe I'll kick that over to you. Could you tell us a little bit more about the diversity of those symptoms and how it might change over time?

Richelle Flanagan: Yeah. Well, I suppose one thing I would mention is with regard to actual side effect of our medication is thing called dyskinesia. And often it's mentioned that this is not a troubling symptom, something that happens in people and they're on the medication for a long time. But actually, I know a lot of young-onset women in particular who have very troubling dyskinesia. So I think everyone has their own journey with their condition, but I think there's probably a lot of research that could actually able to maybe identify those different phenotypes of people with Parkinson's that might actually give us more answers. So I suppose in terms of, it depends on your ethnicity, your age, how your Parkinson's presents. So they say, "You meet one more person with Parkinson's... You meet one person with Parkinson's, that we all have our different journey."

Dr. Maria De Leon: Well, I think that one of the reasons that we see such variability in the presentation of Parkinson's, first, we have to remember that Parkinson's has a preclinical phase, five to 20 years where symptoms are developing, non-motor symptoms developing during the time before the motor symptoms become present once your neurons have dropped to more than 50% loss.

The other thing we have to consider is that it is not a homogeneous disease. This is a disease similar to, say, cancer of breast. Just because you have breast cancer or just because you have Parkinson's does not mean that you have the same type. And so it's very, very important to think that it's not the same disease, so we should not compare one person to another. It's apples to oranges.

So we have to take that into account, lifestyle, dietary, sleeping, and how they're treating their symptoms on top of what trigger that. So there may be some immunological causes, there may be some familiar causes, some environmental causes. So we really have to keep that in mind and keep sorting out the causes till we can find the root of why people have Parkinson's to begin with.

Dr. Cyrus Zabetian: And I just want to amplify what you said that really, I think it's important for people to understand that Parkinson's disease is not one disease. It is many diseases. And in some people genetics plays a major role in some people, it's mostly environmental factors, but that's probably the main isolation.

Bradford Casey: So another question that we often hear from our community is that, "I was recently diagnosed, should I hold off on starting medication?" And the myth there is that starting the levodopa Parkinson's medication too early will make it lose effectiveness too early as well. Dr. De Leon, maybe I'll kick that one over to you. I know you've treated many people over the years.

Dr. Maria De Leon: Yeah, and this is a great question, something that I hear all the time. And I think partly also the hesitation and the fear has come from the community itself, from the medical staff, because it's the way we're taught in medical school how to treat the disease. And so initially when you only had dopamine, you only had one medication, and so you held off last the holy grail.

And I think we're still holding on to the past in that regard. And so then we don't realize that we have now 30 different medications at least. And so you don't have to be worried about, "Do I have to hold onto this medication till I get worse because this is all I have?" You have lots of options.

Also, what I found clinically as a patient and as a doctor treating that the treatment with levodopa, it is so important to the personality and cognitive function of the patient that we sometimes don't really think about it because it's not a measurable thing, not like motors or stiffness or slowness. So somebody says, "Well, I'm having some brain fog," or, "I'm having some difficulty concentrating." And we really don't think of it.

But it's something that I have found that when you begin those type of treatments, dopamine early, those kind of cognitive nuances become a lot less problemsome and slower over the years to develop into dementias and things like that. So I think that there is a positive benefit and now that we have so many treatments to use it lower and slower doses, we don't have to worry about running out and having promoted fluctuations.

Bradford Casey: I think that's a really great segue into our next question, which is really about the state of the field in terms of those new treatments. So the question that comes in frequently is just, "Are all the new medications that are released, are those the same medications?" And the myth there is that there really are no new treatments for PD. Cyrus, maybe you could tell us a little bit about the state of the field and about how you elect to start people on treatments and what treatments you might guide people towards.

Dr. Cyrus Zabetian: So when we start treatment, there's something that we call the honeymoon period where people will start on, let's say levodopa, typically dose three times a day. They get a really nice response. The effect lasts all day, so they don't have any wearing off, they don't have much in the way of side effects, and everything looks good. And then over time, things happen. So they will start to wear off. So the benefit of their medication will start to wear off so they start feeling more slowness, tremor, and that sort of thing before their next dose. So we call those motor fluctuations.

As Richelle mentioned, some people will get dyskinesias where they get extra fidgety movements that can be mild or they can really be troubling. So those things start to happen. And that's where I think these newer medications really began to be important. So there have been advances in a number of areas. So with deep brain stimulation, DBS, it's been out for more than two decades, but now there's more sophisticated methods of employing it. So for instance, there's something called adaptive DBS where the system will sense the intrinsic electrical signals and rhythms in the brain and on demand will adjust the stimulation to meet the patient's needs.

