Academy of PHYSICAL MEDICINE

Transcript

350R- Dizziness, Vertigo and Vestibular Rehabilitation with Alan Sealy

Steven Bruce

Hello there. Good evening. Great to have you with us again this evening. We've covered neurology quite a lot in our recent shows, not least because we've been asked you but this evening we're going to be revisiting vestibular rehabilitation. Now you might recall, I can't remember back it was I think it was December last year we looked at vestibular rehab with LMC Lee joins me via the video link from Aberdeen. We've actually managed to coax him down from the Granite City this evening so that he can run through some more practical issues with us in the studio here. In case you didn't see that show, it is up in the APM recordings library. Of course, Alan is a specialist physiotherapist with over 20 years experience dealing with dizziness and vertigo both within the NHS and now in private practice. Alan, thank you so much for coming down to spend some time in the studio. Great to have you with us.

Alan Sealy

Thank you very much.

Steven Bruce

I think we're probably going to have to overlap a little bit with what we covered in the show back in December, aren't we? And I guess while we're sitting here, maybe we should go through some of the science, the anatomy and physiology behind dizziness and vertigo we get when the stuff we did on the show, or you made it clear there that there are some really distinct causes of both dizziness and vertigo, which perhaps we're going to touch on later this evening. But maybe we ought to first distinguish between the two particularly how the patients present with them.

Alan Sealy

Yes, and in many ways, we don't need to get too fussed about how the patient defines the word dizziness or vertigo. It's all dizziness. As far as I'm concerned, and dizziness, really, we should think of it as the end result. It's the symptom of there being a problem in the balance.

Steven Bruce

And it's interesting, because I distinctly remember when I went through training, they were saying, Oh, no, no, you must be able to extend when they say dizziness, do they mean the room is spinning around them? Or do they just be reliable

Alan Sealy

Steven, it doesn't point me really in any one direction or another. And the key thing to remember is when we're balancing in our brain, and if someone is dizzy, it really just means the brain is unable to make sense out of the balance system information that's getting right. And that's a good place to start with when you're explaining it to a patient. They can perhaps relate.

Steven Bruce

So how would you distinguish between both dizziness that needs your care and attention as a specialist in this and dizziness, which is just I don't know, postural hypotension. So it's really a good question.

Alan Sealy

And the most important point to remember is that the vestibular system, the balance system, is a movement detector. So it's movement related dizziness, if somebody comes in with movement related dizziness, I know it's due to their moving their head or moving their neck, or it may be visual, visual sensitivity and motion sensitivity. But that again, that will also probably point towards the vestibular

Steven Bruce

cause, right? Other causes of dizziness than anything

Alan Sealy

metabolic obviously, that, as you mentioned, postural hypotension or sort of thyroid problems and immune deficiencies, chemical things, imbalances in the body. Hormonal changes. There's lots

Steven Bruce

when you were on the show last time, we were asked a question about the Epley manoeuvre it was a video link and we couldn't we couldn't run through demonstrating the Epley manoeuvre. i I hate to say this, but I in my background, that's probably the only thing I've ever been taught, which is meant to deal with dizziness, but I'm guessing you've got a few more things in your armoury, there's

Alan Sealy

a few more things we can do. The Epley manoeuvre is one technique we can use for treating benign Positional Vertigo is yeah, there are many others. And it depends on which canal is involved. It depends upon the type of condition the patient has. But that's really only going to be effective for benign positional vertigo. There are many other triggers for dizziness, right.

Steven Bruce

So we're gonna be able to distinguish between those different triggers. It would be nice to see how you as an expert would perform the Epley manoeuvre because I've seen a numerous numerous online sources which have different methods of doing it. And I've certainly spoken to practitioners who've said, Well, no, that wouldn't that wouldn't work. Well, that would worsen the problem if you if you do things that way. So it'd be useful to hear your TV, we'll go through

Alan Sealy

that later on, we'll have a look at assessment of the Dizzy patient, doing basic neurological assessment to sort of rule out a brain condition because we've got to be careful, there are red flags, causes of dizziness, so we need to know that there's no brain condition involved. And then we'll look at testing the vestibular system, as in the peripheral vestibular system. So that's signals coming from the ears into the brain. And then we'll look at benign positional vertigo as well.

Steven Bruce

Okay, taking you back a bit. It's silly of me now to say to you well, when a patient comes to you, how do you know that it's dizziness? That's the problem, because pretty much they all come to you now because that's the problem don't because that's your area of expertise. Back in the days gone by there would have been a time when you had to work out whether this was the problem you should be addressing or whether it was a it was an innocuous thing. What are the triggers for you because patient might come to you with a an ache or pain or joint doesn't move, and just casually say well, I also feel dizzy because they wouldn't come to us thinking I'd go to an osteopath because I'm dizzy or a chiropractor is I'm busy they come for something else.

Alan Sealy

Well the dizziness normally links in with other mechanical symptoms, typically neck problems for example, because if you are dizzy, invariably you will then hold your head still. And so you start to then develop tensions in the neck and shoulder muscles. The brain will also deliberately recruit increased firing in the neck muscles. So that will bring on a neck problem because the brain is trying

to make up for the lack of vestibular signals to the brain so it will tend to increase firing in the neck on the same side. So you will get links with mechanical symptoms. And it really comes down to asking the patient here what is their main problem? Why are you here? Why What are you looking for? What are you unable to achieve that you would wish to achieve? And that's what we sort of start from always look at the patient. I

Steven Bruce

could have brought in a really challenging patient for you this evening because my father I have thank you Father fits all those ticks all of those boxes and is that is a real difficult patient but I thought they were just doing demonstrations tonight. We're not gonna put you into the mic. Here's where they'll fix this patient. He's got these things going on. Before we get on to doing some practical stuff, what would you like to run us through in terms of the theory, the science behind, I

Alan Sealy

think it's important to understand that with the vestibular system we're looking at at a movement sensor. So we're looking for is there a movement related dizziness? So we get the patient to move and see what happens. And basically, we run through a set of tests, and we're looking for a dysfunctional test. So is the patient unable to achieve something we want them to achieve? And or does it bring on a symptom. So some of the tests will be tests of central motor function. So we're looking for red flags. Obviously, if we see a red flag flying, we see some unusual central eyes signs, then we have to refer patients on to a neurologist and they need to be managed properly. But it may well be that our tests are functional, the patient can do them. But they produce symptoms, in which case, again, we're going to use that. And we can make the tests we carry out on the patient form the basis for our rehab. So a lot of the patients will need a rehab programme in order to get better. And we can focus in on the things they can't achieve, or the things that produce a dizziness as a basis for the exercise.

Steven Bruce

You talked about referral just there. But you talked about referral or from your own practice to specialists as a result of red flags. I'm guessing that by now, people are referred in to you from the NHS, from their GP, or whoever else, or even for the

Alan Sealy

majority of patients, but many come just by word of mouth, right? Luckily, most have generally already been seen by GP at least, although in the last few years, we've been added pressures of trying to get to see a GP many are only ever being assessed by telephone. And then I have to be very careful, we have to obviously make sure that there are no central science present.

Steven Bruce

Yeah. Well, I was I was thinking well, how do we how do we convince the general medical population that there is an avenue that they can send their patients down where they can get reliable, effective treatment? Because I imagine that most GPS and thinking that's in this area, I'm not sure any GPS around here wouldn't know about services like yours. Because you're in Aberdeen.

Alan Sealy

Number one thing is get in touch with the GPS. GPS will genuinely grab your arm hard if you can offer them a service, because they don't know what to do with their Dizzy patients. So if you sort of start saying, Yes, I can provide a service you offend me and Dizzy patients, they will willingly take it up, I think,

Steven Bruce

is there any course any any pathway for patients within the NHS with dizziness, that yesterday, they go to a GP, I'm getting dizzy. Yeah.

Alan Sealy

Generally, what happens is they will go to the GP and the GP will say, take some medication to get you over the worst of it. And it'll get better within a few weeks. And it does for a fair number of people. But there's a lot of people for whom it doesn't get better within a few weeks. And so they tend to go back to the GP and the GP will perhaps try a different medication. But by which time the medications will probably have run their course, it probably won't have any significant positive impact, because they are really they're just masking the worst of the symptoms rather than treating anything, right. And so if someone hasn't got better after a couple of weeks, or hasn't started to improve after a couple of weeks, then they probably should be referred for vestibular rehabilitation. Now, unfortunately, for most people, this involves a referral to en t, which is probably a year to 18 month waiting time. And so that's where the whole system kind of grinds to a fairly significant stop. So

Steven Bruce

in the 18 months waiting, so I'm not so there's no option for a service like yours in that 18 month waiting time, there is a chance potentially I imagine that the patient will accommodate to the problem or the problem might go away. Will it go away and they'll be fine, or will it go away and they'll be left dysfunctional in some regard?

Alan Sealy

Good point. But again, it'll be a kind of a rule of thirds, almost a third of folks will get better by themselves spontaneously without any consequences. A third will compensate to some degree, and they'll tend to use the vision more for balance, they will stiffen up around the neck and rely more upon the survival reflexes. So they will mask their symptoms, which will be fine and they'll be able to function until their compensation start to fade, which is typically what happens with the elderly, the

elderly will probably have picked up a vestibular problem along the way in their lifetimes, masked it effectively with vision and proprioception. However, as their proprioception and vision fade, they expose the underlying vestibular dysfunction, which then causes them to be very imbalanced right? And then again, a third probably will not ever recover. They will just without help, and they become chronic chronically dizzy, and they desperately need the rehabilitation.

