Post Viral Fatigue

SPEAKERS
Steven Bruce, Dr Gerald Coakley

Steven Bruce
Hey, good afternoon and welcome once again to the Academy of physical medicine and yet another of our lunchtime learning sessions. I'm joined today by Dr. Gerald Coakley. Dr. Gerald cookie is a consultant rheumatologist. He's been one of those for 20 years. So he specialises in things like rheumatoid arthritis, septic arthritis and all that sort of stuff, as well as me chronic fatigue syndrome and post viral fatigue. jerell. Great to have you with us. This is not a new thing for you. Is it fatigue, this goes back a little bit longer than COVID. So how did you get into fatigue in the first place?

Dr Gerald Coakley
Yeah, well, thanks very much for the invitation to to come and talk to everyone. Yeah, so it's one of the oddities about fatigue is it isn't really anybody's specialty within medicine. People go to medical school, you know, dreaming of being a surgeon or visitors or radiologist or cardiologist, and they don't go thinking, Oh, I want to specialise in fatigue. So it's one of the common concerns or complaints that patients have when they when they develop fatigue as well, you know, who do I see about it doesn't really fit neatly into anybody's specialty. And so what's tended to happen is that so disparate groups of professionals have got involved over the years so often endocrinologist because, you know, there's a concern of Could it be an underactive thyroid, that's making people get fatigued, or infectious disease doctors because fatigue often follows infections, or psychiatrists, because often when people have got, you know, unexplained fatigue problems, it affects their mental health and so they develop anxiety and depression and rheumatologists are another group. So as you said, I'm rheumatologist mostly I'm dealing with arthritis, lupus, and that kind of thing. But I got involved in fatigue. Not long after I became a consultant, actually, about 20 years ago. I was invited to join a small group and enters into this very group working in the private sector, specialising in people with fatigue and fibromyalgia. So I worked with psychiatrists, psychologists, physiotherapists, and I was a physician. And my job was to sort of do the due diligence and make sure that there wasn't a physical health problems giving rise to the fatigue. And so I was just invited in as a team member. And I find it really fascinating. I really enjoyed working with physicians and psychiatrists and psychologists. And I learned a lot from them. And that was a kind of a company that went went folded, basically. And when it did, I just kind of really missed working in that group. And so I I decided to set up my own business in 2007, getting some of those different disciplines together and helping try to help people with chronic fatigue syndrome me, which I've been doing now for the last 1314 years. It

Steven Bruce
freaks me out. Yeah. And I knew we were intending to talk about post viral fatigue on this particular show. But if someone goes to a GP with something which is manifesting itself as fatigue, how does the

GP know who to send them to given that you've already said psychiatrists, endocrinologist, rheumatologists, and probably lots of other specialisations could be involved?

Well, so there is guidance about what to do. So the National Institute for Health and care excellence nice, produced a guideline in 2007, to try and help GPS to address this. And it sort of set out the ways in which Emily or privacy syndrome can present and set up the sort of normal investigations that a GP should do, to rule out other disorders like an underactive thyroid, or diabetes, or celiac disease or inflammatory muscles, in your kidney, liver disease, and so on. So it set out a list of things that should be done. And then it said, you know, so you then you advise, the GPU can advise a patient about how to pace and how to sort of deal with the symptoms of fatigue. And if they're not getting better, after, you know, two or three months, the advice is to refer them on to an interdisciplinary fatigue service. And there are services of that sort around the country. They're often not very well funded, they're often difficult to access. A lot of them have been closed down over the last few years. There's also been a lot of controversy of whether the treatments they offer is effective. So it's a real patchwork and particularly if there's a subgroup of people with me or quality who who are very severely affected at the house bound or in worst cases, even bed bound. And there isn't really any provision for people in that category. There's nobody really who's to set up to cater for that. And actually, numerically, it's quite a large team. And if you imagine being bed bound for, you know, months or years, and nobody can help you, that's not a good, not a good position to be.

