Academy of PHYSICAL MEDICINE

Treating the Whole Voice- Ref 149AS

with Ashley Stafford

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TRANSCRIPT

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Steven Bruce
There are times when I have some really irritating guests on this show and I've got one of them this evening. Irritating in the sense that he's ridiculously qualified. He has an Oxford degree in English, he has spent a large proportion of his life singing at an international level, the Vienna Boys Choir and the Vienna City State Opera are amongst the things in his resume, he's been teaching singing for 35 years, he has, of course, his qualification from the European School of Osteopathy and he also has a postgraduate certificate in education. So, I'm hoping that actually I can shut up this evening and just leave all the teaching to my guest. Ashley, Ashley Stafford, great to have you on the show.

Ashley Stafford
Thank you, Steven.

Steven Bruce
I left out your major qualification, which is that you're actually a member of the Academy of Physical Medicine as well, which is really nice for us. Ashley, you've made a career out of the voice, haven't you? And you're going to talk about treating the whole voice this evening, which is a nice all-embracing topic, which I'm looking forward to understanding.

Ashley Stafford
Yes, because I've come to understand that voice has been in my life, as it has been in all of our lives, from a very early age. And it's become an all-consuming passion, along with my osteopathic training, which took place in the middle of my professional career, which was very inconvenient for a lot of people, including my wife and children. But it was something that was really important to me. And in fact, it might be useful just to give a little introduction about how I came to that, because, for me, it all began by having polio. When I was four and a half years old, I was infected with polio, not deliberately I take it but I did catch it, and it affected my lower left limb and my left arm and hand so I couldn't walk and I couldn't hold things in my left hand. And after a couple of operations and being in hospital at the age of four, I was put into a wheelchair by a very benign orthopedic surgeon, he wheeled me out and said to my parents, I've done what I can, enjoy your life, which was a bit, they were a bit disappointed in that. But it being the 1950s they more or less took it on the chin. They moved after that to a new health district and they were able to get a second consultation with another orthopedic man and he said, Well, we've got a hospital, the Queen Mary Hospital, Carshalton for children, and they are running an experimental program helping people who've been put in wheelchairs to get out of them. It wasn't just polio victims; it was all sorts of other physical ailments. And I was wheeled into this amazing space in Carshalton, which was mission huts left over from the war. And three months later, I came out walking with no calipers, but was dropping a lot of crockery. And so, though I was walking and it was a bit unsteady, I was actually on my feet and able to take part back to life. And I had physiotherapy, it was a physiotherapy hospital and they looked after me for 10 years, on and off, and I had an exercise regime which I undertook religiously, it being the 1950s and parents did what they were told, and so did little boys. And I still kept dropping cups and saucers, because I think I was left-handed. But my left hand didn't work. And so, my mother said to one of the physios what can you do about this left-hand business? It's really inconvenient. It's getting very expensive. And the physio said, Well, I'm not really sure,

we've done most things, but had you tried learning the piano? And so, my mother said, No, hadn't but let's give it a try. Contacted a local church organist, who, unusually at that time was a woman organist. I suppose unusually, I don't really know, I had no other experience at that time. And this seemingly ancient lady who was probably, to a five-year-old looking ancient, but probably about 35 said, Yes, I'll teach him the piano if he joins the church choir. And so, this link, I mean, I never thought about this at the time, obviously it comes to you later on, but the link between that accident because there's no real music in my family, well, there was lots: Glenn Miller, Carousel, all the big musicals that my were my parents fan favorite music, and they were mine too. But that link at that level, that stage from singing and music and my physical, at that point, disability and my physical commitment to my body and the exercise regime I was under really somehow informed something in me, so that by the time I was 21 and was embarking on a professional singing career, the singing having taken off from the age of about six when I went to Westminster Abbey as a chorister, when I went to Oxford as a choral scholar, and joined the profession straight after that, but by that stage, I was already beginning to teach singing, people were coming to me or being sent to me and the question I always wanted to ask was: Why are you having a problem with singing? Singings easy. Where's the problem? So, in other words I was thinking not, how can I tell you how to sing, but what is it that's getting in the way of you utilizing your voice in the way you want to, fulfilling your creative potential, your expressive potential through your voice if that's what you want to do? And so, I started asking these questions and I explored all kinds of things. I had very good singer teachers myself, so I had that experience. I then explored Alexander Technique in some depth, but found it interesting but quite slow, didn't really feel dynamic enough for me, but that was my personal view. I did some work, massage therapy work, and went to a healer myself a couple of times. All this was sort of searching. And I met an amazing osteopath, having had a very nasty car accident, my occiput atlas was a bit messed up. And I was recommended to go to Gez Lamb. He helped me out a lot. And I was immediately hooked into the idea that osteopathy had a lot more to offer than anything else I'd been in touch with in this search. And so, he said, come to the ESO Have a look around, see what you think. And that was another story starting and that's how I became an osteopath.

Steven Bruce
Who was the osteopath?

Ashley Stafford
Gez Lamb.

Steven Bruce
That's not a name I know.

Ashley Stafford
He was teaching at the ESO at the time.

Steven Bruce
I don't want to dwell on polio, because obviously, I mean, it's the start of your sort of progression into osteopathy, I suppose. But you must have been one of the last children to not get the polio vaccine weren't you?

Ashley Stafford
Oh, I had the vaccine. I had the sugar cube, the pink sugar cube. Yeah. But I think the early days the vaccine, probably proved to be the case today, they weren't always completely reliable. They gave protection but not the total protection. Let's call it that.

Steven Bruce
There's another broadcast if we talk about vaccines.

Ashley Stafford
And maybe I got it mildly because of that.

Steven Bruce
Sure. Before we move on, just one quick question, you had 21 years as a vocal professor at the Royal College of Music. What did that entail?

Ashley Stafford
Oh, they call us vocal professors. It's a bit of a misnomer, professor just means teacher really. We didn't have to have any special qualifications except a decent professional career and some respect from the body of other professors who said, it would be a good idea if this chap comes along and helps our singers. So, I was coaching and teaching undergraduate singers and post-graduate singers of all types and advancing their careers through that conservatoire.