Steven Bruce

How distressing is the problem for patients that you see? It

Alan Sealy

can be extremely disabling, extremely distressing, out of all proportion to the actual damage or pathology that's involved. Yeah, so because balance is said is a complex system and involves so many different things. As soon as it goes wrong, it becomes functionally very, very limiting. So if you lose your balance you do become very, very disabled. And I've had some spectacular examples of otherwise healthy individuals who sort of resort to sitting in wheelchairs because they're just worried about falling and they're being dizzy, or one fellow came to see me and is reasoning for seeking me out was justification to put himself into a mobility scooter, for example, right hander, okay, if he was 17. Maybe that's fair enough, but he was in his mid 40s, and fit and strong. And so the disability is outrageous sometimes. Okay,

Steven Bruce

so there'll be a big psychological components in it. I imagine at the age of 14, if someone has said to me, the only way you're going to move is to get into a disability scooter, I'd have been absolutely yeah,

Alan Sealy

you got to be aware of these yellow flags that are flying like not that but there is always a component of anxiety with Dizzy patients. But the important thing to remember is that dizziness is fundamentally a physiological problem. And folks are anxious because they are dizzy, not dizzy because they are anxious, right?

Steven Bruce

What about misdiagnosis? I'm thinking here, a patient years and years ago, who didn't come to see me with this problem. But she told me subsequently that she had, she'd become dizzy, she'd fallen over I think she'd even been incontinent and was diagnosed with labyrinthitis, which sounded perfectly reasonable and was given some I think drugs at the time. The problem recurs, though, is that, is there a potential for that to have been misdiagnosed, and she might have benefited from services like

Alan Sealy

Unbeliev, may well still be a labyrinth, Vitesse, it may still just be a recurrent one or sort of further episodes of the condition, which is either a reactivation of the virus or infection, whatever it was, but it's more likely to be the brain decompensating slightly, if you lose function on one side, for whatever reason, the brain will compensate quite nicely. But you can also decompensate and this is typically what's occurring when people are developing diseases, post COVID, for example, or post some other infection, okay, they're losing some compensation from a previous injury. That could also Yes, be misdiagnosis, there could be serious pathologies, but the serious pathologies are very easy to identify. Okay, long as we look out for those red flags when you are sort of central motor sign tests, it's relatively straightforward.

Steven Bruce

Is the problem do you think perhaps underreported as well, because we have so many conditions, a person goes to the GP, they get their drug and it doesn't work? They just don't go back? Because they think well, there's no there's nothing else. So it's a

Alan Sealy

normal and normal product of getting older. But it isn't. That's the point it is. Dizziness is not something that's to do with ageing. It does increase in frequency. As we age. balance problems, obviously increase in pregnancy as we age. That's really just because we're more likely to have picked up a problem because we've been around on the planet longer.

Steven Bruce

Yes. And what about the prevalence?

Alan Sealy

It's extremely prevalent. I mean, we're looking at sort of up and depending on the age group, but I've been saying the elderly population, you're probably well over 80%, will have dizziness, or significant balance problems.

Steven Bruce

And although 80%, what percentage would be treatable, because

Alan Sealy

quite a lot of them, because that 80 plus percent will have a measurable vestibular dysfunction that we can find on our assessments. And you can work with. So if you're getting to the very elderly, of course, there are lots of other factors going on as well. And there may well be postural hypotension.

And there may well be weaknesses and loss of muscle strength and vision as well, which will obviously affect it, but they will have underlying vestibular dysfunctions, and we can address those.

Steven Bruce

And also, the elderly patients that I've seen that there are so many problems going on, sometimes it's hard to know, which is the one you can concentrate on, which is the one which might be provoking the other problems, isn't it but then that's a normal thing of dealing with. That's

Alan Sealy

also with a lot of the chronic you want some of the chronic patients as well will have a lot of different things going on. And you kind of have to approach it chipping away at one facet, and then another facet and then another facet and the trick is working out, which is the main component today. Where am I going to get the most effect for my intervention? And that can be tricky. Sometimes. That's a good way to start. I think starting is thinking about it as a component. Is it mostly a vestibular issue? Is it mostly visual issue isn't mostly just a muscle strength issue, and so on?

Steven Bruce

I suppose I have to ask how much of what you practice is evidence based, because everything has to be evidence based.

Alan Sealy

And pretty much all there's a very good evidence base now for vestibular rehab, and for treatments for benign positional vertigo, for example. And Cochrane Reviews are shown to be very effective, and they're nice reviews and the guidelines have been published. So if you look out there, there's a lot of good evidence. Yeah.

Steven Bruce

And although enough practitioners capable of doing it, probably

Alan Sealy

not as the answer, because there's a long waiting time to get to see any one in particular. So we do need more practitioners out there the GPS see a lot of dizzy patients. By and large, they only give them drugs which will only help short term and will positively hinder Recovery long term. So they they're, they're looking for services out there.

Steven Bruce

Right. And I know you're coming down, you're running a course down here in May, aren't you? Which is a one day course, is that sufficient to take a practitioner to a level where they can offer a useful service to the GP? It should be rather their patients? Yes.

Alan Sealy

I mean, the key thing was a sort of a competence level, if you like is you need to be able to recognise serious pathology, red, red flag pathology, and you need to be able to sort of say, Okay, this is something I can deal with and doesn't really referring on. And with those patients, yes, we can take it to a level where they can recognise basic vestibular conditions, such as benign positional vertigo, the common variant, and labyrinth, Vitus type conditions, or pneumonitis, probably more accurately described, and then plan a rehab programme for that patient, which should work. And you know, with most of the patients, it will get better, because there is natural recovery. And really, as therapists all we are doing is removing obstacles or barriers to recovery. So if we're not helping our patients, it's us that's getting it wrong, not the patient. Yeah.

Steven Bruce

You remember I said to you in the in the online broadcast, and that's music to the ears of the Osteoporosis chiropractors, because we've always thought, you know, we don't fix people, they fix themselves for some reason, we take away the obstacles. Yeah, I'm always criticised, at least we're not always I'm very often criticising the shows because we sit and chat because it's interesting. I chat with my guests for ages and ages. And we never get on to the practical, but I think we might do it a bit earlier than usual, I go into some practical straightaway if that's alright, with you. Absolutely. I know, you said you've probably got more than 90 minutes, we have just a practical if we wanted to do it. But the more we get out of you from this perspective, the better from the audience's point of view, I think. Okay. So, allow me to introduce Mark, who has stepped in at the last minute and as your model for the CB multi an osteopath himself a telemarketer

Alan Sealy

over to you, right, because I think the first thing when we think about our patients is look at how the patient moves, because the patient will give us a lot of clues in terms of movement, in terms of how we function, how willing are they to move to bend to turn? So I always like to start by looking at the patient to mark if you perhaps just stand up in front of the bench for planks. And initially just looking at the patient, how do they hold themselves? Are they able to stand up? Are they able to walk into the clinic, and if they come in a wheelchair, and probably you have to do the assessment sitting down or on the bench, that's feasible, absolutely feasible, but I like to have people standing up if possible, because it stresses the balance system a little bit more. And therefore, I'm going to learn a little bit more from that. Now, some distributed patients may well have a head tilt. And they will have a head tilt because they have a loss of function on one side of the vestibular system, which means that the brain will think they're moving towards the stronger side. So instinctively, they will tip over towards the weaker side. And so you will see them see them sometimes standing that way, or even left over a bit like that. They may also have a head tilt because there's a neurological problem or brain problem, which can cause a skewed deviation of the eyes up and down. And that can be a vertical skew deviation, which would be observable, you see the observable and will be due

to a stroke. So not a vestibular condition. So we need to identify whether there's a skew deviation. If we're looking at the patient, and if the patient is relatively straight, then that's fine. There's no head tilt, there's no problem. I will then do what's called a switching I cover test which involves covering the patient's eyes alternately, just looking to see whether there is any vertical movement of the eyes as they refocus on my nose each time. lateral movements are irrelevant there just means that they're choppier, 40, or something or squint. So that's we're not interested in those but vertical line movements, where you see more eye more white above or below one eye would indicate a central pathology, right. So that would be the first thing to do. Now, if a tilt is present. So for example, Mark, just close your eyes. If I just wobble the patient's head around a little bit, leave you offset to one side mark, keep your eyes closed if you can bring your head back to vertical midline position. Now that is pretty close. That's close enough for me. So obviously Mark has no head tilt, no problem. Now, this time, perhaps mark if you just offset it a little bit, leave it to one side, bring your head to vertical midline position but get it wrong. Okay, so now we can see the patient has a head tilt. Now that might be due to a brain condition. It might be due to a vestibular or proprioceptive condition. We don't know at this point.