Steven Bruce
We might, we might return to that later, particularly if I get questions on it. But I know that much of the interest today is focused on long COVID. So called Do you want, just before we go on with this jerell has got a number of slides, which we're not able to show on in full screen at the moment. So what we'll do is we won't use the slides, but we'll send out a handout or based on those slides at the end of the show. But do you want to lead us into that? I mean, whether it's post COVID is the long COVID, the same as post viral fatigue? And?

Yeah, well, that's a really good question. And the the answer that question is, nobody's really sure at the moment. And almost certainly, well, it's already clear that long COVID or post COVID-19 syndrome, is in fact, not one thing. It's a number of different problems. Presenting with the common feature that patients so affected, do not get better within the expected timeframe so that they're, you know, 468 weeks later, they've still got symptoms.

Steven Bruce
Isn't that the same for any post viral syndrome?

Yes, but it's complicated in COVID. And Alex, I've tried to explain why. So we've known that if you think about some classical post viral fatigue syndromes, which we see most commonly with epstein barr virus that causes glandular fever, simply for many, many years, it's been known that one in five people, typically teenagers or people at university, who get glandular fever, one or five of them will have a

persistent fatigue problem for four months after glandular fever. And there are actually lots of infections that can do that. It's not just epstein barr virus, various different viruses, some bacterial infections, some tropical infections. So there's quite a number of conditions that present like this. But what's different about COVID? I mean, in some respects, you're right. It's it's similar, but in other respects, it is quite different. So obviously, one of the main differences with COVID is that it killed huge numbers of people throughout the world. And we don't see that with EBV, epstein barr virus or the other most of the other infections I've been talking about. So as well as causing in flu like symptoms, it can also cause inflammation in the body and the lungs and the heart in the brain in the gut, it can lead to hyper inflammatory syndromes and intensive care and death. So it's clear that

it

is quite heterogeneous or pleiotropic. In its effects, this virus, and some of the people who have got ongoing fatigue symptoms, over over other physical symptoms, tingling, numbness or pins and needles and chest pain sore, have got serious ongoing organic damage in their bodies, and that's why they feel as they do they have lung fibrosis and scarring or cardiac fibrosis. And that is different from what we see in classical post viral fatigue, where, as far as anybody knows, there's no issue with ongoing viral reputational viral damage. It's something a bit more complicated than that. And so I think when I think about this problem, I think we're really into two sort of distinct categories as the the older perhaps over 50 perhaps overweight person with multiple morbidities

or pressure after all, say okay

Steven Bruce
Could you speak if you can speak to Joe Can you tell me to carry on

your back?

Steven Bruce
Okay, I think I'm back in the room according to Justin Terrell Can you hear me? Move? Justin I've got a banging noise going on.

Yeah, sir, by I think people can hear you and people think I can hear you.

Steven Bruce
It's the COVID age bear with us when we try and sort out the internet here. Clearly, Gerald can't hear me. Can we do that? Justin, can we get him out of the room and back in again?

Thanks for staying by himself.

Steven Bruce
Okay, apologies about this. But as you can see, the internet can be a little bit unreliable, not convinced it's at our end this time, but we'll see. We'll see. While we're waiting, we had our first question in from Christina about a link between epstein barr and fibromyalgia and get that one out as soon as I can, Christina. And please do keep the questions coming in. Because I'm sure. General Brienne is you keen to answer them when he's back in the room. So what we have got coming up, which is hasn't been announced, yes, it's a date for the peer discussion review, which we are going to do have my CPD for my three year cycle. We're going to be doing that on the 23rd of June. So we're gonna do it live. And I'm going to have a fellow osteopath, look at my CPD, go through the peer discussion review template. I'm pretty much interest to you as a chiropractor, if that's what you are. But for osteopathy, I'm hoping it will be a very big reassurance about how that process works, what you're actually going to have to do and what your peer is going to have to do. And hopefully, James, who is going to review me will not find too many flaws in what I've been doing over the last few years. Other than that next week, on Tuesday, we are doing a lunchtime case based discussion. And we really would like a case from the audience. If you've got anything that would be of interest to us. You know, it doesn't have to be something you need help with. It could be just one of those cases, which you found really, really interesting at the time. be great if you could bring that to the forum, because everybody learns from these things. Equally, if you have got one, which is maybe it's something that's arrived recently, and you're concerned that you don't really know what course to take, you know, bring it to the forum, we have several 100 people looking at these things, and you're bound to get some good ideas from a forum that size, even if it's only reassurance that you are doing the right thing, which is generally the case. Second of June, we've got Professor Robert moots. He's Joining me to talk about rheumatology, specifically so a second rheumatologist, but this time we will be looking at rheumatological disorders. And then on the ninth of June lunchtime, I've got a physio called Ron Greif, who's going to be talking about treating stammering patients. And 15th of June. Again in the evening. We've got Rob schlanger back here. And if you didn't see the broadcast with Rob snipe really engaging speaker German, lively. He's going to be talking about the science of fascia. And he's he's great fun on that particular topic. So yeah, join us for those if you have the time. How are we doing Justin?