Steven Bruce
Well, I'm always conscious when I say things like what I'm about to say, that it may just be me, but I think that certainly my year, we didn't get much training on the voice in our undergrad training as osteopaths. What can you tell us about it? I mean, we've got this vague concept of vocal chords.

Ashley Stafford
We got no training on the voice either. Except we did quite a lot of anterior throat work, which I think is a good starting point to understand how to approach the voice. If you're going to approach the voice directly, if you feel there's an issue, the anterior throat is really a good place, obviously, the only place you can access it directly, generally speaking through the cricoid and the thyroid cartilage and the hyoid. So that membranous link through those cartilages is your direct approach. And there are situations where that can be very useful for different reasons. I'll come to that, what I was going to go through was sort of case histories actually, and they will demonstrate some different approaches to how we can affect the voice.

Steven Bruce
Yeah, please do. We always love to hear case histories because you never know when the next one coming through our door will be the same.

Ashley Stafford
Well, basically a lot of things arise. So, going back to your first question, we were taught to approach the voice, we had some really good teachers who were keen to allow us to access the anterior throat. Maybe the most important thing that they emphasized, and I would say that I would emphasize this now, is that it's a very emotionally potent area. And it's really important to bear in mind, as ever, in these situations, the case history. If that person has had trauma to the throat, of any kind, they are liable to be storing a lot of emotional energy there, which can be very distressing for them, not to mention you, when they collapse in tears and hysterics on your cable, if you had forgotten the fact that they were throttled by their husband and thrown down the stairs. That's not frivolous, there has been as a direct example of an ongoing patient who lost her voice following, actually not directly following but following on from, six months after a major trauma to her throat. And so, my point being, I would very much like to have directly treated her cricothyroid, which was probably the root or a route of this in terms of the structure, but there's no way that her throat was accessible for very good reasons. Now, obviously, sometimes people don't tell us things. They don't deliberately hide them, but they're not there, so in approaching the throat, rather like other sensitive areas, I don't think we need to have a signed affidavit but I think we do need to be really careful. Say, I'm going to ask you to tip head back, here's a cushion, I'd like to just palpate the front of your throat, is that going to be okay? All the things we normally do in sensitive areas, and to think of it along those lines. That would be the most important thing I learned on the course: be really careful approaching the throat. If we go back to the anatomy of the structures, it is one of the most complex areas, I believe, if you look at the layers of activity. And if people really want to know, it's too short, it's not the right forum to go into the anatomy in detail, but if you do want to know the anatomy in detail, I cannot recommend highly enough Anatomy Zone. You probably know about Anatomy Zone, it's on YouTube and this guy is unbelievable. He makes this complex area really understandable. And you can take out as much or as little detail as you like, but he's fantastic. It's 4 videos on the various different membranes, ligaments, muscles, cartilages, their interrelationships, it's really fantastic. So that clarifies things. And I really don't think, as I say is, it wouldn't be easy in this time to go into that. But one thing we do know, and I would love people to have as a few takeaway points obviously from this evening, is that we need to remember the four important cartilages that we are going to get our hands on either directly or indirectly are the hyoid bone, the thyroid cartilage, the cricoid cartilage, and by implication, when you're dealing with the cricoid cartilage you're dealing with the arytenoids. So, these four structures between them, we can really get our hands on. And the other thing to bear in mind, of course, is the placement of the hands on the thyroid, not to go too far back and get on to the thyroid gland, because it's quite sensitive and we don't want to be on there. So that can be quite scary if you don't know where you are. But the cricoid is really quite easy to palpate and the exciting thing about the cricoid and the thyroid is that actually there is a synovial joint there between those two structures. Which means that if somebody for example has been unfortunate enough to have a direct blow to the throat, again, rabbit punch to the throat on Hackney Downs or something like that, can result in total loss of control of the voice. And sometimes that relationship just there between the thyroid and the cricoid can actually be

corrected and that can be an amazing benefit for people. And most of the approaches to the throat are going to be very functional, very indirect, not structure in the sense of HVT. But you can actually get hold of that cricoid and very gently feel and sometimes you will get the sense of a disjunct and you can gently, functionally move it and it will, you may just get a tiny little click, and it will come back into, the synovial joint will actually behave like a synovial joint would like to behave.

Steven Bruce
What's the effect of that disjunct?

Ashley Stafford
Yeah, the effect of that is that you can't control pitch. The cricoid and the thyroid, apart from all the ligaments and membranes, the cricothyroid muscle, which is in two parts, basically has the effect of drawing the thyroid anteriorly around the cricothyroid joint, which is around the back. So, it tilts, like that. As that tilts, what it does effectively is lengthen the vocal fold. And as it lengthens the vocal folds, the pitch changes. So, it's the fundamental up and down pitch changing mechanism. And if somebody has just a flat monotone voice, it's not generally because they're tone deaf, well it could be, but it might be because their cricothyroid is not functioning. And that is actually a really useful thing to know that that muscle is the pitch changer. Which kind of brings me on to the major functions of the larynx, well, the vocal folds, really. It falls into three parts, we tend to think of breathing in and breathing out, very often, happens a lot, and in that case, when they're when we're inhaling and exhaling, the vocal folds are always apart. We don't really think about it, but they are. They're not closed, they're open. And the second thing that happens for the vocal folds is that the glottis closes and if you want to protect the lungs from peanuts and other loose objects, the vocal folds are a major protective mechanism. So, it's a survival mechanism in that sense. They also, obviously, the glottis locks, when you're straining at stool, having babies, anything, lifting heavy weights, so we create a pressure zone so that nothing gets through. And it's a power, it's incredibly powerful that. If you think of when you lock the glottis. That's really strong. So, the power of the larynx must not be underestimated, we tend to think oh, it's a mucous membrane. It's very, very soft. And it's vulnerable to all kinds of things like smoke and irritants and abuse. But it is fundamentally, it's controlled by the vagus nerve, the recurrent laryngeal nerve and a superior laryngeal nerve and it comes from the brainstem, it's part of our fundamental survival. And as such, we should treat it with respect in terms of the vulnerability of the throat and the emotions therein, but the folds themselves are pretty tough stuff. They're pretty robust. And when they are not working properly, it's really, obviously once one excludes pathology, of which there are a surprising number, but then that's the case when you look at lots of parts of the body. But once you've excluded that by sending any dubious cases to the local ENT man, and he has a look and says, right, that's fine, I don't know why your voice is not working, why you're croaky, why you have no stamina, why your voice cracks. All the things that could be disturbing people who are voice users. Once he's eliminated the fact there is no pathology then has to say well, what is going on here? And that's when it comes to the case histories in a moment that will become clear that there's a lot more just to look at than just the actual fold themselves, which is why I think the whole body, thinking of the voice as part of the whole is really important.

