

# Neuropsychology In Stroke Recovery - Dr. Jennifer Sumner

The importance of neuropsychology in stroke recovery can not be overstated. Having a baseline of where your cognitive deficits are, helps you to track how far you've come and identify areas that need additional resources.

Socials:

[www.instagram.com/dr.jennifersumner/](http://www.instagram.com/dr.jennifersumner/)

[www.kaizenbraincenter.com/](http://www.kaizenbraincenter.com/)

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Transcription:

Dr. Jennifer 0:00

I think that's like shooting a patient in the foot. What's that going to do for their progress to tell them it's going to be stunted after a while? Because one research shows us that that's not necessarily true. So communicating the positive gains, and then the fact that okay, well, maybe this isn't going in the direction you want.

Dr. Jennifer 0:19

So let's tweak it a little bit so that you can get where you want. And there are always things you can do to compensate for something that you're struggling with, modify something if it's not working. I'm a big believer in continual improvement, right? People that don't have strokes are constantly improving. Why would somebody that's had a stroke not do the same thing?

Intro 0:46

This is the recovery after stroke podcast, with Bill Gasiamis, helping you navigate recovery after stroke.

Bill 0:59

Hello, and welcome to recovery after stroke a podcast full of answers, advice and practical tools for stroke survivors to help you take back your life after a stroke and build a stronger future.

Bill 1:12

I'm your host at three times stroke survivor Bill Gasiamis. After my own life was turned upside down, I went from being an active father to being stuck in hospital I knew if I wanted to get back to the life I loved before, my recovery was up to me.

Bill 1:26

After years of researching and discovering I learned how to heal my brain and rebuild a healthier and happier life than I ever dreamed possible. And now I've made it my mission to empower other stroke survivors like you to recover faster, achieve your goals and take the freedom you deserve.

Bill 1:44

If you enjoyed this episode and want more resources, accessible training and a hands on support, check out my recovery after stroke or membership community created especially for stroke survivors and caregivers.

Bill 1:56

This is your clear pathway to transform your symptoms, reduce your anxiety, and navigate your journey to recovery with confidence. Head to [recoveryafterstroke.com](https://recoveryafterstroke.com) To find out more after this episode. But for now, let's dive right into today's episode.

## **Introduction - Dr. Jennifer Sumner**



Bill 2:15

This is Episode 152. And my guest today is neuro psychologist Dr. Jennifer Sumner and in today's episode, we will discuss the importance that neuro psychology plays in stroke recovery.

Bill 2:29

Dr. Jennifer Sumner, welcome to the podcast. Thank you for having me. I get really excited when I see people online that help people who are struggling with neurological conditions.

Bill 2:45

And, of course, you know that my background is stroke and the people that listen to this podcast are mostly stroke survivors. But I'm curious about you. What kind of work do you do? What are your qualifications? How did you come to be involved in the field that you're involved in?

Dr. Jennifer 3:03

Yeah, I got my degree, my doctorate in clinical psychology, but I specialized in neuropsychology. Neuropsychology is the study of how the brain impacts behavior, emotion, cognition.

Dr. Jennifer 3:22

And so throughout the clinical psych program, you take training and courses in neuropsychology, you begin to see patients that have neurological disease or injury. Then I went on for an internship and fellowship in neuropsychology, mainly working in these populations with stroke survivors, dementia patients, people with traumatic brain injury.

Dr. Jennifer 3:47

And then I have done research here in San Diego, California at the University of California, San Diego, for the last 15 years. And then I also work at a center as the director of neuropsychology.

Bill 4:02

Awesome. Sounds like a very broad base of backgrounds and therefore, things that you can apply to supporting people recovering from stroke. I've got this little document that people can go and download from my website, it's called seven questions to ask your doctor about your stroke.

Bill 4:24

And one of those things suggests that perhaps they need to ask about an evaluation so that they can understand what the deficits are. So that therefore, they can ask their GP or their regular doctor, who else can you send me to? Who else should I be going to see?

Bill 4:44

It's one of the things that I wish that I had known because it took me about, I'd say took me about four or five months for somebody to remind me that perhaps I needed to see a neuro psychologist and the person who did that was my psychologist.

Bill 5:02

And of course, when I was saying my psychologist after the first and second bleeds in my brain, I didn't know what else to ask. I didn't know what to do. I just went where I could.

Bill 5:14

And neuropsychology assessment was really important. Now the challenge was that my assessment because I went through the public system in Australia, which I didn't realize, as well, because I had a brain injury, it didn't occur to me that I could just pay for this evaluation.

Bill 5:32

It took about nine months for me to get there. By the time I got there, a lot of my deficits in this after the second blade had kind of started to dissipate, things had started to switch back on.

Bill 5:44

So that leads me to the question, why is neuro psychology important, especially the evaluation part of it, after somebody is diagnosed with a brain injury or some kind of a brain condition?

## Neuropsychology in stroke recovery



### **Neuropsychology**

A branch of clinical psychology that studies how the brain affects the way we function.



Dr. Jennifer 6:01

So that's a great question. And I think you bring up a good point is, you know, I'm often surprised at how many providers don't refer patients directly to neuropsychology in the beginning, and that patients do have to learn it after the fact. Initially, when someone has a stroke, they are, you know, going to be in acute care.

Dr. Jennifer 6:23

So a neuropsychologist may come in and do a bedside evaluation that is very brief. And what the purpose of that is just to get kind of a baseline poststroke level of cognitive functioning, so we can see where your strengths and weaknesses are, which will then allow us to track you over time.

Dr. Jennifer 6:42

So you're going to have a lot of what we call spontaneous recovery after stroke, where your body's doing the recovery itself, regardless of what other people are doing. After that acute phase, or your body's going through that spontaneous recovery, we want to do another evaluation.

Dr. Jennifer 7:00

That evaluation is going to tell us how much you've improved over time, and perhaps, where you're going to be for a little while. And a good neuropsychologist should then provide a number of recommendations. So early on, you know, which

providers to go to, is it a speech pathologist and OT, PT, another neurologist? any other kind of clinical psychologists, psychiatrists, and then give recommendations as to what those providers should be doing with you.