Still nothing. I'm just trying to get in touch with him now.

Steven Bruce
So this is the time when I ought to be doing a bit of a song and dance to keep you all entertained. But I'm afraid if I move from here, the lighting goes horrible. Otherwise, of course I would. There'll be a bit of overlap, I guess between today's broadcast and what we did on Tuesday evening with Dr. Sarah Myhill. Again, another brilliant speaker and well worth a watch. If you didn't see it live. I have already put up on the website, the very very poor video edit, which comes directly from the team's feed. That'll get changed fairly soon. Just had a correction to one one. Yeah. So that is up on the website along with a lot of references, including the three papers that she's written on the topic. Robert, are you back with us?

I am back with you. I'm sorry. I've got a I seem to have a dodgy Wi Fi connection.

Steven Bruce
Okay, well, I've you've you've tested me. My ability to ad lib for five minutes. So we got away with it. I think

Shall we should we carry on?

I think I bought right.

Steven Bruce
Yeah, we're losing I'm afraid.

Can you hear us?

Steven Bruce
Justin, I think we might have to cut this one.

Yes, he's gone again.

Steven Bruce
Yeah. Okay. I'm sorry about that. I mean, long COVID post viral fatigue is very much a hot topic at the moment and we will get Gerald back in at some point to talk about this. But I think we're probably unless you are you with us again, Gerald.

I'm fine. Can you hear me?

Steven Bruce
Yeah, I can hear you. I can see you moving.

Okay, sorry. I seem to be having a Wi Fi problem, but I think I might be back on track now.

Steven Bruce
Okay. We were talking about the differences between long COVID and communal garden post viral syndromes. In particular, the fact that it is, it's a fatal disease, unlike most of the others, and that it affects a particular demographic as well.

That's right. So saying that I think there are two categories. So there's the, there's the older multimorbid, person who's probably got physical damage from the virus. And that may be why they have ongoing symptoms. And there's the younger previously fit and healthy person who gets a minor COVID illness, and but then has a fatigue problem, which persists for weeks and months afterwards. And I think, in people under the age of 40, by and large, what we're seeing is what I would regard as classical post viral fatigue of the sort that we see in epstein barr virus, and we manage it in a similar way. And so I think it's different in the old in the old age group. But I think that does introduce some problems, I think, for the younger people, because a lot of the younger clients that I see, are really worried that the reason they've got profile symptoms is because they've got serious organ damage, heart damage, brain damage, and things like this. So they're worried that they're going to never recover from this. And that makes the problem worse. I mean, so it's not to say that it's a psychological condition, because it's an infection. But if you're, if you play, worried and anxious about the situation, and worried that you're never going to recover from it, of course, it's going to make the situation more distressing than it would otherwise be. So quite a lot of what I spend my time doing is just reassuring people appropriately, that actually there isn't any serious underlying disease to account for their symptoms. This is what we see in post viral fatigue syndromes. And we know how to help people with that, because we've been doing it for years.

Steven Bruce
Are we able yet to come up with any figures on the incidence of post viral fatigue? In COVID, as opposed to other syndromes?