Steven Bruce

Just to be clear, you didn't have that head to when you first asked him to do that. Yes, because

Alan Sealy

he may well have just been using his vision. Yeah. Okay, so we're orientate himself to the world. So at this point, keeping your eyes closed Mark, I bring your head back to midline neutral position, and now open your eyes. So now I'm looking to see are the eyes level and one eye may be up and one eye may be down due to a vertical skew deviation, which would be a brain condition. But far more likely, the eyes will be level, which tells me that that tilt was probably either the stimulus in origin or just proprioceptive. Bad habits, right? Could be

Steven Bruce

if they're not level, if the eyes have

Alan Sealy

offset vertically, then that would indicate a brain condition, right? Yes, and should be referred to Mr. Scan. So that would be the basic first thing, just sort of the first red flag, which we're looking out for. And we're really looking at this stage to differentiate the central causes of pathology from peripheral causes or pathology. And

Steven Bruce

this is possibly a silly question. But just to make sure it's clear, this is not an urgent referral that's required here, there's you're not saying gosh, there must be a stroke about to happen. And because of that vertical deviation, it depends

Alan Sealy

upon when the patient presents in written respect to the history of their condition. So if, for example, Mark comes in and say, Well, I was fine last week, but yesterday, I suddenly became very, very dizzy, and I'm seeing him on day two of dizziness, then that could well be an acute situation. So yes, if I saw any red flags, any sort of signs of brain condition, that's off to a&e, straightaway, yeah, I will arrange a taxi and he will go to a&e. If on the other hand, Mark says, Well, I've been dizzy for six months, and you're seeing some odd signs, well, then that's probably a referral to neurology into the GP in a letter or phone call to the GP to say, take this man seriously, with

Steven Bruce

my emergency first aid head on how many patients with a condition such as the one you've just described, would have driven themselves to your clinic? Probably

Alan Sealy

not many. But some, but I don't know, it may well be possible. I don't know. I mean, these are not let's not scare people, these are not sort of your typical patient, this would be an oddity, and I don't see very many acute strokes. I have had MS patients, for example, but they're chronically neurological problems. You don't see very many acute people coming in to see a therapist, correct, yeah. And so then we the first like, the next time, probably just look at how you move how you function a little bit. So we're looking at mark in ordinary balance, close your eyes, and be ready to catch. So perhaps have the bench behind the patient at this stage. But I just want to know how able is Mark to balance without using his vision. That's all I'm really going to learn from that doesn't it's not diagnostic, but it just tells me how much you're using your eyes for balance. And if you're very wobbly, that tells me you're using your vision quite a lot. Can you stand on one leg compared to the other. So stand on your left leg, start off with a pretty good stand on your right leg to start off with. And if you have a vestibular loss, you will probably next month, you will probably lose some tone on one side. So if I have for example, vestibular weakness on my right side, I may have good balance on my left, but be a little bit wobbly on my right. Now back to Jen, not diagnostic, but it just makes me think, Okay, is there a vestibular issue or is there just a hip replacement or a sore knee or sprained ankle or something else going on in the past. So some basic patterns like that. And then a fun test, which you may not have come across is something called the step test, where you we ask the patient to march on the spot. Keep on going eyes closed, and we see where they end up. And some patients will do great deviations around to one side. And we keep doing that for 20 seconds, basically. So keep on going. We'll see where you end up. And some patients will turn 90 degrees or even 180 degrees. And this is not diagnostic in any way. But it does give me a clue as to how well the patient knows where they are in space. And that Mark is staying pretty straight. So there's no issue there. Thank you very much. Okay. But again, you know, some therapists will say all clinicians will say that, that points towards a vestibular loss, but it could be proprioceptive, or weak muscles on the hip. It's not diagnostic in any way. But it's useful. And if that fits with other tests, then it's likely to be relevant. And we can always reassess that as the patient goes through rehab. Whenever

Steven Bruce

somebody says something like that, when I'm when I've been on a course they said, Well, we do this and they say, Well, you might see this happen. I'm always thinking, what do we do with this information? You said it's not diagnostic. So at some point, we've got to work out why your patient turned 90 degrees, or one that

Alan Sealy

tells me is that the patient doesn't know where they are? Yeah, and they think they're probably going to the right and therefore they deviate off to the left. So it just it's an indication of how good their picture in space space is in their cortical perception if you like it's because one of the outputs of the vestibular system is spatial perception up here. So it tells us where we are in space, which is why I'm stood upright and not falling over. And that can be wrong and often is if you've had a loss of function on one side, you may well be tipped over to one side or deviate to one side. It's good to look at how patients walk. So perhaps mark if you could just walk from a place and just see how willing the patient is to sort of walk as normally as possible. And obviously Mark is walking quite naturally there looks quite good. And if you can walk can you look around the room whilst you walk? So a lot of patients will tend to use their eyes and fixate on a point and head hold their heads very still. Now

Steven Bruce

we were constrained because Mark's got to stay within camera shot while he's doing this, what distance would you get them to do this over

Alan Sealy

bigger spaces you have within your room, basically, within your clinical and the typical vestibular gate, if you'd like or the pattern, you might see if I can just demonstrate this to step to the side would be kind of quite fixed, quite rigid, holding the head, still a little bit of a broad base gate, keeping the eyes on a target. And as soon as you ask the patient to look to one side, they will tend to take a wobble, so you have to be prepared to catch them, right. So we look at the patient's walking a little bit of balance, and then we'll come back to the again to my eye tests or ocular motor tests, looking to see can we differentiate central from peripheral pathologies. If you just focus on my my fingers there, so initially, I'll just do some cranial nerve tests if you keep your head still. So we'll just just follow my fingers from side to side, keep your head still. So we need to see that both eyes will a duct and abduct. And in abduction, both eyes can elevate and depress. Which indeed, they can. So we just asked the patient to follow the fingers through that typical age pattern. And as long as they can do that, then I know the ocular muscles are good, and therefore their cranial nerves are good, in this case, the third, the fourth, the sixth cranial nerves. So they're the basic tests for the cranial nerve function, which I do, I don't tend to do the other ones, because they're less relevant for me. Also, I'm looking at smooth pursuits. So this is the ability to follow a moving target with eye movements only. And it should be exactly as it says on the tin, it should be a smooth pursuit of the eyes. And in the young person, there should be no issues. If you're very old, then you might see some jumpy eye movements and just shooting up I was moving his head, I could see patients always cheat, never trust the patient, they will always try and sort of follow something. And if there's anything going off behind me, they will be distracted, they will look for that. So you need to need to

say concentrate on the fingers, just follow nice and easy, nice and smooth, not too far out to the sides, or you may generate a little bit of nystagmus in the eyes. And you may want to do ups and downs as well. So vertical and horizontal smooth pursuits. Now, if you see problems with smooth pursuits, that would be an indication of a central pathology. So that's a red flag. Next, we might do something called tracking where you follow the moving target, but this time turning your head. So moving your head. Now this is very useful, because we're actually asking the brain to override a natural vestibular response that gets a little complex here. And you said you want to hear a little bit of physiology. But the vestibular ocular response is that or reflex, if you like is that as I moved my head, the eyes go in the opposite direction. So as Mark is following a target, his head is turning to the left, and then back to the right, the eyes should be moving in the opposite direction due to the vestibular response. But we're asking him to overrule that and concentrate on the target. So basically, we're seeing can the cerebellum in the brain work well, to override a vestibular ocular response? It obviously can't be either fairly stationary in the skull. So we know that the brain is good. And if he couldn't do it, what would you do about it? If you couldn't do it again, that would be a red flag. So I'd say this chap knows neurological intervention, so referral to GP and then MRI and then neurology. It's also a very good test for peripheral vestibular function because it involves head movement, so it's likely to provoke a dizziness in most of your Dizzy patients. So typically, we might say, Okay, follow your head, follow, follow the target with your head. And after a little while, you will probably start to feel dizzy, and so we stop. So we know we've produced a reaction. And if we produce a reaction, that means we can probably give you that at some point for rehab, because it means you're not very good at it. And therefore you will get it as treatment to

Steven Bruce

set after a little while. So how long are you going to be doing this for?

Alan Sealy

Well, I would probably keep on doing it for say up to about 20 seconds or so. Most people would become dizzy before then if they have a dizziness problem. If they don't have a dizziness problem can carry on forever in a day, but you don't learn anything more. You might want to speed it up a little bit as well if the patient's coping well, and again, you can do vertical movements as well. So we're looking, can the brain override the vestibular response? And does it provide or does it provoke a symptom? Then we will go for sockets, and saccade is a rapid eye movement again, so again, this is a central test that motor function. So we'd ask the patient to look to your left and then right and then left, right, wait for me patient. They always cheat. Left, right, left, right, left, and we're looking for a sack aid to be immediate and powerful and accurate. Like likewise, vertical ones as well. So up, down, up, down, up, down. And I like to give the patient a verbal cue and a visual cue as well. So they're really clear as to what they're actually going to do. Do

Steven Bruce

you do all these as you're demonstrating them? Now, when you're in clinical, do you use complicated optometry instruments?