Bill 7:34

The neuropsychological assessment, how does that occur? So give us a bit of an understanding of what that's like for a patient?

Dr. Jennifer 7:43

Right. So the first appointment you'll have sometimes it's the same day as the full evaluation, sometimes it's a day or two before, but you start with a lengthy interview. So the neuropsychologist is going to ask you a number of questions about your medical history, your psychiatric history, they're going to talk about your education, your occupation, developmental milestones.

Dr. Jennifer 8:11

When you learn to talk and walk, even if your birth was a normal, healthy birth. And all of this gives the neuropsychologist information as to whether how you're performing is due to your stroke, or is it also due to a history of learning disability, or maybe substance abuse or depression experienced as an adolescent, it all impacts how your current function is.

Dr. Jennifer 8:39

So that initial interview is really important. And we're going to go over your symptoms and what your current complaints are, how it's functioning your day to day life, how it's functioning relationships.

Dr. Jennifer 8:52

So that interview can be anywhere from one to two hours, it's pretty long. And then after that interview, the neuropsychologist should have a good idea of what needs to be tested. Right are your main concerns about memory, short term memory, is it more about attention and concentration? Is it a combination?

Dr. Jennifer 9:13

And from those concerns, we can then create what we call a battery, which is a number of different tests to actually test how you're doing in those what we call cognitive domains. Compared to other people of at least your age, we try to compare to education, gender, and sometimes ethnicity.

Dr. Jennifer 9:35

So you have that one to two hour interview, then you could have a battery of tests that may run two to six hours, sometimes that can be broken up. And then the neuro psychologist takes all that information, compares you to other people, and then interprets that data and writes a report.

Dr. Jennifer 9:55

That report is generally pretty long. That report is often given to the Patients, neurologists, primary care provider, whomever else is working with the patient. And then a neuro psychologist will write a list of recommendations, what would help this patient continue in recovery to get the most out of treatment.

Bill 10:17

I feel like this is the most underutilized service and part of stroke recovery, because what you just described to me, it's like when I'm buying a car any analogy I can come up with, and I don't know who the car belonged to before the current owner. A

Bill 10:34

and there's a number of issues with that, again, because I'm not a mechanic, I don't know about it. So what I do is I take it to a motor mechanic and I say to him, or her, I say, you know, tell me what's wrong with the car. And then what they do is they give me a complete list of what's wrong with the car.

Bill 10:50

And then they tell me roughly what they need to do to fix it, how much that will cost, and I can determine whether or not that car is worth purchasing. And then I can also go through the process of understanding what it's going to cost to get it roadworthy. So it's able to be safely driven.

Bill 11:06

And I feel like that's something that we do on a daily basis, around the globe, when we are purchasing a vehicle if we're purchasing the right kind of way. And we don't give it a second thought, and we invest in that car so that when we buy it, we don't buy a lemon, or continue to drive something that is costing us money, because it's running too rich or whatever.

Bill 11:28

And yet, when I was in, in my rehabilitation phase, there was no person like you

sitting in the middle of my group or my team that was telling them what my issues were and how they can support me. So when I went to physical therapy, they assessed me for about, I'd say, for about three or four hours over two days.

Bill 11:53

And basically, they could see that I couldn't walk, and they could see that I couldn't use my hand. And they could say that I had some balance issues. But they didn't dive into the cognition side of it, which for me, may have been a big issue, I may not have understood that I couldn't walk, talk, whatever.

Bill 12:11

And I might not have been able to join the dots of how therapy needs to go, and what's going to be best supporting me in therapy. And I try and tell people that what one of the most important things I need to do is send you're a psychologist for that report on how they're currently doing. And then they can take the report to be to advise the rest of the team. Does that make sense is that how you see yourself as being involved in the recovery of somebody who's got a brain injury?

## **Multi-disciplinary team - Dr. Jennifer Sumner**

Dr. Jennifer 12:46

Definitely, I think that the best use of neuropsychology is in a multi-disciplinary team, where you have a number of different specialists so that you talk to each other. because like you said, if you're going to go to physical therapy, and your PT gives you exercises to perform.

Dr. Jennifer 13:04

If your PT doesn't know that you have a hard time with something called working memory, your ability to hold several pieces of information in your brain at once, and then manipulate it. If they don't know that, they're not going to know that they need to break down the steps of exercises for you in a certain way, they're not going to know that maybe your processing speed is a little slower.

Dr. Jennifer 13:30

So having that key information is going to help the PT tailor their work. Not that I know anything about physical therapy, but I know how your brains going to take in their directions. So absolutely, I think it's essential to have really the best outcome possible.



Bill 13:49

That makes complete sense to me. Because when I speak to stroke survivors from all around the world, but even people at home, you know, family people that are related to us, though, they'll tell me that their loved ones not motivated, or they're being lazy, or whatever, and there is far from unmotivated, or lazy people before the stroke.

Bill 14:09

And there's not an understanding that the reason that they are exhibiting these types of behaviors is related to the injury in their head. And it could be a fatigue issue. It could be a cognitive issue. It could be all sorts of issues. And they just, they do the best that they can and they just label it really quickly.

Bill 14:31

And what I find that does is that frustrates caregivers and it frustrates family members and friends and all those types of people. It certainly frustrates the stroke survivor. But then it's the excuse that physical therapists and occupational therapists use to get somebody out of their system so that they can make a way for the next person.

Bill 14:55

And I feel like that's such a shame. That is so terrible that That's happening because they are supposed to be supporting this person in their recovery. And what they're doing is they lack the depth of understanding that's required to actually properly assess that person and give them the type of therapy that they need.

Bill 15:18

And perhaps PT is not the only therapy that they need at the moment. And they also lack the ability to say, hang on a sec, I think we need to call a neuro psych, to get them involved in our discussion. So we can understand why this person is not progressing further, rather than just kicking them out of the system and making it the caregivers responsibility.