Yeah, well, so significant ongoing fatigue, that's more than just a few weeks in more than a month or six weeks, is seen in about 5%.

Steven Bruce
And is that more or less, the same as every other post viral fatigue?

is pretty similar? Actually, it's a bit less than we see with EBV, it's, it's probably a little bit less than we saw with SARS, where it is about 15 20%. But we're still working it out. I mean, you know, there are, you'll see lots of different figures around so the Office for National Statistics came up with a figure of 1.1 million, I think, and that was in December, just before the second wave hit. And if you take that figure, then that's a lot more than 5%. But if you take, for example, Tim Spector at Kings has, has given a figure of 5%, having symptoms for more than six weeks, and that's based on his cohort, which is about 1.5 million people logging in their symptoms every day. So I don't think we have a final figure, but it's some it's somewhere around five templates and something of that nature.

Steven Bruce
Yeah. Actually, Joanne sent in a question asking, but it doesn't flu also kill 1000s of people when flu is at its worst. So therefore, isn't that very similar to COVID? Particularly in the big epidemics that we saw in decades gone?

Yes, that's true. But flu, flu to kill you to kill you. And that's over and done with what we don't see with flu is that people you know, sort of have many months stay on it, you develop and organ damage and things like that, you know, you either with flu pretty much don't survive it. And it's usually the very elderly who get that or, or it's a nuisance, and you're better in a week or two. So I think COVID is different. You don't see for example, the hyper inflammatory problems that the clotting problems with flu we do with COVID.

Steven Bruce
Okay, is it a silly question to ask how we would recognise post viral fatigue in a patient, given that many of them will be coming to us for other reasons, they may have it?

Well, I suppose the hallmark of profile fatigue, or particularly as it evolves, if it goes on for more than three or four months, then that's when we tend to label a client fatigue syndrome. And the Hallmark effect is, is is what's called post exertional malaise. So in loose people, you know, doing some physical activity, doing some physical exercise will make you feel better will make you feel more refreshed and more energetic, whereas in Polish while fatigue and chronic fatigue syndrome, quite capture sickly and unusually and in fact, to the extent that if you don't have this feature you don't have to do you can't be is part of the definition is that the fatigue will get worse after activity, be that physical or mental. So if your patient has that, then it could well be posted after you got it for me. And if they do have this feature of symptoms getting worse after activity, then they can't have the condition. And one of the difficulties is that for some people, the the onset Teague is quick, you know, within within hours or of doing exercise, but for other people is delayed by a day or two. On the day, I feel fine. But you know, two days later, I can't get out of bed, and I'm in bed for four or five days that but that will be what I would look forward in. In confirming the diagnosis,

Steven Bruce
I suppose also written on the tin must be you can't have post viral fatigue unless you've had the virus. So is it the case that if you had a relatively asymptomatic dose of COVID, you could have a nasty post viral fatigue? syndrome?

Yes, unfortunately, it is. So it's, it's a very difficult area and a bit of a moving target. So. So if we just think pre COVID for a minute, and we see patients coming in with new onset fatigue. The problem is that the symptoms of MS fatigue syndrome are very similar to the symptoms of flu. So and you can get me or poverty through things other than infections, you can get it through stress and burnout through various kinds of mental health crises can provoke it. And so it can be really difficult to be sure whether somebody has actually an infection triggering the thing or not. And it's one of the advantages we have with this COVID pandemic, there. Not many advantages, but one of them is that we know pretty much for sure, certainly anyone who got COVID, after about July or August of 2020, we'll have definite proof that they had it. There's a whole load of people who've got the infection in March or April last year, who think they have COVID. But the testing wasn't available at that time. And so we can't be sure. And

generally, the approach that we've been advised to take is to assume if somebody got ill in March or April last year, with some kind of viral illness, and they and they're not improving, we assume that it's COVID. But But yes, there are absolutely people who have really trivial, infection. minute.

Steven Bruce
Did if you took blood tests in those patients, we presumably you'd still see antibodies, wouldn't you? Which would be an indication that they'd had it?