Alan Sealy

I have in the past years where I've worked in a sort of a more specialist clinic, I haven't used the fancy computerised stuff. At the moment, I just use eyeball and it's just not necessary. No, because I'm not needing to measure it really, really accurately, you will see problems if they are that you'll see dysfunctions if they're there, as long as you look for them. So we've got sack aids, and again, that's a central motor test. So we've got smooth pursuits, the VOR suppression and sack aids are the tests of central motor function. And if any problems there refer to neurology, then we come to the peripheral vestibular tests. And here, it's all about testing the vestibular ocular reflex, which means basically, the patient, you look at me, and you move your head side to side. So this is what we call gaze stability, and the patient should be able to keep their eyes on target, whilst they're moving their head, without the eyes disappearing off to the sides. And without it provoking too much of a symptom. If there's no symptoms, you speed it up a little bit to try a little bit faster. You tell me if you're dizzy, that's good. Keep the eyes on me. That's good. And I would keep on doing that for a little while. Most Dizzy patients will be dizzy with that test, because they're moving their head and they don't like head movement. And again, you can do the same thing up and down. Exactly. Keep looking at me, head up and down. Good. And all these tests we've had movement also indicate to me how willing the patient is to move their head. And sometimes they don't like to do it. And they see all sorts of weird and wonderful things. And I asked the patient to turn their head side to side and they end up doing this kind of thing. Because the proprioception from the neck is so poor, or ultimately, it turns into this kind of a thing, which is kind of completely bizarre. So

Steven Bruce

just in terms of you said, a dizzy patient is going to get dizzy earlier on in that test. Does that mean you might not be able to complete it to your satisfaction, you might not be able to rule out a red flag because they get dizzy before the red flag is obvious.

Alan Sealy

The generally the red flag is there it will be there it will be evident. Yes. It's not the it's kind of the red flags. Remember, the sack aids and peripheral vestibular problems will be with this case stability. It's more than the head movement. So you tend you tend not to come

Steven Bruce

to what we're really getting from this is just does it promote the dizziness? Which is Yes, exactly, you

Alan Sealy

can not do it. I mean, again, if you see the eyes disappear after the size, it means they've got very poor gauge stability, and therefore, that should be worked on. Because all of these things are dysfunctions and can be improved with with training. Okay? Now gain stability was relatively slow. at a slow speed, patients can learn to use their eyes, they can learn to sharpen up their neck reflexes. So even in the absence of peripheral vestibular input, you can have reasonable gaze stability, through using your vision and through using your neck. But that doesn't work at high speed. So at

high speed, only the vestibular system can respond. Therefore, we need to bring the speed up. We do this passively by something called the head impulse test. If you look at me, keep your eyes on me. And I'm going to passively do a rapid head rotation. And we're looking to see, can the eyes fixate on the target my nose in this case? Or is there a catch up movement. If I have a weakness on one side of my system, say right side not working, for example, when I do a quick movement to the certain that's that's two marks, right. And I guess we're talking there's a problem on the right side, when I do a quick movement towards the left the eyes of bang on target straight with me. If I do a quick movement towards the right, there won't be a strong enough signal coming from the right side, therefore the eyes will only move partway. And then the brain will put in an extra catch up saccade. So you see a double movement of the eyes. So there will be a normal to one way, a good, big nice movement there. And then this way, there'd be a double movement. And that's what we're looking for with the head impulse or the head thrust test. And presumably you could get that bilaterally you can yes, you can have bilateral loss in which case in both directions would be a double movement. Yeah. Probably worth saying that we tend to do this from an outside position towards midline rather than starting a midline going to the outside in case we manipulate the neck inadvertently. So we're looking for speed with this one. And it should be observable and it should be reproducible each time, there wouldn't be a great learning effect. If there is a pathology. Sometimes the patient's just not quite sure what they have to do and therefore they learn after one or two repetitions. So it's worth doing a couple of times. So that's the peripheral vestibular tests. And we will then probably move on and look at the non positional vertigo tests for which we use the bench and here we're looking for the week crystals which are rattling around in your ear. And we're trying to find which canal which direction the crystals are moving and therefore how we're going to drain them out. And this is where we've come on to their your famous Epley manoeuvre.

Steven Bruce

Good well If you'd like to get yourself onto the bench them I've got I've got some questions which I've been waiting to ask you a suitable pause in the conversation. And the Val has said the term epidemic vertigo has been used increasingly on discharge notes from a&e patients who've subsequently come to see him. He's an osteopath. Does this is this a diagnostic category that sits well with you? I

Alan Sealy

guess this is referring to the sort of increase in in through referrals post COVID or post sort of something like that, perhaps I don't know. It's certainly the case that dizziness is quite Yeah, we're getting a lot of patients now who have had COVID in the past or under then have really having reactivations of a dizziness, or even perhaps dizziness for the first time. It, there cannot be a direct cause of dizziness from COVID. Otherwise, we'd have millions of people suffering dizziness, and they're not. So it must be more indirect. And I think the COVID is perhaps just causing a sensitization within the brain or messing up the control system to some degree with these longer.

Steven Bruce

You've not seen that diagnosis yourself. Yet? Not

Alan Sealy

not when I've come across very often.

Steven Bruce

Somebody who's kept the name to themselves says is loss or poor loss or poor balance, not normal in old age, and also for poor balance, not normal in old age. It

Alan Sealy

depends how you mean by normal. It's typical. It's common. Yeah, but it doesn't have to be that way. There are plenty of elderly who have very good balance. If you keep on challenging the balance system, they can carry on maintaining very good balance it of course, it deteriorates compared to when you're 20 years old proprioception is not as good. And it's very easy

Steven Bruce

to see see it you see a lot of 18 an age group, it's probably very easy, not just one as a practitioner, but for that age group for the novice is just normal. I have to put up with this because I'm this age.

Alan Sealy

That's what people think they think it's just a part of getting old. It doesn't have to be and mostly the poorest balance in the elderly is because we have an underlying vestibular problem, which has been revealed.

Steven Bruce

Okay, Tammy says she's desperate to help a patient who is 65 and otherwise fit well and active. But she has awful episodes of dizziness and nausea that can last a week is triggered apparently by having sex. Symptoms are debilitating. And she can't leave the house or consultant to centre to tell me because they think it's due to a tight neck. She thinks it's vestibular. And the advice from you

Alan Sealy

could be either, and basically it probably means is that it may also just be a regulatory thing. And the whole sort of autonomic system has been fairly well stimulated. It could be that it depends on how they're having sex depends on what they're doing. How are they moving?

Steven Bruce

So a week of being conformed to the houses? Yeah, that doesn't sound

Alan Sealy

like a typical mechanical normal sex. What is normal sex? Yeah, I mean, that's probably something else going on there. There must be something to do with sort of autonomic reactions. I would have thought right.

Steven Bruce

Mr. J. I am an osteopath, but also have a severe balance problem, accompanied by Oski Loxia. Also look to your right after a failed radical trans mastoid labyrinth ectomy in 2017. As you are aware, going to my seniors the chemical lab are infected me to the former. To the former, have you ever been aware of the more common mice in family of antibiotics causing ototoxic results?

Alan Sealy

I think all of the mice in family can to some degree but gentamicin is by far the most common one one was the one most likely to cause damage, right? So not to my knowledge in terms of the damage to the hair cells, but you you can always compensate from a peripheral vestibular loss. So the condition is reversible if you'd like but the damage is probably not okay. My

Steven Bruce

area says how often would one expect to repeat the test? You've just shown us if the patient was to review perhaps at six weeks?

Alan Sealy

I think I will repeat some of them. I'll repeat the ones which were symptomatic to see what have they become asymptomatic. But once you've ruled out red flags at the start, you don't need to keep on doing those tests unless they provoke symptoms, in which case you might be

Steven Bruce

wondering, I was wondering while you were going through this? I mean, how long is your consultation session? Because obviously you're talking to us. So it takes a lot longer to run through this. How long are the normal patient,

Alan Sealy

their normal assessment would probably take about 10 minutes? Right? So I mean, in answer to your question I have about an hour with my clients, I think is worthwhile putting the time in, I think the client gets a much better experience and you're much more likely to have a better effect. If you spend time with the

Steven Bruce

patient for all sorts of reasons. Phil says How long does your assessment in total will take So in total,

Alan Sealy

probably about an hour, probably at least 20 minutes of of talking to start off with saying it's good to get a good history. The running through the sort of the protocols, if you'd like probably takes about 10 minutes and then treatment at the end whatever that involves, whether it's a specific treatment for crystals or whether it's planning a rehab programme with the patient, demonstrating and explaining. Now

Steven Bruce

Jason wants to know about any recommended reading for the clinical examinations you demonstrate Is there a good textbook source but

Alan Sealy

then there isn't a very good one to be honest. The standard one is is a book called vestibular rehabilitation by Susan Hurdman, from American Susan Hurdman. But it's, it's long. It's very, very detailed. And it's a little bit unnecessarily detailed and

Steven Bruce

what to do. Yeah, it probably takes 10 pages to do that and not exactly,

Alan Sealy

exactly. So I don't think there is a very good one out there.

Steven Bruce

Okay, services, can your problems trigger stupid problems?

Alan Sealy

Job problems can make people dizzy, they probably won't trigger a vestibular issue. This is the thing. So they may well be a component of the problem. And it's about identifying is the component today, or is the main component today? stimula. Net neck jaw visual. But yes, they may well be involved.