Dr. Jennifer 15:40

Yeah, a key component to neuro Psychological Services is education, educating the patient, educating the caregiver, and educating the providers. In an ideal world, educating the community. So that one, the patient and caregiver can be

advocates for their own treatment, because knowledge is power.

Dr. Jennifer 16:01

And if you don't have the knowledge, or you don't know the right course of treatment, or even the right questions to ask, you're going to get moved out of systems and you're not going to get the help you need. So if you can have a neuropsychologist to provide that education, give you direction, and then hopefully track your progress. Like I said before, you're gonna have a much better outcome.

Bill 16:23

How do neuropsychologist usually get involved in that conversation? How do people come across you? So I stumbled across my neuropsychologist, because somebody else told me but how does it normally happen, at least in the States?

Dr. Jennifer 16:39

Well, it definitely depends on the type of insurance you have, and where you live. If somebody's in the United States, if someone's in a managed care organization, they're going to see probably their neurologist, or whatever rehab doctor, they have an acute care.

Dr. Jennifer 17:02

And they may provide a referral to either a neuropsychologist that's in house on the team, or they may just refer you to outpatient neuro psychology. If that happens, then there might be someone in your network that you have to go to.

Dr. Jennifer 17:18

But like you said before, if there isn't someone in your network, if you don't belong to managed care, then you can find a private-practice neuropsychologist, where they have their own clinic, they operate their own services. Now some of those will be covered by insurance.

Dr. Jennifer 17:36

Some of those you will have to pay for on your own we call it cash pay or fee for service. It depends again, on where you live, what you're looking for. The cost of that can range depending on the complexity of your case, what kind of services or the extent of the services you need.

Dr. Jennifer 17:58

But I tell everyone across the board, one, check with your insurance, if they're not helpful at all. Google, go online, type in neuro psychologist and the name of your city and see what comes up. Talk to that person, if they can't provide you with what you need, then they should have suggestions as to where you can get that help what other neuro psychologists may serve you.

Bill 18:23

A little earlier, we spoke about, you mentioned multiple stages where you check in with the person at the very early phase of their recovery, and then later on to see how far they're progressing and what we need to focus on. So how often do you like to see somebody and assess their progression in their recovery?

Dr. Jennifer 18:44

If I see someone at the acute stage, let's say a neuropsychologist is working in the hospital, they will probably see them, once someone is able to engage with the neuropsychologist.

Dr. Jennifer 18:59

So depending on the severity of the stroke, it may take a week, it may take a few weeks, it may take a month. If someone has aphasia, and they're not able to speak, then it may take a little longer or there may be different tests utilized. So that's in the acute setting. In general, a neuropsychologist will assess once again before a patient is discharged and goes out to outpatient services.

Dr. Jennifer 19:27

Now, like I said before, there's a lot of spontaneous recovery. And you guys are seeing a ton of different providers at once it gets kind of crazy. So in general, people do not have a follow up neuropsychological evaluation for at least six to 12 months later. So that's just the follow up evaluation.

Dr. Jennifer 19:49

But in terms of tracking, it depends on what type of neuro psychologist you see. So some patients will go to an outpatient provider do one assessment, get recommend emendations and never see that neuropsychologist again. Others will see a neuropsychologist in a hospital setting where they track the patient as they come in for follow up services with other providers.

Dr. Jennifer 20:13

Some people see a neuro psychologist who also offers cognitive training or

cognitive rehabilitation. That's something I do, where I'm seeing a patient every week, maybe twice a week. And I'll do periodic assessments every three months, brief tests that look at your progress. Then, as I'm seeing you every week, I'm also checking in with how you're doing, how your other services are going. And then performing cognitive rehab.

## Tracking progress and tailoring support



Bill 20:46

A lot of stroke survivors that I speak to will do the whole. I haven't done anything, I haven't been able to recover or achieve anything or do this or not speaking properly at all this and that. How important is it to remind them of how far they've come? Is this some kind of a process where you can show them the, this is where we started and look where we are now?

Dr. Jennifer 21:12

Absolutely. So anytime you have that baseline neuropsych assessment, and you have any follow up testing, you always put in the progress, like I usually create a graph, or I will compare their scores to previous scores so they can actually visually look at it, and we can talk about it. I think conversation is really key. Because in the beginning, I feel like a lot of stroke survivors are told, look you're gonna get your most improvement in the first 90 days, and then maybe you'll get some slow progression.

Intro 21:48

If you've had a stroke, and you're in recovery, you'll know what a scary and confusing time it can be, you're likely to have a lot of questions going through your mind. Like how long will it take to recover? Will I actually recover? What things should I avoid in case I make matters worse?

Intro 22:05

And doctors will explain things. But obviously, you've never had a stroke before, you probably don't know what questions to ask. If this is you, you may be missing out on doing things that could help speed up your recovery. If you're finding yourself in that situation, stop worrying, and head to [recoveryafterstroke.com](http://recoveryafterstroke.com) where you can download a guide that will help you it's called the seven questions to ask your doctor about your stroke.

Intro 22:32

These seven questions are the ones Bill wished he'd asked when he was recovering from a stroke, they'll not only help you better understand your condition, they'll help you take a more active role in your recovery, head to the website now, [recoveryafterstroke.com](http://recoveryafterstroke.com) and download the guide. It's free.

Dr. Jennifer 22:51

And I think that's like shooting a patient in the foot. What's that going to do for their progress to tell them it's going to be stunted after a while because one research shows us that that's not necessarily true. So communicating the positive gains, and then the fact that okay, well, maybe this isn't going in the direction you want. So let's tweak it a little bit so that you can get where you want.

Dr. Jennifer 23:14

And there are always things you can do to compensate for something that you're struggling with modify something if it's not working. I'm a big believer in continual improvement, right? People that don't have strokes are constantly improving. Why would somebody that's had a stroke, not do the same thing. It doesn't make any sense.

Bill 23:35

It doesn't make any sense. But it's such a terrible thing that continues to happen. And people tell me all the time, and it is that golden time, you know, it's that three month period where if the person hasn't made certain improvements, if they appear lazy or unmotivated.