Steven Bruce
I'm going to interrupt you just for a second here, because apparently you cut out earlier on when you said the muscle which changes pitch Could you just go over the muscle that's changing pitch and how it does it just for those people who missed that section.

Ashley Stafford
Okay. Yeah, so the cricothyroid muscle which runs from the anterior- so the cricoid cartilage is a ring, looks like a signet ring, and the signet part of the ring is posterior and the anterior part is just a thin ring. And the thyroid cartilage is on top of it and articulating at the joint, the cricothyroid joint, which as I say is a synovial joint. So there at that point in that ring to the front of the thyroid, where the shield of the thyroid is pointy, you have the cricothyroid muscles which are in two parts. One's a little bit superior, it goes straight up, and the other bit goes back at an angle oblique. And as it contracts, it pulls the thyroid down anteriorly, it tilts it. And as it tilts it, it lengthens the vocal folds, so like an elastic band, the pitch gets higher. That's the main function. There are other ways that voice changes pitch actually, as a singer, one recognizes this more than in speech, because in speech, the pitch variation isn't very much. If my voice went up and down an awful lot and I went into all my registers and down the other way, it's actually going to be losing, it's not going to be doing the job. But so, when we speak, actually the cricothyroid is not that active. But if it didn't, one would speak like that the whole time and nothing else would happen. You would have a pitch which would carry on like that, and nothing else with no intonation.

Steven Bruce
Hopefully we've recapped a bit there. Ashley, are you aware that you have any sort of fan club at all?

Ashley Stafford
Not particularly aware.

Steven Bruce
We have a founder member because Beverly Polson says it's lovely to see you again.

Ashley Stafford
It's nice to know you're there. I think. I hope it is nice for you. It's nice to know you're there. But I hope it's nice for you that I'm here. Yeah, so let's go back to continuity. I think one of the things that I think is a joy in osteopathy is that we are so all embracing of such an incredible process. So, we've got this whole thing from the structure through to the way processes work within that structure, and the relationships between things. And then the overall complexity. And we have our hands on that complexity, that process, that relationship and that structure every day. And I think we are all probably quite humbled in the face of that. And the voice gives us a chance to perceive that very easily. Because the changes that happen in vocal production from when you take strains and stresses out of different parts of the anatomy, and the changes and the feedback you get from professional voice users, and that's not just singers, that's actors and teachers and lecturers and people who have to read from books and things. It's amazing, because they get it straight away. Which is not always the case with patients with musculoskeletal problems, because the changes might

sometimes be very quick but quite often it's a long, long process. But voice is very responsive to the changes and strains and stresses in the whole system. Just a couple of quick things. Thinking about continuity, which that brings one onto, it's very important for us to recognize that there is a continuity in the mucous membranes, in the mucosal linings, all the way from the esophagus, up through and down into the larynx. It's one embryological and mucosal structure. Now the implications of that, I think are obvious. So, somebody who has, they might come up with a vocal fatigue problem. And you think, I don't know why you've got a vocal fatigue problem, but then asked about the digestion. Have they got any digestive issues? Have they got any reflux? Are they aware of any of that? Because reflux is really common cause of vocal issues. So, it may well not be that they come with a vocal issue, but they might if you can resolve that. It's interesting to note, of course, that the vagus is stimulating acid production in the stomach, and decreased acid production leads to reflux, as well as the opposite. It's generally speaking, decreased power in the vagus, it seems to me, that's overlooked more than anything else, especially by the medical profession where they kind of suppress acid, which is not so good. But that same nerve, your recurrent laryngeal nerve, and then you've got your mucosal lining, so this continuity between those two, it's really worth remembering that. I think the technical term is the MALT reflex. I think it's the Mucosal and Lymphoid Tissue reflex, which comes to that continuity and very logical continuity. The other continuity we have is the fascial continuity, which is very obvious when we start looking at the way the larynx sits in relation to the cranial base, down through extrinsic muscles from the jaw coming down through to the sternum basically and the clavicles and the upper ribs. But the internal continuum, if you think of the cranial base, this is the obvious one, the cranial base, the pharynx attaches at the pharyngeal tubercle on the occiput, and also on to the wings of the sphenoid and pterygoid plates, and it hangs from that superior, middle and inferior pharyngeal constrictors, coming down as a tube along with all the other membranes and mucosa, that continues down as the trachea, you've then got your broch pericardial membrane linking the trachea and the bronchi to the pericard. And the pericardium wraps all that up and is fused fascially to the diaphragm. That's one part. And then under that, of course, liver, spleen stomach, and that going down is the pelvis. That's your anterior. Then of course the posterior fascial continuity is also more obvious. But this fascial continuity really means that you could be working perhaps on the cranial base and looking for the spaces underneath and you can have some people who are sensitive, a professional singer will say, what are you doing to my larynx? And you may just simply be wanting to monitor what the SPS is up to. And as you do that, you might be taking it into, let's say, it might willingly go into external rotation or flexion and suddenly, whoops, my larynx is coming up through the floor of my mouth, could you please let go? It's quite surprising to see, did I do that? So, if one ever has any doubts about the, not so much efficacy, but the actual reality of working with cranial membranes, just try treating a singer whose throat, suddenly their larynx is in a different plane, and then the diaphragm locks up. So, it's quite good, from that point of view, you think, well, I'm actually doing something. I thought I was sitting here falling asleep, but actually, I'm really having quite a lot of effect on this patient. So, the continuity through the fascia down through the body is also. I think I'd like to start with a case history now. Oh, one other continuity is really the continuity of mind, emotion, intention and structure. The mind, emotion, intention and structure. There's a tendency in our culture to separate things, but the body doesn't separate things. And the voice really does make that clear. A formative experience that we have at birth, the first thing we do is, under normal circumstances, taking a breath in, the first breath. And the next thing that happens is the first cry. And the baby's cry is so important. The baby's saying, I'm