There are new programming options. There's much longer battery life so that you don't have to get your battery pack changed every few days. Bilateral ultrasound. So focused ultrasound is another less invasive way of doing something like DBS. It was approved on one side. Now it's approved to be done on both sides. There are longer acting forms of levodopa where they can be dosed less often and have less side effects. There's a new dopamine agonist that is under FDA review that has fewer side effects in other dopamine agonists and can be dosed less frequently once a day, in fact.

And then there are subcutaneous pumps that will administer either something like levodopa or another medication called apomorphine that affects dopamine receptors, and that is continuously delivered just like with an insulin pump, it's delivered through your skin for the entire 24 hours of the day. So those are all things that I think can really help people as the disease progresses. And then there are a number of other trials for medications.

So there are gene therapy trials looking at injecting growth factors into the brain. There are medications, antibodies that will target alpha-synuclein in the brain. That's an entirely other discussion. There's still work being done with stem cell therapy, and there are Phase 3 trials going on right now. There are vaccines for Parkinson's disease. There are trials that are looking at some of the GLP-1 agonists that are used in diabetes, and there are drugs that target the product of the GVA gene in clinical trials as well.

So lots of things in the pipeline. I think the key is right now, it is true that we only have medications and treatments that can make symptoms better, but don't change what's going on underneath. Don't change how fast the disease is progressing. But some of these trials, if they're successful, might change that. And that for us, those of us who treat neurology is the holy grail.

Bradford Casey: And I think that's a really nice introduction to another myth that we frequently hear, which is that Parkinson's can only be treated with medication, or conversely, that it doesn't require medication at all to manage. Maybe you could tell us a little bit more about some of the lifestyle medicine alternatives or other alternatives that might be available to people.

Dr. Cyrus Zabetian: So medications I think are certainly a mainstay of treatment. And without medications, I think people's quality of life will definitely suffer over time. But there are other things, and I think two of the most important things are a proper diet, and then also exercise. And when we say exercise, we don't mean trying to train for a marathon. We're talking about getting out there and doing something that's safe for you. So for some people, they're still able to run several times a week, and that's great.

But for other people whose balance is off, they need to find something else, whether that's going into a pool, whether that's a recumbent bike that's safer for falls, but doing something is really, really important. And I think that there are good data to show that if you do these things, if you have a good diet, if you are engaging in regular exercise, your symptoms will look better as time goes by. It doesn't, again, change what's going on underneath and overall your symptoms will worsen over time, but it definitely makes your symptoms at any one time less problematic.

Bradford Casey: Richelle, maybe you could tell us a little bit about how these lifestyle medicine strategies might better support one's treatment plan might affect their course of disease.

Richelle Flanagan: I think one of the important things, just coming back to the point about medication, if you're not optimally medicated, then you can't actually partake in the exercise, which is showing benefit in terms of your symptoms and potentially to slow progression. Potentially, I say because we haven't got the definitive evidence yet, but it definitely is showing benefit in terms of symptoms. And I think that's the core piece.

And I often say to people when they're afraid to take the medication, it's a bit like if you've diabetes, if type 1 diabetes, you don't withhold your insulin, you take it because you're lacking insulin. And in Parkinson's, we're lacking the dopamine. So you take it to help you move, but then you do other things to help slow the progression or the neurodegeneration, which is the same in diabetes. It's actually a progressive disorder as well, but people can be very well with it when they exercise, they watch their diet. And so I think it's the same with people with Parkinson's.

And I think diet is probably an underutilized tool at the moment in terms of actually helping people. So back to the point of constipation. So if you're constipated, that's going to make your medication not be as effective. It's not going to be absorbed as well, so you're not going to get the benefit as well. If you're constipated, it's going to affect your microbiome, and we know that has an impact on Parkinson's disease as well. And we know in terms of things like the Mediterranean diet, the pattern of foods in the Mediterranean diet. So you don't have to live in France to have a Mediterranean diet. It's the constituents. It's having the whole grains, it's having the oily fish, it's having the olive oil, it's having the fruit and veg.

They're really powerful as a combination of foods together to help in particular non-motor symptoms of Parkinson, and particularly around the cognition and brain health. And we know the study came out quite recently in 2025, the people who improved their Mediterranean diet score by two points actually improved their cognitive outcomes. So I think there's a lot to be benefited for people with Parkinson's to really look at diet and nutrition alongside their exercise, but it needs to be with the complement of your medication without a shadow of a doubt.

Dr. Maria De Leon: The other lifestyle that we don't talk about much or we forget about is sleep, that how important it is to do a good sleep hygiene because that will decrease the inflammation, that will decrease the memory loss and get rid of the fatigue and make you feel better overall. And the other thing in regards to constipation is that this is one of the reasons why we need various different delivery systems of the medication, because then we can bypass the gut when we're having a lot of GI issues so that it can be absorbed and have a benefit.