Bill 23:53

And if they do all these things, it's like kick them out, instead of actually having them supported then and there. I think it's really the wrong time. My opinion about it all. Just an opinion, it's my thought is that there needs to be less done in

that early phase where people are spontaneously recovering, and more than later, because that's when people really feel the gap in the health care and in the support, that's when they really need it.

Bill 24:20

And in the spontaneous recovery, if we can just focus on getting people on their feet using their arms and legs, the you know, the physical side of it, I think that's gonna help a lot because we know that physical movement and exercise supports brain health and brain recovery.

Bill 24:38

So I kind of see it as a now that we've put some time and effort into that. Now let's do some of this. I was spending three or four hours a week at outpatient rehab after my inpatient rehab, which was a month, which meant that those three or four hours at actually the rehabilitation facility meant that I had to spend an hour getting there and an hour getting home.

Bill 25:04

So that was three or four days a week, that's my entire week gone and I can't put any time or effort into any other thing that I need to put into, especially when I'm dealing with fatigue. And I'm dealing with all the other things that stroke creates.

Bill 25:17

So I think it's definitely time for the the community of doctors working with stroke survivors to re-look at their supposed standards of support and health of a stroke survivor, because there's too much being done. And it's easy for somebody to get in feel unmotivated, when they have completely and totally physically and mentally exhausted because they're dealing with a brain injury that they have to recover from, as well as supposed to get all these appointments.

Bill 25:56

I was writing my appointments in my calendar, I was getting two or three reminders before that. And I still wouldn't occur to me that I had an appointment that day, in half an hour or in an hour. And I'd often get a phone call. People say to me, you come into the appointment today and I was like, which one's? The physical therapy appointment?

Bill 26:18

And I thought, Oh, okay. Yeah, I did get the reminders. But Sorry, it did not occur

to me that that reminder was for an appointment right now. I'm not sure about what your thoughts are on that. And if you have a comment or can comment, but I think that it's time to reevaluate and reassess the way that acute care is given to stroke survivors.

Dr. Jennifer 26:42

It's a complicated system, depending on where you get the care. Some facilities are far better than others. But I think the majority of them, like you said, Do not streamline care in a way that works for patients. It's too overwhelming. It's too stressful. It's exhausting. And it's complicated.

Dr. Jennifer 27:05

So spending those first few months, like you said, capitalizing on that spontaneous recovery is important. I think there is benefit to introducing some type of rehabilitation early on in a careful, systematic, supported way. But I think focusing on lifestyle management is the most important thing you can do in the beginning.

Dr. Jennifer 27:33

Encouraging nutrition that's going to help you recover, getting the sleep that you need to recover, introducing an exercise regimen that will work for you creating a social support system, those types of rehab tools are going to build the foundation for later recovery, and more cognitive, physical, emotional improvement.

Dr. Jennifer 27:59

And then like you said, there needs to be a transition period where you're not just like dropped on your face. I mean, how many patients leave acute care, and then all of a sudden, you're isolated, lonely, confused, you have no help anymore, it feels like people have forgotten you.

Dr. Jennifer 28:18

And so there needs to be a transition piece. And I hope I mean, I've worked in centers where the neuropsychologist and other care providers not only work in the acute stage, but they have created an outpatient system within the center. So there's a little bit more of a step wise, or a step down approach. And then after outpatient care, it's long term care. So definitely it needs to be adjusted.

Bill 28:48

Yeah, we kind of got sparked by your Instagram, and on Instagram, you're at Dr.

Jennifer Sumner. Yep. And I'll have the links to that. So anybody who wants to reach out or have a bit of a follow they can do that. One of the what you have all your posts are really cool because they're all associated to what supports recovery and what supports brain health.

Bill 29:14

And one of those things was brain food. And I like this saying that one of my mentors/coaches somebody who I follow says and his is garbage in, garbage out. So with regards to food, there is a very complex idea of what's healthy depending on who's selling it and you know, where you pick up that product from.

Bill 29:43

But what are some of the brain foods that people can use that support recovery because I love that this is coming from you a neuropsychologist because I think again, that's missing from the field of psychology and neuropsychology and even psychiatry, this comment session is missing this part of the recovery is often glossed over.

## Food for brain-health

### **BRAIN FOOD**

- FATTY FISH
- OLIVE OIL
- VEGETABLES
- BERRIES
- WHOLE GRAINS
- NUTS

@dr.jennifersumner

Bill 30:04

And especially in psychiatry. It's just about prescribing, you know, pills and medication, amongst other things. I'm being a little bit cynical, I know. But that's my experience. Tell me some more what are some of the foods that support brain health and recovery in those early days?



Dr. Jennifer 30:22

So a lot of the information about food and brain health comes from studies about neurodegenerative disease like dementia. Now, obviously, stroke and dementia are two very different neurological injuries or diseases. However, the brain benefits similarly from the foods you would prescribe, I guess.

Dr. Jennifer 30:45

So one of the common diets suggested is the Mediterranean diet. The Mediterranean diet is rich in fatty oils. So really fatty fish, fatty nuts, any type of like avocados or rich vegetables, a colorful array of fruits and vegetables. I mentioned the fatty substances, because some part of your brain is made up of fat, we call it myelin. And this fat wraps around your neurons.

Dr. Jennifer 31:20

And what it does is speeds up the messages between neurons. So the information you bring in gets sent to other neurons more quickly, you process that information more efficiently, and then you can get it back out. So increasing those healthy fats can be beneficial.

Dr. Jennifer 31:41

Also, you want to have whole grain foods, I get frustrated with people that want to go on fad diets or feel like they need to get rid of carbs and just focus on proteins and fats, because what we know is our brain needs carbohydrates, we need the glucose and carbohydrates because our brain functions off of glucose. So you want to make sure those carbohydrates are all whole whole grain based, I'm sorry.

Bill 32:10

So that means less processed, and it's less likely to be like a very fine, powdery substance like a flour.