here, I'm in the world and I need you, please, can you help me. It's a survival mechanism again. So, this first cry, and if the baby knows how to use its voice, and anybody who has children, grandchildren, godchildren, or babies, knows that babies know how to use their voice. So, what happens what goes wrong? Something gets in the way of that natural reflex, which is a whole-body reflex, and it's based in a feeling, a cry for attention, survival. So, it's pretty profound actually, it's a formative experience. Is that cry being heard? Is that cry being suppressed or is it in endorsed? So, a lot of things in singing have to do with that very early experience of the first breath, the first cry, that's your voice, then the suckling, so tongue and the lips. It's really important in articulation later on in language. And those things are really present, early stage, and often you find, when you're dealing with people who have vocal problems, that it might be even going back that far that something's been suppressed in the mechanism. And they're carrying that suppression through their life. And there comes a point where they can't adapt or compensate any further and their voice gives up.

Steven Bruce
How would you know, Ashley?

Ashley Stafford
How would you know?

Steven Bruce
Yeah, I mean, I have no idea what my first cry or my suckling technique was like.

Ashley Stafford
I don't think you do know. What I do is I track back, I just track back and if there's, if there's nothing else, and let's say, for example, I ask do you know anything about your birth. And then quite often, they do know it's forceps or can ask their mom, if she's alive, and maybe ventose, maybe forceps, you can palpate those. But they might know, if it was caesarian, for example, sometimes that first cry is suppressed. It has to be a bit more spontaneous. But my main point is not really about whether or not it causes problems later, it's the fundamental nature of voice and breath being linked to the world. I think we can get hung up on whether or not it causes problems or not later quite easily and that can be a red herring, I think. There's always more interesting things that are present

Steven Bruce
Just one for Julia. Julia, you've sent in a question about a case of your own. I'm deliberately holding on to that because I know Ashley's gonna run through a few of his own case histories. And then perhaps we can bring up some more specifics of our own experience.

Ashley Stafford
Yeah. Well, the first case I was wanting to talk about just to talk through, it might be useful, is a 55-year-old, healthy woman, she's an author, quite a famous author, not the famous female, I hasten to add, but a relatively well-known female author, who did a lot of readings of her own work, going around selling her

books, doing readings. And she said, I don't understand it, for the last two years, I just can't get through a reading anymore. My voice just packs up. And it's really not very helpful. It's not the end of the world, but publicity is important to me and I like having contact with my audience and doing readings.

Steven Bruce
What sort of length of reading was she doing?

Ashley Stafford
Probably 20 minutes to half an hour.

Steven Bruce
Okay. So relatively short.

Ashley Stafford
Relatively short. But for her that was generally quite easy, but she couldn't last that long. Voice went weak, went husky, very dry, voice started cracking, wasn't working at all well. And so, the case history was unremarkable, I think that's what they say, except for the fact that about three years before, just before these symptoms started to build up, because it was progressive, it didn't happen just like that, she'd had a hysterectomy. And I thought, well, that's interesting coincidence, was anything else around that time? No, no family troubles, nothing too emotional or physical elsewhere. And so, when I asked her to show me her reading, so I said, Well, why don't you read something to me. And so, she got out the book I had on the shelf. And it was obvious that she was reading using nothing below her ribcage. So, she was reading from here, she's speaking from here, there's no connection here. She wasn't making any emphasis from the lower part of her abdomen, which meant that she could carry the power in her voice further with no vocal effort. Everything was coming from here. And this is what we get talking on zoom. Of course, I'm doing it now, I'm talking from my throat. I'm just feeding air through, it's drying, it's tiring, we need to drink water. And, of course, people using microphones don't have to project their voices. And ironically, they end up with more vocal problems, if they're having to do it a lot, than if they were really projecting their voice, which means you're using power from somewhere else. And we've got time I'd love to go through a little diagram I have actually put together to show how I believe this works. So, she wasn't using anything below the diaphragm basically, the whole throat was tight. The specific muscles that get tight of course and it's well worth looking at, is the inferior constrictor. The inferior constrictor grabs hold of the back of the larynx. That's it's job, by the way, but obviously it's not it's job when we're speaking or singing. So, the clues in the name the constrictor muscles, as you will probably know, are to do with the swallowing mechanism, they create a wave, the tongue comes up, the bolus goes down, and the muscles go shump, shump, shump, shump, shump, and it takes it down through to the oesophagus. So therefore, if the idea is, I need to be doing something for my voice, quite often like this now, I'm going to be, let's say there's not enough power, coming through the air to my larynx, which I'll come back to hopefully again in a minute. If there's not enough energy to make those cords work, as they should, a way of operating is to squeeze it slightly. And the inferior constructor is ideally placed to squeeze the larynx slightly so that the chords can work on this lower energy, but it's not really good for them. Because it's not a free mechanism. It's one of those situations

where sometimes it's easier to do more than less. So, in other words, more energy creates a better balance than less and squeezing. So, imagine a hose pipe with very little power coming through low pressure, you squeeze the end, and you get more coming out. And that's what people do with the voice with the inferior constrictor. So, she was using her inferior constrictor quite a lot. So, her voice was tight. That's why she got dry and tired. But the cause was the lack of connection through to the lower abdomen. So basically, I also asked her about her bladder. And she said, slightly embarrassed, yes, since the hysterectomy, my bladder control and stress incontinence has been a problem. And so, I then tested her adductor muscles, which were very weak. So posturally she was not supported through the middle. So, a lot of collapse through into the lower pelvis.

Steven Bruce
I have to say, Ashley, when you stand up, we get a lovely view of your waistcoat buttons, but not much else.