Well, unfortunately, not necessarily. So there are some people who don't aren't antibodies. And also, I mean, I know, I'll say what most of my time in an NHS hospital and, and, you know, we're all having tests all the time. And so I've got colleagues in the departments I work in who had PCR proven COVID who had antibodies, and then, you know, two or three months down the line, they didn't have antibodies anymore. So you the antibodies are usually in most people, they You're right, they do hang around. And one of the ways you can tell that somebody has had an infection is by doing an antibody test, but they're not totally reliable. And there are people who have had an infection that antibody negative.

Steven Bruce
Does that call into question the value of the vaccines if there are people, I don't know what scale they might appear, but the people who don't preserve their antibodies?

Well, I think it's a no, I think it's the short answer. So I think if you know, it's one of the reasons why viruses were developed and even people who've had COVID infection is still advised to get a vaccination is because the longevity of antibody response after vaccination, particularly with a two doses is much better than after a natural infection,

Steven Bruce
or three. Right. I was going encouraging news today, I think wasn't I think they found that 100% of those vaccinated twice did produce antibodies in the Pfizer and the Oxford vaccines, I think.

Yeah, I think it's 96% Yeah, but pretty much it's, it's really, I think, very much better than we reasonably were hoping because you know, you look at the effectiveness of a flu vaccination, the cover is much is much less impressive. So it was really hit the jackpot all the vaccines in terms of effectiveness.

Steven Bruce
So epstein barr has raised some interest amongst people. Christina says, Is there a link between it and Fibromyalgia in later life?

Um,

well, not that I'm aware of. I mean, the problem with epstein barr virus is that if looked in the general population, the prevalence published prevalence of having antibodies to EBV is about 70 to 80%. So most people will have antibodies. And when something is so prevalent as to be almost universal it's very hard and statistically to work out whether it's influencing your risk of getting fibromyalgia, I think it would be fair to say that, you know, the majority of people who have EBV do not do not get Fibromyalgia because, you know, just, most people don't have fibre mouse's so.

Steven Bruce
But mice actually answer a question from idemia, who says he keeps hearing that EBV is to blame for so many things, and he wants to know if there's any truth in that, but it sounds to me as though there's Association but no causation in this?

Yeah, I think

I think, you know, there were years when people had when people were researching me chronic fatigue syndrome, when there was a real interest for decades in the idea that it was to do with persistent bi weekly viremia, persistent sources of epstein barr Barr virus. And somehow system virus was causing the symptoms and and i think that's been completely disproved. And so basically, what you get with EBV, most people who get it asymptomatic, they're completely unaware of it. There's a subsection who get claims with a fever, swollen glands, sore throat Malays for two weeks, and some of them don't get property, but most of them don't. The other thing that you can get is, you know, EBV is one of those viruses that does remain within the body. It's not, it's not got rid of, and it's it remains within the bone marrow of it like herpes simplex does. And so if later in life if you become immunosuppressed, because you develop a lymphoma or leukaemia, or because you have your immune suppressed because of an autoimmune condition, then the EBV can escape the control of our immune system, and it can cause serious problems. But that's extremely rare. It can cause bone marrow plays here and this kind of thing, but numerically, it's tiny. It's like 0.01% of people who get that. So in the main EBV is pretty much a non event, I think, as far as we currently understand. Okay.

Steven Bruce
As I said earlier on, when we were here more to talk about long COVID, post viral fatigue than we are other things, and there quite a few questions coming in about vaccines and things now, because I raised I raised them. But I want to get back to that main, the main subject. Elspeth sent us a question, how does one deal with fibrosis of the heart and lungs? She says, How do you deal with it when they may not be you personally?