Dr. Jennifer 32:17

Right exactly. The more unprocessed your food, the better.

Bill 32:25

Yeah. I certainly noticed that when I changed my diet after the stroke, from healthy to actually healthy. There was a big difference in my fatigue, and how it decreased the level of fatigue, one of the things that I used to consume a lot of was bread, and usually white floury bread with no whole grains in it.

Bill 32:50

And the purpose I used to consume that was because I always did. And it always was something that I ate to fill one of those little hunger holes that you have through the day. But what was happening was I would experience this potentially, say, a hungry period, I would have some of that I'd have a really massive crash of energy.

Bill 33:12

And of course, I couldn't, at the beginning associate that I didn't know to associate that with increasing the level of my fatigue and decreasing my fatigue. So it and nobody that I dealt with none of my doctors, none of my counselors or my psychologists, none of my neuropsychologists and I don't expect everybody to know everything, right?

Bill 33:35

But nobody sort of suggested that perhaps that deficit or part of that deficit is being contributed to by the food that you might be eating. So I was still drinking soda. I was still drinking or having sugary cakes and meals like that, all in moderation, but perhaps in moderation two or three times a day.

Bill 33:57

And they were all causing this cascade of a massive energy spike and then a massive energy drop off and I was eating pasta a lot, you know with every every second meal was based around one of those highly processed foods. And then what I found was I took out those highly processed foods and what I did they actually paid attention to perhaps what was happening to me one or two hours later.

Bill 34:25

And then I really knew that those foods were not for me. So there seems to be a lot of discussion in the stroke community around low carb meals, but low carb meals of that type not like a bigger pattern, high carbohydrate meals of that type low carbohydrate meals and vegetables. And like you said whole grains and other types.

Dr. Jennifer 34:52

If anybody says low carb it should be low refined carbs, but high complex carbs and those complex cards cards. Are those whole grains. And I think another

important thing to note is that many people that have neurological illness or injury often experienced some type of maybe depression or anxiety because it is a huge life adjustment.

Dr. Jennifer 35:16

And food will not only help your cognitive skills, but it'll also help your mood. And so it kills two birds with one stone if you can make, and I'm not saying a complete overhaul that's hard for a lot of people that are just trying to get up every day. Start with one thing, maybe add fish once a week, maybe avoid that sugary snack for one meal, make small adjustments and then grow incrementally, it will make a huge difference cognitively, emotionally, and then behaviorally.

Bill 35:51

Yeah, because food is responsible also for supporting neurotransmitters like dopamine and serotonin. And if you supporting those types of neurotransmitters, you're less likely to feel so quote unquote, depressed or anxious, you're more likely to feel calm and level and relaxed.

Bill 36:12

Even if you're contemplating the serious challenges that stroke has caused, and what your future might look like. You might be able to feel a little bit anxious in that moment when you're thinking about that. But you shouldn't be feeling anxious, ongoing, and forever in a day, it should be a very common and useful experience of an emotion. And at some point, it should dissipate and go away.

Bill 36:41

So I love that you said that about food and how it supports balance in your in regulating your emotions, it really does, I found that myself and I have bad days. One of the challenges with this podcast is that I'm 150 episodes in this is going to be 151. And I've been on my recovery path since 2012.

Bill 37:04

And people see me and the way that I come across, and they make the assumption that wow, look at this guy, he had a stroke, look at him, I need to be like him, it's taken me a long time to get here. And I've adjusted a lot of things. And one of those things that I did was food. And I did it very, very slowly.

Bill 37:22

You know, the first thing I stopped was taking alcohol. The next thing was refined

sugars, no sweets, no lollies, no cakes, none of that stuff, which meant that a lot of the time I cut out a lot of the refined flour, because they'll combine you know sugary cakes and beautiful meals like that.

Bill 37:42

And then slowly, I noticed how caffeine was impacting me, and what a difference that was making to my mood, and how it would make my heart race which increased my anxiety, which made me and at the beginning, I didn't combine the two, I didn't understand that they increase the caffeine.

Bill 38:01

And making my heart race wasn't actually my thoughts and my concern about the future. It was this other thing that was impacting my thoughts in the future. So I love that you. You're focusing on more than just getting people and assessing them and then setting them off and then expecting them in the most difficult time in their life to just do this all on their own. It's such a difficult challenge.

## Teaching others



Bill 38:31

What are your other posts I really loved was you just call the brain health basics. And you say some things in here which really are stunning to read, but they make sense. And they're stunning because they are so simple. One of them is to teach something to somebody else. How does that supporting brain health?

Dr. Jennifer 38:54

When you are teaching information to someone else, you're using a number of

sensory modalities at the same time, right, you're speaking aloud. So you're going to hear it you're using verbal skills, you're awfully often using visual aids. So you're also using visual modalities.

Dr. Jennifer 39:11

But above and beyond that, when you're teaching somebody something else, it's creating repetition. And it's consolidating that information. So what we know with through different research studies is that if you can repeat and teach it, consolidate is a hard word for for some people, but it will bring that information in and make it stick.

Dr. Jennifer 39:37

So that when you go to recall it later, it's easier and you have reference right you can remember where you were, who you were talking to what the situation was. And when you can add another component to memory, you're more likely to be successful and recalling the information.

Bill 39:57

I love that one of my mentors used to ring me from time to time. And he'd say to me, can I speak to you for an hour, I just learned something new. And I wanted to tell somebody about it.

Dr. Jennifer 40:08

That's awesome.

Bill 40:09

And I used to learn something new that was probably not relevant to my life. But it was really lovely to connect with him. And then I would learn from him, but he would learn. And and he did make a point of explaining that to me that he was actually doing that, so that he can store the memory and have it, I suppose more more cemented to that part of him that needed to recall it at a later stage.

Bill 40:34

And I found that myself, if you want to learn something really deeply is teach it to others. You know, when you get up onto a stage, and you try and teach somebody, something that you learned, you start to deeply integrate it into your memory and into your being. And then. And then after time, after you do it many, many times, it just becomes second nature, you don't even have to think about the process of your conversation, it just comes.