Ashley Stafford
That's the idea. Yeah. She was collapsing, we are all aware of this, I'm sure, that when they adductors are not engaging properly, the whole of the pelvic floor, the urethral sphincter, pyramidalis, all tend to switch off and you get a kind of collapse and congestion, lack of activity in the lower abdomen. So, the switch, the switch for the energy for the voice could be said to be the pyramidalis muscle. If you don't know it, it sits on the pubic bone and it's that shape. Guess what? Yeah. And it goes is within the rectus muscle, rectus sheath. But whereas the rectus sheath does that, this goes in and like that, and then it becomes at the opposite angle of the obliques on the same side. So, it goes up like that and joins the external oblique on that side and the external oblique on that side. So, it creates a little energy point. And if you cough, you will find out whether your pyramidalis is working properly. Because if when you cough, your tummy comes in and up and back. Then your pyramidalis is working. If it pushes out, which is what 90% of people do, not only are you stressing your thoracics, sternum is coming in and the transversus thoracis is being over contracted, but you're dragging on your larynx and it gets very tiring. We should be coughing up, not coughing down. The same goes when you laugh. When you laugh, if you laugh, hahaha, put your hand on your pyramidalis, hahaha. Is it bouncing in and out? Or is it going, haaha, and pushing down and out. That's an absolutely good test to do with any patient ask them to cough, ask them to laugh and see where their lower abdominal muscles are going. You can even just get them to put their hand on it. I do that, I say just put your hand here, just in the midline on the pyramidalis and I'll put my hand on top. Say, just cough for me. I said okay, that's interesting, now can you try to cough inwards instead of outwards. I don't know what you mean. Anyway, you can retrain that and then you've got the beginnings of a good energy flow for the voice. Because that's what it's all about, it's transmutation, transformation of energy, emotional energy through the body. So, the pyramidalis is a switch. And as I say there are various reasons it can switch off. Hysterectomy is one, the woman wanted to avoid that area, there's a void in her, she avoided it. And the adductor muscles were switched off, the urethral sphincter, which is a nice little knotty place where that can, is linked to those adductors and the pyramidalis, and if that's weak it's not doing its job, it's not a very strong muscle in the first place. So, having discovered that, we worked with some muscle energy technique on the adductors, I gave her some very simple exercises for her sphincter and the urethral sphincter and for switching on her lower abdomen. Very simply lying on her back, legs up at a right angle like that, so self-supporting, and just

doing some pulsing work on the urethral sphincter, independently of the anal sphincter, so she had to isolate that, but in that position. And as she does that, immediately, the whole of her abdomen starts to contract and starts to come to life. And she did that regularly for a week or so and she noticed that there was a really big change. So, there was some other work, local work, to undo the tension in the throat, which had become a little bit habitual. Which was very gentle, actually. Nothing structural in the sense of there's anything wrong with cricothyroid, it was balancing the membranes and the fascia so that it was not this, well two things, first of all, she'd been dragged down. Because nothing was supporting her anyway, posturally and what I won't say nothing. And also, the consequent contraction through the throat. So that was one case where again, looking at the problem, which was very specific, and it's not always one gets people with specific vocal problems like that but it was nice to see that, you know, she'd already been ENT, she'd had speech therapy, she'd done lots of things which hadn't quite worked for her. And identifying the underlying problems were useful. So that was one there.

Steven Bruce
It's funny, Ashley, I'm going to interrupt you just so I can exercise my voice a little bit. While you were talking about that, I was thinking, blimey, this is great. We're talking about a whole connection of muscles from the adductors all the way up through the throat. And I've just had a comment coming in saying that there's lots of chat about this on the two main forums that we go out on, and people are just loving the anatomical connection here. Can I ask, you've talked about someone coming to you with a voice problem and there is a danger, of course, that you're a hammer and you always see everything as a nail? And I suspect that's not true. But how often do you think people might come to us with a structural problem, and we find that, if not the voice is the cause but actually, we can affect the voice by treating them appropriately.

Ashley Stafford
Yeah, so if this woman had come to me because she had bladder issues, I wouldn't have treated her any different and it would be unlikely that her voice would not have benefited. I think one can use, if one's tuning in to the speaking voice of the patient, so we, all of us, we listen with two sets of ears, if you like. We listen to the words that people are saying. And then we listen to the subtext, the tone, and how they're communicating. It's rather like there's always more than one thing going on. And just as when you look at somebody sitting back in the chair or lying on the couch, telling you how laid back they are, very, very relaxed, and you see their eyes and you feel their adrenals and you realize they're stressed to hell. But of course, their mechanisms, their coping mechanisms are to be very laid back on the surface. So, the voice can do that too. You've got the words that come out of the mouth, and then you've got the feeling behind it and the tone, the content, the form that is being expressed. And we all tune into that, it's just putting on the wavelength. And you can notice let's say somebody who's come in, very common these days currently and generally, bouts of coughing. Sorry, I've had the winter flu, cough cough cough, bronchitis or just chest chest chest, cough cough cough. And you want to know perhaps am I releasing transversus thoracis effectively, have I got those clavicles to externally rotate and the shoulders to drop back, have I got some tonus back in the diaphragm so it's nice and flexible. Well, you'll notice straightaway because the speaking voice will change. And if you can hear it on the couch, they will say something like, Oh, that feels better or- the words don't matter, but they'll say something and then you say, oh listen to your voice. Suddenly you'll

hear oh, yes, there's a bit more fluidity, there's more tonus, the cords are just meeting in a more relaxed way. So, you can actually use it as a barometer really.

Steven Bruce
Can I put Julia's case to you before you move on? Julia says she's had a patient who's had radiotherapy and has lots of scar tissue and no salivary glands. The voice is affected, as well as their swallowing. And she's had to have her throat stretched under sedation. What can Julia do to help you think?

Ashley Stafford
Throat swept, did you say?

Steven Bruce
No, stretched.

Ashley Stafford
Oh, I see.

Steven Bruce
I don't know how.

Ashley Stafford
Because of the scar tissue on the inside?

Steven Bruce
I imagine.

Ashley Stafford
So, what was the treatment for again?

Steven Bruce
I don't know, all I have is what I told you. She's had radiotherapy, so imagine there was some sort of perhaps oesophageal cancer. Julie, perhaps you can let us know. And she's got lots of scar tissue. So, no salivary glands, voice is affected, and she can't swallow properly.