Steven Bruce

Right. We'll let you get back to your patient for a time. Okay, good question, we're looking at BPPV. Or,

Alan Sealy

Yes, we're looking at them assessing the patient for BPPV was benign positional vertigo. Here's where we use the bench, I'm going to basically move the patient around. And we're trying to see if we can move crystals around the different canals. And we use different test positions, because the canals are orientated in different planes. So that's why we put the head in different positions, I think it's important to get the bench at the right height for you. So I like the bench at about sort of mid thigh height, so we don't sort of hurt our backs too much. Okay, patient if you could bring your legs up onto the bench. We go. Now by far the most common condition you're likely to come across is posterior canal benign positional vertigo. So this is the one that you should really spend most time practising and get used to. We assess the condition by something called Dix Hall pike manoeuvre, which is basically involves having the patient turn their head 45 degrees to one side, and then lying backwards. Now we have the head in 45 degrees rotation, because we're assessing a posterior Canal, which is at a 45 degree angle to the sagittal plane. If we put the head 45 degrees to that side, the canal is now in the sagittal plane and in the plane of the bench. So you put the canal in the plane of the bench, and then any movement of the patient will be in the plane of the canal. So therefore, you will generate movement of the crystals around the canal with gravity. So we have 45 degrees, I like to face up the bench, there are various other books and people will tell you, you must sit at the end of the bench and you have the patient's head dangling over the edge. But I prefer to have the patient facing me. So I can look at the patient, I can hold the patient's head and Mark, you can hold my arms you hold on to my arms. And then you can use me if you've got poor control or feeling very unsafe. And remember, we're putting the patient into a position which may produce a big dizziness, a bit of vertigo. So the patient is going to feel very insecure. And if they're on a narrow physio bench, they're not going to be very happy. To save having too much extension at the neck, I'd quite like to have a pillow behind the patient's back so you can lean back over the pillow. So you don't have to have so much neck extension. We basically dropped the patient down into this position. And I'm looking at the patient's eyes. And what I would expect to see at this point, if it's a positive Dix Hall pike would be a torsion and a upbeat nystagmus the eyes and I think we have a video of that that we can have a look at so that patient delegates can mark if you want to sit up for now. This is an example of a right Dix Hall Pike, and you're looking at the eyes. And you can see that it produces a reaction, pretty unmistakable, up beating and torsional nystagmus. Okay, and if you see that, and it settles, as this is settling there, then nothing else produces that reaction. And it's one of those rare cases where you can be 100% sure of your diagnosis, because nothing else produces that reaction. Okay. And that's quite a valuable thing. I think. We didn't, we didn't get that with Mark. But meanwhile, if you put yourself to before you,

Steven Bruce

is the variation in the frequency of that beat. Could

Alan Sealy

it be yes, it can be yes, it just means how mobile the crystals are within the cloud. So if the crystals are heavy and a falling rapidly, big lump of crystal and it's a big problem, you will generate very, very rapid, powerful misdiagnosis and the patient will be very, very dizzy, lots of vertigo, spinning sensation. If on the other hand, the crystals are kind of sticky, and they're not very heavy, they're they're not. They're similar density to the fluid, they're going to fall slowly, you're going to get a slow onset and the stagnation. It'll be rather sort of half hearted and still treatable, but you might have to use a little bit more energy in the treatment to actually dislodge the crystals. Okay. Right. So, Mark, can you put your feet back up on the bench? So we'll go back into this Dix Hall pike position now? I would always check both sides. DIX Hall pike because I need to know is it a one sided problem or is it a bilateral problem? And we do have bilateral BPPV? Yes. If it's bilateral, I want to treat the side with the strongest symptoms the strongest response today and bring the patient back on a second occasion for the other side. Why? Because I might undo the treatment in doing the second canal, I might mess up the first one by redoing the second, just to keep it simple. So we go Dix Hall pike on the left, back, you go. Now in the normal, nothing will happen in the pathological, we'll get that jumping the stigmas of the eyes, and then it will settle down. And in this time, I can talk to the patient. Don't worry, I know exactly what's going on. And I've treated this 1000 times, I'm going to make you better, you're going to be better off today. So lots of reassurance and sort of positive reinforcement reinforcement, keep your head there, no cheating, is that okay? Next I'll show you a little about how you can do this, if there's a problem with the neck. Okay, but obviously, in this position, we have the neck in 45, rotation and some extension, so we got to be a little bit careful of leg problems. Now the symptoms and then snagless will settle down after 510 2030 seconds. Hold this position for about a minute, we need to make sure that a nothing happens in that minute and B if it does happen, but it's settled right down. So we keep the patient there for one minute. And this is actually position one of an Epley manoeuvre. And so if I know what's going on, if I've seen the patient before, I know he's got a left sided BPPV I can go straight from Dix Hall pike into the Epley manoeuvre. If it's the first time I've seen the patient, I would sit the patient up, come right up to newsmen if you want, and they will be the opposite pattern of nystagmus, because the crystals will move the other way. So as the patient sits up, you will get a little bit of a reaction, little bit of dizziness and from opposite nystagmus. And then I'll check the other side to see which side is the worst side. And if we're going for treatment, then yes, we go straight into the actual bike. And that is position one of the Epley manoeuvre. So we hold this position for one minute, as long as everything's calmed down, then we can go to the other side, and we can go to position to position to you bring your head slowly to the other side, you don't need a lot of speed with this, because the crystals are going to roll around the canal with gravity need to come around to this side for this occasion. And I'll show it on the other side as well. Hold this position for one minute. Position three is the fun one, you bring this knee up. And you're going to roll on to your right side, but bring this arm right around me use me, I can get my elbow right over the patient's shoulder and bring you onto your side, you come onto your side right towards me. And this is why it's important to be stood by the bench blocking the patient. So they're not going to fall they're going to fall, I'm not going to feel the falling off, I'm supporting the weight of the head, and the head is 45 degrees down. So we started off 45 degrees to the left, then 45 degrees to the right, and 45 degrees down. And this is position three. And we hold this position again for a minute. And then bring your legs forward off the edge of the bench and sit yourself up you can use me We just helped the patient up. And then just keep the head a little bit of flexion. Because a lot of women and men with long hair will want to flip the head back to keep the hair out of the eyes. It's not an issue I have or even mark as we keep the head still just to stop the crystals flicking back into the into the canal. I'll show you that on the other side just for the cameras. Just bring your legs up again. To do a right side epi manoeuvre this time, let's head to the right get hands on my arms if you want the right the way back. Position one

for a minute. Let's make sure everything's settled down. Turn the head position to scoot around the other side. Again, one minute, you bring this knee up, roll on towards your left side, bring this on right around me. Come onto your side roll right towards me. And you can use your elbow around the patient's shoulder to keep them nice and snug, nice and sort of supported. Relax your neck, it's good. And then bring legs forwards and set yourself up and head a little bit forwards. And that is an Epley manoeuvre. And that

Steven Bruce

is a frequent mock was scooting a bit rather than rolling Mattox you

Alan Sealy

shouldn't matter too much. It's head position, I'm controlling the head, it's all about the head position, and you're basically just moving the canal through space. So the grip the ground, the crystals will roll themselves around the canal.

Steven Bruce

I'm guessing most patients will do that, because it'll be worried about falling off the edge of treatment. Yeah, and

Alan Sealy

if I'm holding them, it's important that they're sort of reassured me feel safe.

Steven Bruce

Okay, sorry, I

Alan Sealy

interrupted you. No, that's okay. So I tend to do an epi and then I want to know whether it's worked. So I will always retest Dix Hall pike straight away and see whether it's worked. And then if it's negative, yes, I know it's been a good success. And you would expect an immediate improvement like that you would expect it to be better, just like that. But I will then go on and go into a second Epley manoeuvre, because in retesting Dix Hall pike I could be moving some crystals back towards the mouth of the canal. So I want do a second deputy to clear them well away from the mouth.

Steven Bruce

If it has worked, your patients going to be quite reassured, but at this stage, you can think I'm a lot better already. Exactly.

Alan Sealy

It's really powerful to show the patient show the patient that if there's a difference show you've made a difference, and they feel better. And that's very effective. You look for more, because

Steven Bruce

are you willing? So you got your back to the cameras, but you're comfortable with that Dix Hall pike assessment that everybody had your head extended? Was that just my misinterpretation?

Alan Sealy

I think it was just the duration that my neck was in? Yeah. Yeah, I mean, obviously, you wouldn't be in that position for quite as long. But I would say a minute in each position is generally reasonable. Now, if you are concerned about the patient's neck, if there's any issues to do with circulation, you're worried about if the patient just has a crumbling neck, or they have been builder or rugby player, and they just won't go into that position, then we can modify Dix Hall Pike, so that it's a little bit more comfortable, which I can show you. Now. If you sit on that side of the bed do something called a modified Dix Hall Pike, which is just as good. But here if we just lock the patient's neck, and twist the trunk, and then we can lie you down quickly like that, that will produce a similar reaction. Okay. So drunk there, and then we'll go on three, fast as you can onto this shoulder 123. And you can bring your legs up onto the bench. So this is a similar ish position. And because of the fairly rapid rotation or sideline down, you will get moved into the crystals within that site. Yes, yeah, we've tested can only move towards going towards the right.

Steven Bruce

And again, we've heard people do this on the show before, they've never actually said that this is the angle of the canal when the head is in this position.