Dr. Jennifer 41:01

Right. A lot of times when we learn information, we may learn like the surface of the information, it only goes so deep. But if you're teaching someone, you become more analytical, you take a deeper dive, and so it's going to consolidate better.

Bill 41:18

Yeah, and by becoming more analytical, you're bringing in other experiences from your life. And you're relaying them in this particular application. And you're creating this much wider and broader foundation for that information to hang around that it's more relevant than just in this one instance, where I'm telling somebody about it.

Dr. Jennifer 41:39

Well, and another cool trick that I teach in cognitive rehabilitation is that in order to remember information more efficiently, you want to link it to something else. So if you have to remember an item linked to an experience, link it to something you've seen, link it to a story.

Dr. Jennifer 41:56

And so when you teach, you automatically link what you're teaching to something else, right, if you're going to share an anecdote if you're going to show a picture, so you're already using one of the memory strategies, that, you know, I would teach in a cognitive rehab session, so you're just adding more and more skills to memory recall.

Bill 42:19

Yeah, brilliant. I also was told, when I was in my darkest days, I was told to laugh and to watch funny videos or funny shows or things that made me laugh, and you have got here, laughter increases dopamine and reduces stress hormones. Both are great for brain health.

Bill 42:40

And I think there's a lot to be depressed about at the moment. And as well, as well, when you're experiencing a stroke, and all the rubbish that goes along with that. And here's a really simple way to shift all of that junk. And to make a massive difference to your health and well being tell me how does laughter support the brain to heal.

Dr. Jennifer 43:04

So, when we are feeling stressed, we have an increase of cortisol in the brain, that's a stress hormone. And a little bit of cortisol is good. You mentioned before, like a little bit of anxiety is helpful, we need a little bit of anxiety, it will either teach us to, you know, leave a situation, that's bad, fight through a situation that's hard, or sometimes it stops us in our tracks.

Dr. Jennifer 43:29

And that's okay in the short term, but if we're experiencing chronic anxiety, chronic stress, that level of cortisol becomes toxic to the brain. And we know that that can actually lead to some atrophy and an area of the brain called the hippocampus, which is largely responsible for memory.

Dr. Jennifer 43:50

So if you are chronically stressed, it's going to interfere with how your brain functions and more specifically with memory. So we want to reduce that stress, stress reduction is really key to recovery. And like you said, one of the ways we do that is through laughter. So laughter is going to reduce that stress hormone.

Dr. Jennifer 44:10

And it's also going to increase a really nice neurotransmitter called dopamine, dopamine, that feel good neurotransmitter. And the more we can have that, the healthier our brain will be to process information, manage stress, increase memory, increase attention, things like that.

Bill 44:32

Yeah. I think part of feeling depressed has also got to do with our behavior and our habits. And there's no doubt about it, that depression is a thing. It's real, and I acknowledge the people that are experiencing that. But habits and behavior tend to be something that supports depression, potentially, and also the antidote to depression or part of the antidote to depression.

Bill 44:56

It's a very complex thing. So that's why I love that part of supporting yourself with laughter really makes a massive difference. And the more you laugh, and the more you create those dopamine neurotransmitters by laughing, the easier it is for you to make those neurotransmitters and continue to laugh.

Bill 45:18

And, and as a result of that, the less likely you're going to be in a depressed state

all the time. If you're switching in and out of feeling slightly depressed from time to time, and then having wonderful laughing episodes, that's a good sign that you're not potentially going to be always stuck in the depressed state that you can shift yourself out of there.

Bill 45:41

And what I like to say is, if you focus on the solution, rather than the problem, you'll get more of the solution rather than more of the problem. And I think it's kind of a, it's pushing the needle towards the solution as much as possible. And then decreasing. The amount of the problem is that way, by focusing simply on that thing that gets you more of the result that you want.

Dr. Jennifer 46:05

Well, I think it can also be preventative in nature. I mean, a lot of times we'll try these tools once we're already feeling down or stress. But if we're not there yet, adding laughter to our life can be a good way to keep it up. Keep it away. So even if you're feeling okay, introduce some laughter into your life, right? YouTube, your favorite comedian, read some of your favorite comics, do things that will keep you feeling a little bit better every day?

Bill 46:35

Yeah. Beautiful so simple, cost effective, really amazingly beneficial and helpful. One of the other things that stroke survivors do is they push, so they want to get back to what life was before stroke, they push, they push, they push, they push, they try and fit as much as I can into their day.

Bill 46:59

And then they have a crash. And then they struggle to overcome that, that makes them feel unwell, have negative thoughts, etc. And they forget to take breaks. And one of the things that you list on your tips is brain health basics, take short breaks, 10 minutes, every hour, three minutes, every 30 minutes, reduces fatigue increases energy reduces stress decreases errors.

Bill 47:24

I mean, it's such a simple thing. It's so common, yet there's a guilt associated to taking breaks and not being productive, and even having a sleep during the day. Do you come across that with your comments?



# Giving yourself a break - Dr. Jennifer Sumner

Dr. Jennifer 47:40

All the time, I was just gonna say people don't give themselves permission to rest. I don't know how it has become so ingrained in our global culture to just keep going at the detriment of our health, right? I mean, heart diseases on the rise, cancer is on the rise. And so much of this is because we experienced constant stress, and we don't allow ourselves to rest and rejuvenate.

Dr. Jennifer 48:06

We get tired, because we over exert ourselves, then we can help to prevent that fatigue. by just taking short breaks, it's not a lot. It's not too much, after sitting in front of a computer for 30 minutes to just stand and do a stretch, look away, go get a drink of water, go to the bathroom, simple things, come back and do what you need to do. Again, we all need to do it not just stroke survivors, all of us need to integrate this type of behavior in our day to day functioning.

Bill 48:38

It's so true I, I do talk about stroke survivors a lot. So therefore sometimes I forget that these skills, actually supportive of the caregiver, for example, who has to deal with this new, new challenge in their life and they're not skilled to do they don't have any qualifications.