Ashley Stafford
Well, what I would do first of all, given that we do always ask lots of questions. But my first thought would be if the patient is lying supine, I would check the relationship from, so I'd have one hand stretched across the sphenoid wings and then I'd check down to first of all the mandible and the hyoid, thyroid, cricoid, clavicles and upper ribs and see, do they feel as though they're in a very comfortable flowing relationship? And if not, which I suspect they don't, where does it focus my attention. There could well be a contraction of the tissues pulling up, so the hyoid's coming up far too close to the mandible, because it can be pulled up.

And that would, that would really impede the voice. Because when there's a pull up like that, the voice doesn't like it. You only have to do it, you feel it. Or if the hyoid because of the scar tissue is twisting to one side or the other, you can get all kinds of impediments in the speech because the tongue and compensations throughout, but because of the tongue. I would then so that's the hyoid, go to the thyroid itself, in relation to the hyoid. So, remember all these structures are membranously, they're embedded in membrane and mucosa. So, the fascial continuity is what you're looking at, and then see what are the muscles doing in relation to that facial bind, and sitting with it really easily and seeing does it ease. What's going on in relation also from the cervical spine to the anterior throat structures. Because there again, if there's been an effect, because there's been lots of operations, and there's a kind of extension through C5, C6, you've actually got a mechanical pressure pushing forwards against the back of the larynx. And lots of people complain about a lump in the throat, which is remarkably common actually, I always start having a look by looking at the cervical spine. And if there's been a history of whiplash for example, which is an obvious one, and you can get quite a shunt by that, that C five c six x which, which actually pushes the voice forwards in the throat, and it doesn't really want to work so you wouldn't do that so you do this instead or try to do something about it to make it relax. But nonetheless, you feel this lump because there's pressure forwards. It's quite good fun actually experimenting with different things. If you think about what Sutherland did with his butter things on his head and strap them on and made his cranium hurt and worked out different strain patterns, we can actually do the same with our throat if you're gentle with it you only have to move it in certain directions and push and pull, and you realize your voice is responding and affected by that quite immediately. And if you think of John Major's voice, for example, what's he doing? John Major is swallowing his tongue down the back of his throat, it must be really uncomfortable. And then Margaret Thatcher whose voice was high and squeaky and petulant, and then had speech therapy, which made her try to speak when she was breathe out. So, she spoke like that. So, the voice is coming through cords which are no longer adducted properly.

Steven Bruce
I didn't know we were gonna get a show of impressions this evening.

Ashley Stafford
I just tried to think into what these guys must be doing. There's a big mistake, actually the breathing out thing's important but we do not, this is, God, this is really- I don't know whether that was helpful, by the way, Julia.

Steven Bruce
Julia came back to say that the stretching was because of choking and apparently the patient has no thyroid. I don't know whether she means cartilage or gland.

Ashley Stafford
Right.

Steven Bruce
I imagine it would be the gland. Yes

Ashley Stafford
Well, I would still maintain that my approach wouldn't be, initially because that's all I can go on, would be to monitor to each of those structures and their relationships. And from that point, I would be able to perhaps, if I was lucky, ascertain whether there was an issue that I could address. It may be that it's not an osteopathic problem. I mean, one of the things we were always told was, is there a case to be answered here by osteopathy or chiropractic or physio? And maybe you have to say no, but if you can find a disjunct, if you can find that disjunct between those structures, you could work with them. And the scar tissue maybe is old, I don't know.

Steven Bruce
Do you think that voice problems are connected at all to stress? And I ask because Nikki has sent in a question saying that, ever since she was studying for her FCC, she's had a terrible feeling of a constricted throat. And it settled down until the COVID problem started, so she thinks it's a stress response. And could that be the case and if so, can it be helped structurally?

Ashley Stafford
Adrenalin has in an immediate moment has an incredible effect on the voice. So, thinking as a singer rather than a speaker, because I'm not a speaker, really, but as a singer which I am, my voice under stress, when there's lots of stress around, the actual hormone effect, as opposed to the stress of breathing, because I could control that, because I was trained to do so but I couldn't control my adrenal glands. So, what happened, my mouth dried out and the mucosal linings of my throat dried out and that was very uncomfortable. It changed the moment I got going into a performance, it all just went away. But that first few bars were always a nightmare, is something going to happen, is something going to come out? But that was drying out. Some people, it's not so common, have the opposite effect when the adrenals are up their mandibular glands start squirting away and their mouth is full of saliva. And that's almost worse. The other thing that happens, of course, it does affect the breathing pattern. So, hyperventilation, major or minor, clavicular breathing, can stress the throat. Am I answering the question or have I just gone off on a tangent?

Steven Bruce
She specifically asked about that feeling of constriction in the throat that she's experienced.

Ashley Stafford
Yeah, I think that's more likely to do with the breathing pattern, which is associated with stress. But the dryness again, if it all depends on the overall vocal production, it may be that this person already is producing their voice in a way that's not abdominally generating the power, and therefore, there's some stress in the throat to start with and the inferior constructor is already tight, so the addition of extra stress hormones and the breathing mechanism would not help that because you get drag on the throat or you get

squeeze on the throat. And they're both uncomfortable and not really sustainable. So the best thing, I'd say, to start with would be to do breathing exercises.

Steven Bruce
Right. Going back to the previous one, Julia says that your comments were very helpful. Thank you very much. The APM team have said they've never known me to be so quiet but that's because we've got somebody fascinating to listen to.