Well,

interdisciplinary teams that deal with this because it's very complicated. So it with difficulty, I think is the is the thing to say it's not easy to treat scarring of the lungs, that is not easy to treat scarring of the skin

or scarring anywhere, really. So sometimes, there is there's a degree of reversibility. And there are some certainly the early experience with patients who've got inflammation and scarring of the lungs due to COVID is that steroids can be really effective. But we know from the studies that were done in the in the UK during the first wave COVID that dexamethasone can be used as a form of silver, it can be really helpful in reducing the serious effects of COVID. And but also for those people who've got lung scarring, it can really help healing, you know, after post discharge, so we've had my researcher colleagues tell me that they used to, it's quite liberally, and they can be very effective. I think that's all I mean, in you can get scarring in the lungs due to things like autoimmune disease, inflammatory disease, and in those situations, we use immunosuppressants as well as still it's thus far, I don't think we have any evidence in COVID. That that's a sensible thing to do. But certainly, you know, I think my experience has been quite a few of the of the post COVID consequences. You see, I see people develop inflammatory disease. And these kind of scarring forms they can, they can swell really well to short courses of steroid and that's mostly what we use.

Steven Bruce
For once, what does the rest of the the treatment package comprise when you're dealing with post viral fatigue?

Well, I guess the steps so one is sort of The physician lead bit, which will I do the due diligence. So my job is to make sure when people have got lots of symptoms, because typically your post viral fatigue sufferer will not only describe fatigue, they'll describe lots of other symptoms like problems with memory thinking word finding, which is often called brain fog, points of concentration, they'll have problems like palpitations, shortness of breath, abdominal pain, abdominal upset, tingling, pins, and needles numbers. So have lots of lots of symptoms. And they are very often because you know, it's feels very odd to having all these symptoms suddenly, so not unreasonably, they will fear that they've got some terrible multisystem disease that's easy with their bodies. And the first question you need to try and answer is, have you or have you not got some terrible things eating where's all your organs. And that's really the role of the physician, I think, is to sort of work that out from taking the History During examination, during appropriate and judicious tests. So we don't test everybody endlessly. But we do what seems proportionate in testing to the situation. So if it's a 20, or 30 year old person who's previously fit, well, we're probably not going to investigate very much. And if it's someone who spent three months on it, you with COVID, you're probably going to investigate quite a lot. Because the likelihood of you finding something is different in those two groups. So that the first that's the first bit is just working out, you know, what's going on here, doing some prudent testing to check kidney liver function, all these kind of things. So that's what we do. And then mostly the what what I spend my time doing is just explaining to people why it is that people get post viral fatigue. And, and that, you know, it's normal to have lots of physical symptoms, when you've got post viral fatigue, this is just what we see, we always have we did pre COVID. And we have post COVID, as well. And so we trying to develop a sort of model with the patient for them to understand and why it is the bed experiencing these symptoms to try and normalise them to make them seem less frightening. We do an assessment of their psychological health, because very often it's it's affected. And you have to be quite sensitive about this because people often think that you're sort of saying it's they're being hypochondriac or they're imagining it. And it's absolutely not about that. It's just about trying to get a holistic assessment of, of

how they are. And that means you've got to assess their soul as well as their body. So that mean, and then. So, you know, in terms of what you do next, you basically give people advice and support. It's about saying, if you get if you manage this period, right, these next few weeks and months, there's a good chance you'll get better. What does that mean? So it means, first of all, being optimistic, hoping, you know, having a reasonable expectation that you will get better because that's what happens with most people, not catastrophizing, not not spending a lot of time thinking, Oh, woe is me, my life is over, I'm going to get well again, not that I'm afraid in the mean, looking at Facebook groups and that kind of thing, which unfortunately, in my experience, often just give people the heebie jeebies, and make them worry, they're never going to get better.