Bill 48:57

And all of a sudden, they're a caregiver of somebody with a neurological condition. I mean, it's potentially ridiculous. One of the other things that you've got on here is brain health basics is his deck to help decrease error to help simplify your life and to end things and to support using less energy is to establish a routine now I really love that.

Bill 49:25

Because my routine used to be wake up in the morning, leave pretty much as quickly as I could put my clothes on, go straight to work, work all day, every day, and then come home, get stuck into preparing a meal because I was the first one home and then sit on the computer and do work to support the day's tasks to pay the bills to pay my my contract is all those things.

Bill 49:50

And there was very little time for me and the only way that I could get time for myself was if by some miracle, there was nothing for me to do during the The day which never happened. So I was always struggling for time. And I didn't realize I was in a routine that wasn't supporting my health and well being. Yeah, since the stroke, my returns changed a fair bit.

Bill 50:13

So I'm more productive in the morning. But by the afternoon, I might not be productive at all. So by about maybe 1:30pm, or 2pm, I'm done. And I'm really noticing myself fade off. And I'm not helpful as useful to anybody. So I get out of there. And that's my new routine.

Bill 50:31

Now I come home and give myself two or three hours break before everybody gets home after work and school. And then I can support myself to be better version of myself after that to prepare a meal and do all those things. So routine, is something that many of us don't have, I feel like most of our lives tend to be very ad hoc. How do you find your clients dealing with the lack of routine?

Dr. Jennifer 50:58

Well, I think that a lot of people end up reacting, like you said, we don't necessarily plan and create healthy routines, a lot of our life is spent on kind of a spontaneous reaction to what's presented to us. And then you would have spending all day reacting and not doing what you would want it to do in the beginning.

Dr. Jennifer 51:20

So the differentiation between choosing to act versus reacting, and secondly, picking healthy routines versus unhealthy routines. So creating a positive outlet during the day, if you're going to create a routine for that one set aside a time, if you decide that you're going to exercise everyday, maybe you're going to go for a walk, give yourself 15 minutes, 30 minutes, whatever you can, and say I'm going to do that at 7am, every morning, rain or shine, before after breakfast, what I need to do.

Dr. Jennifer 51:53

To make that more of a routine, you're going to set out your sneakers, your shorts, your T shirt at night, before you get up in the morning, you're going to set

your alarm for the same time, maybe you have a water bottle on your counter every morning, you're going to introduce things that will keep that routine going and solidify that habit.

Dr. Jennifer 52:14

So you want to support that routine, by you know, putting the water bottle out putting your sneakers out, maybe you're walking the dogs, you put the leash on the counter, whatever you need to do to support that healthy habit.

Bill 52:27

Yeah, I love the idea of that one of our close friends had a brain aneurysm when she was 20 or 21. And it burst and she's now 46, or 47 says quite a few years between that incident and where she is now. And one of her routines is to support her memory in the morning, she has to make a list at night.

Bill 52:49

And she has to write it down and put it next to her bed so that when she wakes up in the morning, she has it. So she has some kind of a challenge with memory. Overnight, it seems to be a little bit of a gap there for her. So she still does that. And it's so many years later, but it actually supported they she could tell me that she does that she could tell me about that routine.

Bill 53:11

But she can't yet get to that point where she doesn't have to run that routine. So they are really useful. And I think that's how you fit in the things into your day that you love. I think by me having a routine where, for example, if it's yoga that I love to do, whether I'm doing it outside of my house, or via YouTube and watching a yoga video.

Bill 53:36

Maybe that's a really good way to introduce it and find more time for myself. And no matter what you don't interrupt my routine, I don't respond to your, your ad hoc requests for something until I go through my routine and achieve the things that I need to achieve. Everybody can wait a little longer let's face it.

Dr. Jennifer 53:56

Right. And when you're establishing a routine, I think it's really important to give yourself room to experiment. Because sometimes we think, Okay, this is what I'm going to do. And this is how I'm going to make it happen. And then it doesn't work

and we give it up.

Dr. Jennifer 54:11

So give yourself a few different ways to try the routine out. And if you need to adjust it be flexible enough to adjust it. You just want to get to a place eventually, hopefully within maybe a week of experimentation, where you can solidify the routine. But don't just try one avenue, and then trash the idea. Give it some time.

Bill 54:35

Yeah, I completely agree with you. Now, a lot of my challenges with dealing with the doctors and the people that are involved in stroke recovery is that and this is a great thing Don't get me wrong is that they've never had a stroke and they don't really understand and I completely wish they never do have a stroke.

Bill 54:55

But it's a little bit of a interesting thing when you come across a health professional That has had a serious issue. And they kind of get you. Now I know you've had your own health scare, and how have has your your training in the fields that you've dealt with helped you get through that? Did you feel comfortable to chat about that for a little bit?

Dr. Jennifer 55:19

Yeah, absolutely. So I was diagnosed with breast cancer last September, I went through chemotherapy for about four and a half months, I had surgery. And then I did radiation for about two months, and I finished treatment mid May. So I'm in complete remission now. But there is ongoing treatment, I still have things I need to do and I'll have to do for a number of years.

Dr. Jennifer 55:47

But like you said, going through experiences like that, help you get it, right, you get the just endless doctor's appointment, the waiting, the confusion in communication, different providers telling you different things, the pain, the slower recovery.

Dr. Jennifer 56:12

And something I experienced that I've started to talk about more is this chemo brain where you have this brain fog. And I definitely experienced moments where I just would break down into tears, because I just thought, what, why isn't my brain working? And how come there's, like, it fell out of my control.

Dr. Jennifer 56:33

And so thankfully, I had this skill set that I have used with many of my patients where I thought, Okay, well, I need to start applying the same tools that I've been teaching other people. And they really saved me this year. I have for young children, I have my work, I have some volunteer service, I had my healthcare, so it was hard to try to juggle everything.