Alan Sealy

Again, it's about putting the cow in the plane of the bench. And so then we're moving the patient in the plane of the canal. And, you know, to be honest, I can never remember which way I've got to turn the head. But if I picture the canals, yeah, here are the posterior canals. I want this right posterior canal in the plane of the bench, it's got to that will be a head turn away, and then you light it on this side. Likewise, if you if you want to treat the anterior canal, it's going to be different here. They're going to turn it that way. Anyway, right, so we have an equity manoeuvre, I would tend to do it twice. If it was negative, great, send the patient away. I tend to ask the patient to take it easy the rest of today. Avoid big forward bends, avoid tipping your head back, and tonight try and keep off the treated side. The literature says it makes no difference how long you ask a patient to immobilise for so we used to say two weeks in the colour sitting upright in the chair. And it was one week and then they got rid of the colour and then it was 48 hours and then it's 24 hours. But the literature says over a population. It doesn't make any difference. How long you mobilise somebody, but some

patients it doesn't make a difference with Neff office for my patients, I tend to say take it easy to rest of today. And for tonight. Keep off the treated side.

Steven Bruce

I'm trying to picture now what's happened to these crystals. Okay. crystals

Alan Sealy

will have been drained. Just like when you remember these little games you play with amazing the marble and YouTube amaze around the Marble Falls. That's what pretty much what's going on with the crystals in your head. And the crystals will come out of the canal back into the waterless where they will be reabsorbed. Right. So crystals belong in the wall of the Nautilus. They're important they have mass and therefore they allow us to detect forces acceleration and gravity through age and just generally the crystals are fragmented, continually fragmenting and crumbling. And so little crystal fragments like a sitting in the auto lift all the time and new crystals are forming. And as we age that process increases so the older you are, the more bits of crystal you have floating around in your ears Yes, the within the otter list, they get reabsorbed quite quickly because there's relatively large amounts of fluid small amounts of crystal, whereas within the canals is that little bit fluid and quite large amount of crystal. Okay.

Steven Bruce

Right. Where do we go with Mark now? Okay,

Alan Sealy

now we can also if we want do another manoeuvre called a three month manoeuvre, and this might be more appropriate for the patients who we don't want to put into that equity position, which is pretty damn uncomfortable if you've got a bad neck. Yep. So we could do something called a similar manoeuvre, which involves speed rather than positioning. So we use centripetal force if you'd like to with the crystals around the canal. It begins with the modified Dix Hall pike. So again, if we say we're going to treat the right posterior canal, so if you twist your trunk round that way, and we're going to go down onto this shoulder first of all, and then bring your legs up onto the bench, so we'll go on 3123 And it looks a little bit brutal, but in actual fact, the very sort of fragile little ladies or the bit Have builders Hold this position for a minute, that would probably be provocative. So you'll get dizziness and misdiagnosis. Once it's all settled, we know the crystals have reached the lowest part of the canal. Therefore, it's time to move again. So position two is a fun one, you're going to go as fast as you can come to this side. So you're going to drop your feet off the edge of the bench that you're going to sit up as fast as you can, and go all the way over to the other side. But keep your head and body twisted to the left slightly. So you'll end up with your nose down on the bench. You just helped me. So you're gonna sit up as fast as you can 13123 up and down. That's it. And we'll stay there. And you can bring your feet up onto the bench if you want. And so that's the same manoeuvre, so we're looking for speed as fast as you can. And I'm

Steven Bruce

guessing that because you didn't do this straightaway that this is less effective generally than Dix Hall pike.

Alan Sealy

You just bring your legs over the side where the results are pretty similar, right? It's less well known. Therefore, nowadays, everybody's Googled, everybody kind of almost wants to have an equity manoeuvre because that's the one they read about. So I tend to do the app at first. It is perhaps a little bit less effective than Napoli. But sometimes it's more effective. So there are some situations where the crystals are a bit sticky, and they don't just drain with gravity, and then you need the speed. So sometimes I will do a seamount followed by Napoli. And as a pair of treatment.

Steven Bruce

I got a whole lot of questions. Now, let's take some questions. Yeah. So he says that she's going to be a pain, what if they've got a shoulder issue preventing them from lying on that?

Alan Sealy

Yes, you just have to adapt to whatever we do. We have to adapt it to our patients. The principle is very clear. Yeah. There's no wrong or right ways of doing these things. You just have to involve more trunk rotation, so they're not purely on their shoulders, not on the point of the shoulder. But yeah, absolutely right, Sally, you've got to adapt the technique to fit the patient. And as long as we're moving the head into the right position, it doesn't really matter what the rest of the body is doing. So you can sort of compensate by using your bench and make sure you're sort of dropping the bench down. If you've got a bench that will drop down use that to the patient's head is always supported. If you don't have that, or if you're doing using a flat bench or a bed at home, you can even lift up one end of the bench. So you get a little bit of inversion of the head is fine. It doesn't matter what the neck or shoulders is doing. Its head positioning is the key. Okay.

Steven Bruce

You just partly answered this. Lauren says how do the crystals come adrift in the first place? And you said naturally, they will fragment but they don't. They shouldn't go into the canals. He's asked whether trauma can be a cool, absolutely right

Alan Sealy

lines. Yes, trauma is probably the commonest cause for BPPV in younger people. So head injury, if you're playing rugby, or if you have a whiplash in a car or something you back your head on the dashboard or whatever. headrest. Yeah, so trauma can dislodge them. It was

Steven Bruce

quite alarming for a child's parents if they suddenly that Johnson was getting busy. Yes,

Alan Sealy

yes. Yeah. And I have I've treated a four year old and a seven year old girl, the youngest of them with BPPV. It's more common as we're older because there's more bits of crystal and a fragment more. But the symptoms are often worse. The younger you are because the crystals tend to be larger, so they fall heavier, heavier, faster. Okay.

Steven Bruce

Janet says how often do you get adverse side effects after the Epley as she says here, nausea or vomiting, and

Alan Sealy

nausea relatively frequently, it's quite common for people to feel a bit nauseous, a bit spacey straight after the technique. So we warn people about that. And they can sit quietly for 10 minutes in the waiting area or whatever. vomiting, it depends on who you are. GPS, when they do this, the patients vomit all the time. And that's why they stopped doing it with myself Touchwood I've only had one person in 20 years vomit in my clinic. So always have the bucket. But if you do it right, if things are on my side, because I'm the expert, they're coming to me they have some trust, my handling is good because I'm used to doing it. So the patient is reassured.

Steven Bruce

So when you first got qualified or skilled at doing this, how often did they

Alan Sealy

actually know to be honest? No, no, not either. Not then. The vomiting one was relatively recent, in fact, but that was more the patient rather than anything I was doing.

Steven Bruce

You feeling alright.

Alan Sealy

Good. A bit of spiciness. A bit of nausea is relatively relatively common. And you know, we've got to be aware that you are putting a patient's head into 45 degrees and extension there. We have to be

aware if there are any concerns regarding circulation and through the neck. We really must adapt the technique and use the modified techniques.

Steven Bruce

brokers out there they like to send in conditions that I've never heard of and long words I can barely pronounce, especially on the fly and as Charlotte says, Has anyone found any vestibular rehab that would help Melda Barkman syndrome? Yes,

Alan Sealy

this is a different thing. So we're getting away from crystals now. Mowgli bark Moises see like if you've been many of you have been built on land, and you feel that you're in some form of motion for an hour or two. And normally it settles down very quickly. With some unfortunate souls, it doesn't, it keeps on going. And they can have that feeling of motion for months, sometimes years. It's to do with how the brain is using the sensory inputs. So when you are balancing as you stood there, now Stephen, you're predominantly using your proprioception for balance, your head is not moving doesn't matter whether you close your eyes or not. It's proprioception that's keeping you upright. If you go onto a boat, for example, your proprioception is going to be unreliable, because you may be stood on the solid floor at the bar, but the boat is pitching up and down on the North Sea, and therefore, it's giving you false information. So you have to switch away from that. Now, if you're like me, you will use vision. And I will tend to look at a point on the horizon or stare at the land or Lighthouse or something, and that will keep me up, right. But as soon as we're in the blue water, and I don't have a clear visual reference, or I go blue decks, and I'm at the bar, my eyes are telling me I'm stationary, my body is telling me I'm stationary, but the boat is bubbling up and down. Yes, I have to switch to using the vestibular sensory inputs and a good sailor will. I don't, therefore, I'm seasick. But point is you should be able to switch systems. And then when you come back onto land again, you should be able to switch back. And some brains find it very difficult to do that. So yes, you have to tailor your rehab to that particular client. And everybody's a little bit different, but often it involves re emphasising the proprioception. And moving away from the vestibular input something about re emphasising how proprioception really by stimulating proprioception as most as much as possible. So a lot of balance work within bare feet on hard surface weighted with a rucksack waiting belt, that sort of thing. And varying as well. So getting people on soft surface, then hard ground, soft surface hard ground, so probably doing some form of water. Proprioception yourself, absolutely. Yeah, we can do that and get them sort of wobbling around on boards and trumpets and the like, and moving as well. You can, but yes, it does work, but you have to tailor the rehab.

Steven Bruce

Kim says do you go the opposite way with the head for posterior canal to anterior canal?