Ashley Stafford
I can't stop talking. That's the problem. So much to say that it's not really very well ordered. But you know, something that came up just now. Yes, this thing about transformation. I don't know how we're doing. Just want to show if it's possible, a little diagram. So, I visualize the whole of this business of vocal production as something to do transformation and transmutation, we transmutate energy through the body. So, we start off with an emotional energy, again think of that baby, think about almost anything that you speak about, somewhere there's an emotional impulse which initiates the speech. And what we've got, our next one, we have these cavities and they're different, energetic, the foot is really clever, they have these three cavities. If you think about the abdominal, thoracic, and craniofacial cavity, they actually go from pretty large, to medium sized to pretty small. And then you go from a cavity, which fundamentally very fluid based to a thoracic cavity, which, yeah, it's generally considered to have quite a bit of air inside it. And then you've got the craniofacial cavity, which is at just simply atmospheric pressure, open to the atmosphere. Yeah, so that's that. So, you've got atmospheric pressure, you've got pressurized cavity, and you've got a fluid cavity and the pressure exchange between the two cavities, thoracic and abdominal, we know changes as we breathe. And we also know that the different parts of the abdominal cavity from the true pelvis to the up above is also subtly different. But we don't want to go into that too much. Just think about that fluid pressure. So, we come to the next one, and we know that we have between these cavities, we have diaphragms. The diaphragms are transformers in this case, they transform or transmutate, an energetic impulse and the impulse starts with the breath. The breath comes in, vocal folds are open, thoracic diaphragm drops, initially the pelvic floor, which we know is much more muscular and robust and this is very important when people's pelvic floor is compromised, which it can be. So, the initial thing is that the breath just sends all the diaphragms descend, the larynx drops, everything widens and opens, the diaphragm drops, and the pelvic floor initially drops. And this is in response to the whole pelvis moving but that's another story. And then the pelvic floor being much, much more elastic, a much stronger trampoline than the others, starts just as you finish the inhale, the pelvic floor starts to come back again and say oh, I've had enough of this, I'm feeling vulnerable, I'll come back up. And it starts this wave of energy coming back, which under normal circumstances would be an exhale. But with the emotional intention to speak, what happens is the thoracic diaphragm and vocal folds actually engage. So, the vocal folds are engaging in the midline, thoracic diaphragm is fixed very slightly. And then as the pyramidalis gives you the impulse, pyramidalis organises and stimulates the abdominal wall, then you get an airway which is- so we don't speak with air, we need to speak but it's energy that's carried in the air. So, the air, it takes the fluid wave from the abdomen via the diaphragm, the air carries the energy to the larynx, the larynx uses that to produce a sound wave. And you've got a kind of output which is different. So tiny input from pyramidalis, which is like a switch, actually ends

with a very high output. So, if you think about an exclamation if I'm very surprised and I go "ah!" My actual amount of movement through my abdomen is very small, but the energy is very focused and comes out the top quite loudly. And this pyramidalis is quite clearly shown on this picture on the left, where you've got the abdominal wall and you see the linea alba and then tucked into the bottom pyramidalis. And if we're thinking about people's breathing problems, so if you think of two things, first of all, think of the light switch. If the light switch isn't working, the lights won't go on, because the energy, the current can't flow. But equally, if the light bulb has blown, then doesn't matter how many times you hit the switch, nothing's gonna happen and the equivalent of the light bulb in the abdominal area is transversus abdominus, not transmissive thoracis, transversus abdominus, which wraps around. If that muscle is failing and it's very common in our current society for transversus abdominus to fail and not be ready, when you set the switch, nothing happens. So, we demand a certain elastic response through the whole abdomen. And that comes, it gives energy to the air, the air is excited, the air is already under pressure, it wants to leave, it's had enough. The energy goes through the medium of the air and whacks against the vocal folds which create a sound wave, which is a standing wave and that goes to the resonators. So we've got an amplification transformation system. So that's that. That was one idea. It may or may not be helpful, but it does explain to me that we amplify, so therefore if we, let's say we cut out the input from below, and you actually generate the energy from your thorax, if I speak from my thorax, I've got a lot of air coming through, but not very much and my cords are getting tired all the time. Yeah, if I only grip my throat, I want to speak from my throat, I will speak from my throat and I it's really, lalalala, really tight, I speak or sing from my thorax, lalalalala, I just get air. If I speak from my pyramidalis, lalalalala, you've got much more energy available, because you're coming from that fluid place. And also, if you think about the fact that speech and sound are emotional responses to being in the world, whether it's sophisticated and high-octane opera or folk song or just a conversation with somebody, you're just being in the world, this is an emotional response to being in a world. And therefore, if that's true, and it happens to be in my experience, demonstrably true, the root of those feelings is an abdominal area, we often have a gut feeling. We know it, that's where it goes. It's not an intellectual feeling. It's a physical feeling. And that's where the pyramidalis is a wonderful way of switching that on. So that's that. There's another little diagram actually, which might also be useful when we're diagnosing issues with the voice. Which is, I know, this is for singers who sometimes are not that bright. So, you'll find this a bit obvious. But here we have, this is us in the world, we have the gravity line, we have a postural energy. So, gravity takes us to the center of the earth, we respond to that with postural energy, then we have there's the vocal tract. These are the internal. So, the postural energy is an outer energy, apart from psoas, which is very internal and terribly important for all this, by the way, always check psoas when people have got vocal problems. You've got outer energy coming up through the structure. And then of course, everything else is hanging from the cranium, all the organs hanging down inside, comes to the diaphragm, hanging from the diaphragm, then picked up and supported by the pelvic floor. And then as we're talking about this as sound, we've then got breath energy coming through. Or we could say more likely the energy and the breath, these are in a funny order. And then we've got the relationship between these. We've got the relationship of gravity to the posture of energy, postural energy to the inner energy, the postural energy to the breath energy, all these things are affecting each other. So, you've got a dynamic triangle between structure, breath and sound.

Steven Bruce
What does the VT stand for on your diagram?

Ashley Stafford
Vocal tract, in this case.

Steven Bruce
Vocal tract, thank you.

Ashley Stafford
Yeah. And of course, all that's sort of, you can see, well, it's all embraced by mind. Well, the next one is interesting for singers actually, anybody who sings and has an interest, a lot of people say, well, singing isn't just, or acting or working from a script is not just an emotional response to being in a world, it's actually scripted. So, what's the role of this rather powerful thing, mind? And so, this is my thought, we have an intention. That's how we use the mind. You have an intention, whether it's verbal or emotional. And then this whole thing happens, the sound and while we're doing that, we need to give it attention. So, we want to pay attention. There's two things which are missing to a lot of people in the world: clear intention and paying attention. And if we have clear intention, it doesn't half help. And if we pay attention to what's going on, that's also rather helpful, I find, but I don't always do it. There we go. So, one last thing, and I'll be there. So, this fits into this lovely triangle here, where, if you think of the whole, you can think of the whole in any way you like. It could be the universe or it could just be the environment we're living in or anything like that, you've then got the nice triangle of mind, matter and emotion. And then, for us with thinking about vocal activity, you've got the sound, the structure, and the breath in this dynamic relationship. There should be lots of arrows going around here. Very dynamic relationship. And our role as osteopaths and physiotherapists and chiropractors, when we're treating somebody in this, specifically in my mind for this particular organ, is to be really listening. That can take any part you like, that can be with your ears or it can be with your hands. But it's listening. And I, just with that one thing, I just want to just quote this wonderful woman, "hearing is a form of touch, you feel it through your body. The body is like a huge ear. It's as simple as that." And I think that's really powerful. Anyway, I'm not going to show any more slides for the moment. I think there may be some questions.