Dr. Jennifer 56:57

And so I introduced a lot of my planning and organization techniques, I utilized a lot of short term memory strategies, I focused on some different concentration tools. And all of that helped me everyday to move forward, I think fully have made great progress and improvement.

Dr. Jennifer 57:22

But I still use those tools. I think that it will help me continue to get back to where I was, if I don't stop. And even someone that was healthier before I utilized some of these tools, because I saw how helpful they were. But now I'm using them in a way that just feels so like, integrated into my life. It's my scaffolding, right. It's, I'm the building and it's what's keeping me going and staying healthy and living in a structured way that works for me.

Bill 57:57

Yeah, beautiful. I wanted to mention that because I think it's really important for us to talk about all the things we're talking about. And then sometimes you get that occasional person who says yeah, but what do you know, you're not living my life, you've never been through what I've been through and they use that as an excuse to get out of taking the advice or applying a new learning or a new skill.

Bill 58:19

And I'm just here to say, to the people that might be thinking like that, that look, both of us have been in difficult situations, we're talking about this stuff, because it has helped, it has made a difference. And it could help and it could make a difference to you. And most of what we're discussed is cost effective, it doesn't cost you anything to do.

Bill 58:40

It's free. So consider it and consider changing one small thing right now rather than try to implement everything at the same time. Do the one thing that's the

easiest for you. And then then see how you go and reflect back, look back and see what has changed since you've implemented that something new what difference you've noticed whether it's positive or negative, and then basically try again, do something else and see what else you get. It's important for people to take responsibility I feel for their own recovery, as well as be supported by the medical professionals, you still need to take responsibility for your own recovery.

Dr. Jennifer 59:19

Right. And everybody does experience different things, right? We don't exactly get what the next person gets, you know, I had a dear friend, one of my best friends that was going through breast cancer at the same time as me, but she had a different kind of cancer and was treated differently.

## **Building a toolbox**

Dr. Jennifer 59:39

And things that she did didn't apply to me and things that I did didn't apply to her. But having kind of a partner in communication, to just run things by and to see if maybe something she tried might work for me was really helpful. And so I think Whether you've had one kind of stroke or another, or you're talking to someone that's had a different health scare, you build a toolbox.

Dr. Jennifer 1:00:08

And you get as many tools in that toolbox as you can, you may never use a saw, you may never use a hammer, but you might need the nails, you might need the anvil. And so you have the toolbox in case you need it. And then you pick what you need at certain times. You don't have to use everything, but you want to gather as much as you can.

Bill 1:00:30

I think that analogy that you're talking about that toolbox is also how resilience is built. Because having a toolbox of different things that you can go to, at different experiences and different problems and different challenges in your life is what makes you resilient, it means that hang on a sec, I've done something in the past that actually might be applicable to this new challenge that I've never experienced before.

Bill 1:00:54

And instead of getting overwhelmed by each new challenge, you've got something that you can use to help you get through that new challenge, or at least start to tackle it, and then also get better at tackling it. I really love what you're saying about the toolbox.

Bill 1:01:09

It feels to me like you're talking about the foundation for resilience. Yeah, absolutely. And in that time, it's okay to lose your shit. And in that time, it's okay to feel unwell. And to be emotional, and to get cranky and to yell at people and to be rude and obnoxious. As long as you can be aware of it and apologize from time to time.

Dr. Jennifer 1:01:30

Scream that out from the roof, like give yourself permission to process what you're going through. It's crap, right? Like, give yourself a moment to feel your feelings. If you can be responsible with those feelings so that you don't hurt others. And you can explain yourself afterwards.

Dr. Jennifer 1:01:51

I think that's going to give you the chance to heal. If you bottle everything up, make excuses for other people, or don't allow yourself to get frustrated or pissed off that it's happening to you. That's going to turn into another problem. Right? You want to feel your feels deal with it so that you can process it and move on.

Bill 1:02:14

Yeah, I love it. If somebody wants to reach out and connect with you, where would be the best place to go?

Dr. Jennifer 1:02:22

So probably my website, which is the clinic I work at that's [www.kaizenbraincenter.com](http://www.kaizenbraincenter.com). They can follow me on my Instagram which is Dr.JenniferSumner and really, if anybody has questions, feel free to email me. That's [jsumner@kaizenbraincenter.com](mailto:jsumner@kaizenbraincenter.com).

Dr. Jennifer 1:02:50

I know how frustrating it is trying to get ahold of a provider and get their secretary or wait weeks, like shoot me an email if I'm busy. I'll just respond and tell you to give me a couple of days. But I'm happy to answer any questions you can direct message me on Instagram as well.

Bill 1:03:07

I really appreciate your time. Taking an hour out of your busy schedule for children, full on business and all the other stuff that you're doing. Dr. Jennifer Sumner, thank you so much for being on the podcast.

Dr. Jennifer 1:03:20

My pleasure. Thank you.

Bill 1:03:22

Well, thanks so much for joining me on today's recovery after stroke podcast. Do you ever wish that there was just one place to go for resources, advice and support in your stroke recovery? Whether you've been navigating your journey for weeks, months or years now, I know firsthand how difficult it can be to get the answers you need.

Bill 1:03:41

This road is both physically and mentally challenging from reclaiming your independence to getting back to work to rebuilding your confidence and more. Your symptoms don't follow a rulebook and as soon as you leave the hospital you no longer have the medical professionals on tap.

Bill 1:03:57

I know for me, it felt as if I was teaching myself a new language from scratch with no native speaker insight. If this sounds like you, I'm here to tell you that you're not alone and there is a better way to navigate your recovery and build a fulfilling life that you love. I've created an inclusive, supportive and accessible community called recovery after stroke.

Bill 1:04:19

And this all in one support and resource program is designed to help you take your health into your own hands. This is your guidebook, through every step in your journey from reducing fatigue, to strengthening your brain health to overcoming anxiety and more, to find out more and to join the community head to [recoveryafterstroke.com](https://recoveryafterstroke.com) See you next time.

Intro 1:04:41

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Intro 1:05:00

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Intro 1:05:15

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Intro 1:05:36

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Intro 1:05:58

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