Alan Sealy

Yes, you do. Anterior canals are not common because the anatomy of the anterior canal is such that the open end of the canal faces down so the Debye tends to drain out of its own anyway. And the

one of the treatments ran through Erie Canal is very much like a functional movement like bending down tying one shoelace tying the other shoe laces and standing up again. So people naturally tend to self treat without even being aware of it. But again, you just think about where the canal is if we just sit yourself straight square again. If you match, imagine we've got posterior canal on the right and you've got anterior canal on the left and they are in the same plane. So anything that is stimulating the posterior canal on the right will also stimulate the anterior canal movements towards the posterior canal. If we go to the right there that will be x iterated the posterior canal on the right but inhibitory to the anterior canal on the left, that movement that way will be right excitatory to the anterior canal inhibitory to the posterior canal. Okay, so yes, you can super

Steven Bruce

someone known as Ostia once was, I have a patient who is booked in for tomorrow afternoon, she woke up with vertigo type symptoms. When she lays down the room spins. She had a spa treatment and she thinks it was something she did with her neck. It's tender in one place, and it's making her feel very sick. osteo one is asking for some advice. Now quick

Alan Sealy

sounds like BPPV. When something is really positional like that, she says she has a vertigo. That's a strong sort of feeling of dizziness, which you're asking at the very outset. Yeah, yeah. Can you differentiate a little bit well, sudden onset stones that vertigo almost certainly implies an imbalance somewhere or difference between the two sides. So that would probably imply anything

Steven Bruce

you think she's mentioned, it could be quite coincidental this person has been to a spa. Is there any sort of thing there that might aggravate? Well,

Alan Sealy

if she's been laid on her back, for example, having a neck massage or a facial or something, she's been in one position for a length of time that may well have done and typically for example, dentists trigger a lot of BPPV because the patient right back in and went upside down sometimes, okay, yes, it may well be just that.

Steven Bruce

Chopra says what's the anatomical link between the crystals and nystagmus?

Alan Sealy

Good question. And here we come back to the physiology again. So the canals of the inner ear are wired up by the brain to the ocular muscles. So for example, if I have a posterior canal, or let's think

about a mark, it might be easier to see for the folks posterior canal here. If we bring the canal into the sagittal plane and move backwards. The vestibular ocular reflex is for the eyes to go round and down to the left. And they will carry on going round and down to the left into the right around the back of the skull, which is very uncomfortable for the brain fixed back towards midline. So it's really just the normal vestibular response because it's an excitation crystals are falling around the posterior canal that excites the posterior canal generates eye movements the opposite way, and then the brain corrects it. So we have upbeat torsional misdiagnosis.

Steven Bruce

Thank you. Tim, do you have says Do you have an opinion on why be histidine works sometimes in brackets. It doesn't create nice simple answers. Just

Alan Sealy

to qualify that, a very well known and sort of respected end surgeon called mom's Magnusson from Sweden, who's one of the leading people in the field. He told me a course when I was with him. The best thing you can say about Viva history is it does no harm. So it's widely used, though it's the common common most commonly prescribed medication because it's, for example, for many years disease, right? But it's supposed to increase perfusion to the inner ear. Why that would help. I don't really know. Okay.

Steven Bruce

We're going to run out of time soon. If I gave you 10 minutes to do something more. Is that going to be enough to demonstrate you've talked about cervical doesn't dizziness? We can have a little

Alan Sealy

look about that. Yes. And the trouble with cycle dizziness is there's no reliable good definitive tests for diagnosing cervical dizziness. And I would say you cannot, because we cannot, in fact, in practice, separate vestibular from cervical inputs, because they go together throughout the nervous system. So your dorsal ramier from your C two, three and upwards goes into the vestibular nuclei along with the vestibular inputs. Therefore, how can you separate them and as far as the brain is concerned, at the level of the vestibular nuclei to where the brain doesn't? Well, it's, it's deciding its outputs. It's just an electrical impulse. So you can't really tell the difference. So what I think is much more useful is to think about, which is the main component, is it a bigger component of cervical today? Or is there a bigger component of vestibular? So is it more to do with neck tension, neck movement, or head movement, and that's probably the best way of thinking about it. There's a one reasonable test we can do, which we can bring it, swivel chair in to us. So Mark, if you were to perhaps sit on the chair, facing me, we can do something called a smooth pursuit neck torsion test. And the thing was cervical dizziness is you cannot diagnose the back of dizziness by looking at the neck. Because you fundamentally can't tell the difference between someone with a bad neck. And someone with a bad neck. Who's dizzy? There is no difference at the neck. So you cannot diagnose the vehicle dizziness at the neck, which is a little bit paradoxical for us manual therapy. Yes. So we have to look away from

the neck. And we can do that by looking at smooth pursuits. So we compare smooth pursuit with the neck and neutral. And we're looking at the quality of smooth pursuit with the neck in neutral and does it produce a symptom? It's all about symptom response. And we compare that to a smooth pursuit in neck torsion. So now if you rotate your whole body, but keep looking at me, so now we've got neck torsion, 45 degrees, and we'll repeat smooth pursuit. And is there a difference in quality of eye movement? I think are they more jumpy? And or does it bring on a symptom and repeat that and the opposite neck torsion? The same thing here. This test has been validated. So it's effective for whiplash population, but not normal mechanical neck pain population. But it was that was with using the computerised iconography. So you know, we don't have that in clinics, we just eyeball it, but it's still clinically useful as an eyeball test.

Steven Bruce

Why is it more useful to do that with him sitting in a chair rather than turning sideways and looking at

Alan Sealy

it, you could do that way as well, if you want to if you want to stand up. And again, same thing, look at me, neck neutral, keep the head still neck neutral. And now twist right round. Otherwise, twist the body. That's it. You could do it like that. And that's a fair point. Yeah, there's no difference in practice, it's slightly different postural set, you will probably say this would be more likely to produce a reaction. Yeah. Right.

Steven Bruce

Anything else you'd like to do with Mark before we go back and sit down, and that's

Alan Sealy

probably enough for now. Thanks, Mark.

Steven Bruce

Thank you very much. All right. Let's go back over here and see what the audience has to say about all that.

Very clearly explained. Thank you. I'm really pleased that so hopefully everybody else thinks the same thing or maybe they just think I'm stupid. Steve says I have a patient recently diagnosed with vestibular migraine, no pain, just dizziness or any thoughts on that? Yeah,

Alan Sealy

migraine is probably one of the more common triggers for dizziness and again, we're thinking about the triggers and the commonest trigger is a BPPV. Second is probably vestibular migraine. Third would be Vestibular neuritis. And so in migraine is just a temporary imbalance between the two sides of the brain in the vestibular system, so you're getting a temporary imbalance hence, very strong vertigo, horrible feelings. But then it will settle it will behave like a classic migraine maybe comes on out of the blue, but then you're forced to lay down in bed for a day or so. And then maybe a day or two recovery after that. So that would be a vestibular migraine and just as the delegate says, the symptoms of dizziness rather than headaches or kaleidoscope,

Steven Bruce

so you would recognise that it was a migraine because of the other symptoms that came on with it,

Alan Sealy

not necessarily you may just have the dizziness, just the vertigo. So you can have it just purely depends on the whereabouts in the brain the burst of firing or activities occurring. It's the bits of the brain dealing the visual effects of migraine, or just the onset and if it's suddenly out of the blue blasting a day and six hours to a day or something that sounds like a migraine, but what probably is okay, a lot of people are diagnosed with vestibular migraine now perhaps incorrectly, just because they have what's called Visual sensitivity. So you move eyes or things move around in front of the eyes, and they're sensitive to that so that makes them dizzy. And that has been labelled vestibular migraine. That is not technically vestibular migraine, that's just visual sensitivities, but migraine may have been the trigger in the first place. Okay.

Steven Bruce

Annabelle asks if it please sorts of posterior canal issue, what can you do to treat anterior or lateral canal Okay,

Alan Sealy

so we didn't really get on to the anterior and the lateral because they're less common, yet 90% are going to be posterior canal. So if you're not seeing that many Dizzy patients, it's likely to be a posterior canal. lateral canals are probably account for about 10% or so of the BPPV and are most likely to occur as a complication of equities. Right if you do an Epley manoeuvre, and if the patient just is a bit unlucky, or they're the anatomy of their canals is such that the debris it's falling out can actually fall into the lateral canal. And then you can do a repositioning manoeuvre for a lateral canal. Communist one is known as barbecue. So called because you revolve the patient like a chicken on the spit 360 degrees, basically draining the crystals out. Anterior canal, again, left common you can do reverse Nepalese, you can do a very deep Epperly. You can do a theme or a reverse Siemens manoeuvre, you can do this there's different manoeuvres you can do. By and large, though the patient treats themselves because typical manoeuvre is just to bring my think about my anterior canal on my right side, I bring my head to the side, bring my head to the left canals in the sagittal

plane, I go forwards. I go round, I come up, and I come back up again. Yeah, I do that every day when I do my shoes and socks. Right? We tend to treat ourselves. Okay.