And then we give advice on pacing. So that's, you know, your your energy is less than it used to be, you've been had an infection, you're not being well. So you've just got to cut down your activities, to something that you can cope with. So that you can get a consistent pattern of activity of rest, avoiding boom and bust where you feel a bit better one day and you do more, and then you spend days in bed, this is a cycle you've got to get rid of. So we talked about pacing, we talked to them about very often, what we find is that these patients have got major problems with sleep, they can't sleep, or they're sleeping too much. They're sleeping up, you know, half the day as well as much of the night. And these are unhelpful. And so we try and explain why that pattern is is not helpful and is likely to perpetuate their problem. And, and often we find that people are very anxious, and that's understandable, but actually it can make the situation worse. So one aspect of what we do where appropriate is if people have got to develop Disorder, Sleep patterns are simply too much or too little or they're very anxious or panicky, then we'll get a psychologist involved to help them deal with that. And it can be hugely beneficial quite quickly. It's surprising how quickly see people turn around. And then the other approach is really one of rehabilitation. So that's where you know i involve other members of the interdisciplinary team. And really the from my point of view the clinical specialists who are best at rehabilitation occupational therapists, so they are in a team members who really specialise in getting someone who's because of a health problem is no longer able to function as they used to. It doesn't really matter whether that's because you've had a virus or because you've had a leg amputated, or you've had a stroke or whatever, something's happened to catastrophic Lee, or no, suddenly, that means that you were, you know, two or three months ago functioning normally, and now you can hardly get out of bed. How do you? How do you turn that situation round? Well, you do it cautiously, slowly, with care and compassion, with guidance supported by somebody who's helped other people recover from a situation like that. And that's what occupational therapists do. So I work for many people, it's just about giving advice and reading material and you know, I think you'll be alright, get on with it. And then where people have got lots of sleep problems with anxiety, depression problems, then I recommend psychological therapy, and to people where that's not the case. And it's more a sort of rehabilitation, occupational therapy gradually improve, gradually increase the physical activity type of approach.

Steven Bruce
So given that the the NHS system is under a lot of pressure at the moment, and I speak to so many people who are not able to get an appointment with the GP, if we where's the cut off for us as chiropractors, osteopaths, physios, if a patient comes to us, and they're complaining of things like those that you've described? Where's the kind of where we can give them advice along the lines of it's going

to get better? We know this, we recognise this. But at some point, we have to say no, you need to get a referral. So you need to go see your GP? Or should we not? Should we just say we think you've got post viral fatigue, go see your GP anyway? Well, I

think it would depend on when you're seeing them. So I think if it's early days, if you know, if you see someone who's, you know, a month or two after having COVID, and they're still feeling under the weather, I wouldn't regard that as at all surprising. And I don't see any reason to sort of get in a panic about that. And I'm either a therapist or the patient. If you're getting out to three or four months and or someone is very severely affected, and they can't get out of bed, then I think you think, Okay, this is this is a serious problem, or they're not, they're really not recovering, right, they should be and then they should go and see their GP in the first instance, because the GP will have access to an array of services, including the new long COVID clinics that were set up in the nation's

Steven Bruce
okay. Jennifer's asked about chronic fatigue, which you mentioned before, you said it could go on for months after a viral infection. But she asks if it can relapse and remit over years, if it's not managed or treated?

Absolutely, it can, it can and it very often does. And unfortunately, it can even if even if it is appropriately managed and treated. Unfortunately, total recovery from me or chronic fatigue is, is probably the exception rather than the rule. So what I usually say to people is, I think, you know, if you've got these people relatively severely affected, then it is usually with treatment, feasible to expect people to get their life back on track and perhaps back into work and, you know, doing normal activities, but but it's very often the case that they may not make it back to full time work, they may not make it back to the kind of exercise levels they were doing before. And they may just have to lower their expectations, what they can achieve. And, and it's likely that it periods of stress or you know, forget another infection or whatever, they may have a setback. And that's not particularly to be surprised about or upset about, because that's just what happens, unfortunately. But as I say there are some cases and particularly if you see people early on, they got post viral fatigue, they haven't yet gone developed a chronic, you know, problems going on for months and months. I think it would be more optimistic. But certainly we've had symptoms for 912 18 months, likelihood of total recovery forever and ever is probably is quite low.

Steven Bruce
Is there any sort of lifestyle advice that you would offer people before they get to a stage where they need medical intervention papers asked whether probiotics are helpful at all in managing post viral fatigue? Something like that. Well,

there's I don't think there's a lot of evidence about that. I think

the

certainly, you know, making sure that you're getting adequate I think lifestyle adjustment to support Making sure you're getting adequate rest, making sure you're not over exercising, making sure that you're managing stress appropriately, making sure that you're having making time for pleasure. What I often see is that people, people's energy level has gone down, and they put all of their energy and focus into what they see as the most important thing, for example, work. And then they have no energy or time to do anything else to shop to see people to exercise to have to have any pleasure. And unsurprisingly, that is not sustainable for a long period. And sometimes you have to sort of cut down on everything a bit, including work to try and give yourself time to maintain a balance in your life while you're recovering.