Richelle Flanagan: Yeah. Often people are worried about protein, timing with their medications, and sometimes the protein can interfere with the levodopa, but it's very important that people don't cut out protein because protein's really important for our muscles, and actually protein is a building block of dopamine as well. So it's very important to look out for things like weight loss and to talk to your neurologist if you're unintentionally losing weight, if you're noticing there's problems with timing of your meals, with your meds, to talk about these things with your health professionals.

Bradford Casey: Another question that often comes up from our community is how does someone get involved with a clinical trial? How do they know that it's going to be safe? And the myth there is that research participation itself is unsafe and may include privacy concerns. Maybe I can get started on this one and would invite others to weigh in. So we talk about this a lot in our community, and one thing that's really important to know is that any legitimate research study has very strict protocols for safety and for data privacy. These are core tenets of how one is approved to run a trial.

And so it's really important for people to understand that if they're engaging with a team that is really doing good, honest research, a lot of great effort has gone into ensuring that their data is going to be protected at the highest standards. I always tell people that I would never want anyone to be involved in a trial that I wouldn't participate in myself in terms of the way that we manage that data, and I think that that's an important standard for all of us to uphold. Maybe we could talk a little bit about what it might mean to participate in research.

So Richelle, maybe I'll kick it back to you. Could you tell us a little bit more about what that research might mean and how participating in research supports the field?

Richelle Flanagan: Absolutely. I suppose if we don't take part in research, we're actually not going to get the answers we need, so we have to participate. I think coming from the perspective of a woman with Parkinson's, I think we need to do more to actually facilitate women taking part in research. I think there are some barriers there in terms of women obviously being precluded from participating in research unless they're on oral contraceptive pill. They're left out of research. Also in terms of because they have kids, they can't sometimes take time out to take part in research.

So I think we have to find ways to communicate to get certain cohorts in. I know in terms of certain ethnic groups as well, we have to meet them where they're at to get them more involved. I know I've been involved with several studies and it seems to be a repetitive issue in terms of getting different ethnic communities involved in the research. And the more diversity we have, the better the answers we're going to have. So that's been my observation.

Bradford Casey: Yeah, that's really great perspective. Maria, maybe you could tell us a little bit about how participating in clinical trials might look for a participant that's considering.

Dr. Maria De Leon: Yeah, I think that it is important to realize that there's not just one type of clinical trial or trial so that you can find out whether this is something that is already a medication that has been approved, is being repurposed for something else, or it's a new medication or it's a new surgical procedure. Phase 1, they're just trying to see if it's safe in humans. So if you want to do a Phase 1, then you know what the risk is that has not been tried before. Or if you then find out it's tolerable, but to see if there's any effects, Phase 2.

And then of course, like many things, Phase 3 where they do a larger number of people to see if we can have the wanted effect across the board, across different ethnic groups and genders and so on. But I think that talking to the Michael J. Fox, going to the website, going to the government websites, talking to your physician, you can talk about what clinical trials are available. So there's many, many choices you can do online like the Fox Trial, you can just answer questions from your home.

So there's how invasive and how involved you want to get is up to you, but there's a way that you can always participate and putting a grade and help the greater good and the greater community. And if you are participating in a trial of any medication, you may have the chance to have more closer observation by physicians and still get medication and not have to worry about cost. So those are all positive things and you're helping yourself and you're helping others.

Bradford Casey: I think that's a really wonderful note to end on. Again, the importance of people participating in those trials is that we really can't make progress without their support. So it's really great that people are considering it. And obviously, as you highlight, there are opportunities for people, whether you want to be part of an interventional drug study or whether you want to be part of an observational study where there's no therapeutics administered, there's a lot of ways to get involved.

So I think that that's probably about it for our time today. So I'd just like to take a moment to thank our panelists for sharing your expertise today, and then also to thank all of the listeners for tuning in. If you liked what you heard, we hope that you'll share it with a friend or maybe leave a review, wherever it is that you get your favorite podcasts. It is really helpful in making sure that others like you can find the show.

As you may already know, April is Parkinson's Awareness Month, which is a powerful opportunity to connect, to take action, and to join millions of others moving us closer to a cure. You can always visit our website to learn more. It's michaeljfox.org/april. That's michaeljfox.org/april.

Speaker 1: Community members like you are a critical part of bringing us closer to a world without Parkinson's disease. Learn how you can be a part of our mission at michaeljfox.org.

Michael J. Fox: This is Michael J. Fox. Thanks for listening to this podcast. Learn more about the Michael J. Fox Foundation's work and how you can help speed a cure at michaeljfox.org.