Steven Bruce

Sharon says can you do the Epley manoeuvre on yourself? Yes,

Alan Sealy

you can. Absolutely. Perfect demonstration you go. And patients can do it themselves. And once you once you teach a patient how to do it, they're perfectly able to do it themselves. It's just as effective. thing is they don't know for sure which canal and which technique is going to be the best one for them. So if I want to give a home exercise I will only ever give it once I've diagnosed posterior canal BPPV. I never give exercises. I don't know what's what's going on. Having diagnosed that I tend to prefer a SimonK manoeuvre as the home exercise because it's only two stages as opposed to three. And it doesn't involve putting your head into that rather uncomfortable. Extension rotation.

Steven Bruce

Okay. elvina wants to know whether you can test someone if they have no stigmas, generally due to vision issues from childhood? Or how can you test someone if they have nystagmus? Generally,

Alan Sealy

yeah, so a lot of people have a congenital nystagmus. And obviously, that's going to mess up your interpretation of eye movements. But what you'd be looking for is something on top of that. So you will have seen people whose eyes are jumping around with their congenital nystagmus. But if you were to drop them back into a Dix Hall Pike, the nystagmus pattern may be rather misleading, but there still would complain about vertigo, because the brain will be getting false signals from that particular Canal, which would disagree with the signals from the other side. So they will still have the symptoms, even if the misdiagnosis is a bit haywire. Okay.

Steven Bruce

Bi I think it is what are the diagnostics and treatment for LeBron LeBron fighters, which we talked about earlier on.

Alan Sealy

Here we're talking about loss of function on one side, the brain should naturally reset the system. It should, it should occur naturally. Often it doesn't. Because people put in the barriers, the obstacles, they keep themselves still they don't stimulate the system, they don't give the brain the feedback it needs. Basically, it involves head and neck movement. If you move the head, move the neck, the brain will get feedback, it will get it wrong because it's the imbalance therefore the patient will be

dizzy, but the brain will quite quickly realise that it's getting it wrong and will therefore correct it. So it involves head movement, right,

Steven Bruce

which actually is probably quite scary for someone who's had Lebaran fight because very scary, just very

Alan Sealy

unpleasant. very worrying. And yes, they keep their head still. Classically the labyrinth tightest patient will not move their head and they'll be going up and down like this and they'll be twisting their whole body They won't want to move their head.

Steven Bruce

I like this question. Elsbeth says that she missed the Epley manoeuvre that you did in yourself. Could you do it again?

Alan Sealy

Okay, right. So right posterior canal, hit to the right, tip it back, go back like that, then round to the other side and then loads down and then bring it back up again. It's it's that's a rough and ready one, but it's not far on

Steven Bruce

this sudden fear as you're doing that. Oh my god, is the chair gonna fall off the stage while you're doing. But it didn't. Rachel says I suspect the answer is no. But is it worth testing someone with an established condition like MS to see if there are any treatable components to their dizziness?

Alan Sealy

Absolutely. It is Rachel Yeah, because MS is variable and Ms. people with MS can have neuritis. So there are lots of different Yeah, there'd be lots of different potentials there. And it just depends, you know, with the MS for example, it depends where in the nervous system the D myelination is occurring where the problem is. It may be centrally may be peripheral, it might be a problem on the cranial nerve or vestibular nerves. Okay, so yes, it is worth

Steven Bruce

Anabella says if BPPV causes end up beating torsional nystagmus with Dix Hall pike kind of central issue cause a different result?

Alan Sealy

Yes. So if you were to put somebody into a Dix Hall Pike, and you got to generate it in a stagnant, but it wasn't the classic BPPV then you might be thinking, Is there something else going on? And that might be a central issue? The expectation would probably be that you'd have vertical understanding within that situation. So yeah, if you were to see a vertical misdiagnosis that perhaps didn't fade away, then that might be a central issue, in terms of what's likely to cause that, probably the most likely would be something like a Chiari malformation. You're getting a compression of the brainstem cerebellum within the from the magnet. Okay.

Steven Bruce

Sasha says, she's seen a child today, seven years old, with Fukuda, very unstable, disorganised can coming for poor balance and coordination had some physio a year ago without improvement. There's no question in that, but does that

Alan Sealy

can't be any company diagnostic at all that we've no idea but any child with a with a very poor balance probably just means they need the system stimulated, they will have more stimulus to their balance system. So but someone like that, you'd be looking to stimulate the vestibular system as much as possible. So they should be doing lots of gymnastics and playing on the swings and going on the roundabouts. Or in a controlled way. If it makes them feel unwell, obviously, keep it limited but stimulate the system that the youngsters definitely

Steven Bruce

we've got 470 people in the audience who are now all experts in everything that you do

Alan Sealy

not quite, they need to come on a course. Well, I'm

Steven Bruce

not asking this question to advertise the course. But personally, I would want to do when rather than just watching you having done what you've done, what do you cover on the course.

Alan Sealy

We start off looking at the what it means to be dizzy. So we talk about setting the dizziness within a sort of psychosocial context, because that's important, as we touched on early on talking about the disability because we need to be aware of how it affects people. We look at the physiology behind it,

because the physiology although rather challenging, it's important because the better we understand the physiology, the better I can interpret what I'm seeing, if I'm interpreting correctly, I'm much more likely to be effective with my intervention. So a basic understanding the physiology is good. We go through the practical exam, just basically looking at eyes and the GI stability tests and the different central versus peripheral differentiation tests. We look at BPPV posterior canal and lateral canal don't really do the anterior canal on the first course. And we look at vestibular rehabilitation planning, and that's planning the rehab based on what we see in the patient. So not on a recipe or a list of exercises or a guideline because there are good starting points, but we can be a whole lot more effective if we base it exactly on the patient. Okay.

Steven Bruce

And at the end of the day is course you'd expect people to go away confident enough to be able to see their GP Dizzy patients. I reckon I could give them a go.

Alan Sealy

Yeah, to start off with Yes, I think the key thing I would say would be that you need to be able to recognise the serious pathologies, it's going to be dealing with a neurological symptom you've got to be able to recognise when it's a rub. So that's the most important thing to take away. Secondly, yes, a basic vestibular assessment, which you know, with a bit of practice takes only a few minutes and you can incorporate it in into your normal musculoskeletal exam that you already do. And then a knowledge of treating at least the posterior canal comfortably. And then basic, yeah, basic exercise programming. And obviously, the complex patients will challenge you if you've if you've got very limited exposure. variants, we don't talk about the more complex conditions and the central conditions, I do a follow up call.

Steven Bruce

I mean, from what you've said, there's, there's a large population of potential patients out there who are not getting ready access to treatment who could benefit from the matches.

Alan Sealy

It's a huge number. And it's a crying shame. Because this group of patients more than any other group I work with are the ones who get better. So these are the ones which are really satisfying, and the ones that you feel are actually making a difference. And you really do make a difference. Yeah, that's the thing.

Steven Bruce

A couple of quick questions will just come in Paul says, How do crystals affect balance whether or not connected to the sensory head?

Alan Sealy

Do you mean in a normal physiological sense, and physiologically, they're very important that they are connected to the sensory hitters in the auto lift. And so they help us detect gravity forces acceleration. In the pathological state, they are loose, they're rattling, they're free. So this is I guess what he's getting at here, they will generate currents within the canal, because as they fall with gravity, they will set up a current motion within the canal. And it's that current motion, which will deflect the hair cell triggering a false signal. Okay.

Steven Bruce

And Phil says, if you have a patient who presents with nystagmus, with Dix Hall Pike, but has no vertigo, should they be treated as a prevention in case of future vertigo or left alone as there are no symptoms? I

Alan Sealy

would treat it Yes. And because they may well have balanced disorders. And so you know, remember, everybody's different, we're all individuals and how we present is different. And that's why I'm saying at the outset, you can't reliably diagnose from patients description of their symptoms. And sometimes you do see in a stagnant without vertigo, but if it looks like a BPPV, even if it isn't being described, or sounds like one, it probably still is. So you could treat it and see if Mr. Magnus reduces, and it probably will, therefore, you know, it was a BPPV. On the other hand, conversely, you might have someone who you don't see any nystagmus, but you lie them down indictable. bikin, whoa, the world seems to spin for them, and they're very dizzy for a few seconds, and then it settles, again, treat it as a BPPV. And see if it works.

Steven Bruce

Given that there is the possibility that you're going to make one of these patients feel bloody awful, perhaps even as you have done, you're going to make them feel sick. Do you have any challenges with communicating what might happen to them making sure that you've got valid consent for treatment that they fully understand the purpose what you're doing?

Alan Sealy

It's a very important question, and people need to know what's going to happen. So I do explain what we're going to do. I asked permission to carry out the Epley manoeuvre, I do not routinely go through every possible outcome, because that includes death.

Steven Bruce

Yes, of course. So consent is an interesting term.

Alan Sealy

They come to see me they come to see me as a specialist, they come to see me for my opinion, and intervention where appropriate. Once I've asked permission to carry out the equity, I think that's enough. Yeah.

Steven Bruce

I think we've covered an awful lot of ground this evening, we have certainly a lot more practical than we often do. And it's been fascinating stuff very clearly explained. So thank you very much for that, Alan, and I'm looking forward, I will be, I think I'm here for your course. But I'm certainly hoping I'm going to be of that course, because I'd love to sit through it all. But I know we've got a large number of people on it already. So it's very nearly full. Anyway, thank you. I know you're gonna find all that really useful in your own clinic, even at the basic stage that we've got to at the moment