Steven Bruce
Okay, getting off that topic a little bit. I don't know who's asked this question. But someone asked what we know about T cell immunity and COVID-19. And I remember reading a bit about this sort of thing early on last year about T cell immunity.

Yeah, so well, when you when you think about the response to the virus, the early response is driven by T cells. So we have CD for CD eight cells, we should both T cell subsets and CD eight cells, their job is to fight viruses, that's what they do. So the initial recognition of a virus is based on a T cell response, the long term you know, and so our ability, unfortunately, to, to do anything about the T cell response is is a bit limited except through separate vaccination. So vaccination will allow your immune system to recognise peptides or epitopes on the virus. And so they will prime the T cells to be able to recognise the virus when it comes into the body. And the other thing they will do is they will, the T cells will help the B cells which produce antibodies to produce antibodies against the virus, or at least antibodies against the vaccine, which will help provide protection. So you kind of need both both bits to to get your immunity both the T cell response and the B cell response. One of the reasons why there's been a lot of interest in this is that it's possible. And this is speculative. But it's possible that in different individuals, which bits of the immune system is activated, and in response to COVID may may have an influence on whether you develop a post viral fatigue syndrome or not, it's conceivable that some people might have, for example, a strong T cell response, and they clear the virus and they don't get post-viral for t whereas other people may have a weaker T cell response and take longer to clear the virus and it may cause more trouble and perhaps result in more long COVID features. But this isn't we don't know the answer to this yet. Well, one of the there are a few silver linings to the cloud that is COVID. And one of them is that the NIH in the States has as is put $1.3 billion of research funding into looking at this very question. And and it's about a quarter of a billion in the UK has gone into it as well. So I think I think the questions are very pertinent to that I think in a year or twos time, we will have much clearer answers to those questions. But right now, we don't really know. Okay,

Steven Bruce

we've only got a minute left. So one more question, if I may. I don't know who's asked this. But the question is, do e n t issues arise first, then giving brain inflammation which then relates into the symptoms of the body? Or systems of the body? I should say?

Yeah, well, I mean, the virus obviously gets into the nose, or the mouth. So that's the way it gets in, it seems then to go to the because it, it attaches to these Ace two receptors, angiotensin converting enzyme receptors, which are mostly in the lungs, actually. That seems to be where they get in. And then subsequently, there is evidence that in some individuals, they go to the brain, it seems to be really rare. But there are certainly some studies that were published in Queen square, the National Institute for neuro neurology neurosurgery of patients getting an capsulitis from COVID. But but it's like it's about 0.1%. So we're not sure in the generality, there's a very vigorous blood brain barrier which stops us Getting into the brain usually, and I haven't seen data yet to be sure what it really is getting into the brain. But it does seem to be first of all nose and throat and then into the lungs. And then it goes around to other parts of the body to the h2 receptor.

Steven Bruce
For Darryl, thank you. I know you've got a clinic this afternoon and most of our viewers will also have patients arriving shortly, if not already. So thank you very much for your time. Thank you for that. I hope it's reassured some of our people that we know something, if not everything about long COVID and post viral fatigue syndromes. Just a quick follow up on what I said earlier on while we had our internet problems, I said that Rob later in the month was next month was going to be talking about treating stammering patients he's not going to be talking about treating stammering it's about treating the patient who stammers that'll be a broadcast which has a lot of communications and consent elements to it. And can I just re emphasise that if you've got a case for next week, particularly if it's got something to do with me chronic fatigue post viral fatigue. Next Tuesday will be a great lunchtime to share it with everybody. And again, we're not looking for cases that you need help with necessarily just interesting cases that we can all learn from. But that's it for today. Hope you've enjoyed today's lunchtime session and I hope to see you again next week.