Steven Bruce
I mean, you haven't even got through your three case histories, have you? But we've got a whole load of questions.

Ashley Stafford
I could do them or I could just have other people commenting. I'll give you another case history because that one-

Steven Bruce
Ashley, we've only got 20 minutes left and I've got a load of questions. Can I put the questions to you? I'm very happy to book you again to do the other case histories. Dominic says, could you talk about speech impediments and how they can affect people, how they can be treated? Dominic had a stutter when he was younger.

Ashley Stafford
And does he now?

Steven Bruce
That I don't know, but he may well come back to us.

Ashley Stafford
Okay. I don't treat speech impediments which are of psychoemotional origin. So, if there's a structural speech impediment, i.e. the tongue doesn't want to behave, which is remarkably common, where the tongue appears to be too big for the mouth and appears to be lazy and floppy. You're going crown me in a minute because it all comes back down to the lower abdomen. So, the exercises I give to people with the apparent lazy tongue or the protuberant tongue that won't do the "th"s or the "d"s and they get stuck, if for example, I'm sitting here and you can do it in your own home, if your mics off you can try this, if you sit in a sort of slumped way. So, your lower abdomen is really unactive, unactivated. And just go "d, d, d, d, d, d, d, d" and see if you can repeat that as fast as you can and as hard as you can, without any engagement of any other part of your body. "D, d, d, d, d, d, d." Okay, or "t, t, t, t, t, t." Now if you then note how that went and whether your tongue was able to keep going rhythmically. Now sit up, put your hands on your lower abdomen, round pyramidalis, just engage "D, d, d, d, d, d" and see what happens. And your tongue immediately picks up and says oh, I can do this. And the reason for that is to do with the support of the tongue on the hyoid. And although we know the root of the tongue sits on the hyoid, and the hyoid is floating in a membranous sheath down the throat, that is not how it's energized. Because it's part of the speech apparatus. And when it's left to its own devices, what happens is if it's unsupported by the rest of the structure in a dynamic way, the tongue is working from a very short wheelbase, if you like. The muscles around the tongue start to seize up and can't do it. If you know the piece by Schubert called the Erl-King, the piano part goes Ba ba ba ba ba ba ba, and the hands just doing this the whole time. Now, if you try to do that from your wrist, your hands seize up within about five bars. If you watch a real pianist do it and you'll notice they're completely relaxed and they're supporting their arms, elbows and wrists from the back. And they can do this all day. And its same problem with, as I see it anyway, people who have repetitive strain injury in the wrists. Since the invention of the computer keyboard, all the tiny little muscles inside the hand are having to do work unsupported, whereas for the good old keyboard, you actually have to sit there and work and the interossei muscles don't have to take the strain. So basically, for speech impediments, which are lazy tongue or tight tongue, not of psychological origin, I would use tongue exercises, consonants and teach people how the consonants relate to the top lip, the hard palate, rather than the other way around. So, what some people do is they speak like that, and come down onto their lips, rather than coming up. So, every consonant is formed in a direction going from the bottom lip and the tongue going up and it engages

the zygomatic muscles. So, Mama, Mama, Mama, Mama, dah, dah, dah, dah, dah, dah, dah, dah, Papa, papa, papa, papa, kaka, kaka, kaka. As opposed to Mama, Mama, Mama, Mama, dah, dah, dah, dah, dah, dah, dah, kaka, kaka, kaka. That's more and more common because the youngsters today, on flat screens the whole time, if you notice their faces are really dead. They don't have nasolabial folds anymore, they all go like that. And they speak like that. They haven't got any real articulation going on. Because everything's dead in their mouth. The moment you actually get the zygomatics working, everything comes alive again.

Steven Bruce
Another great impression there. Thank you. On that note, John's asked if you could talk about your work on the tongue directly? Is that what he means in terms of working on the tongue directly?

Ashley Stafford
Yes, I wouldn't get hold of the tongue. Unless it's a very tight tongue. In which case, sometimes you can get hold of it. And there are exercises where if it is very tight, again, it's this local versus global. If there is a global problem, i.e. the system is unsupported. The energy's being localized in the throat. The hyoid and associated muscles, all the strap muscles, are going to be really tight. And you can work directly on those. And one of the exercises.

Steven Bruce
Something for the bus or the underground.

Ashley Stafford
Yeah. I think, in yoga, that's a yoga exercise, it's called the lion. Who knows? Somebody will know. But there's one where you actually go. Or maybe it's just Maoris playing rugby.

Steven Bruce
I was going to suggest that might be the case.

Ashley Stafford
But if you do that, and nobody's on camera apart from Steven and me, so try it. You will find your tongue and your face feel really alive.

Steven Bruce
Don't even think about it. Because I'm not going to try it while I'm on camera.

Ashley Stafford
I thought you might. One other thing about speech impediments and that is checking hearing. Because we cannot speak what we haven't heard. And you cannot sing if you can't hear. You can't speak if you can't hear. So, any issues with hearing and they can be structural or they can be psychological or they can be just somebody going deaf, or somebody being deaf. So hearing, you can't really talk about voice without talking about hearing.

Steven Bruce
Sorry, I want to drag you back to the tongue again, because Gemma sent in a question asking about unresolved tongue ties. How do they influence the voice? What can be done?

Ashley Stafford
Ouch. Yes. I'm not sure whether it's ever too late to have a tongue tie operated on. I used to be dead against the tongue tie snip. Because I thought surely, we could do something with that. But I actually had a patient change my mind, well more than one but one specific one which was a baby. It was not flourishing and not able to feed properly. And it was definitely a tongue tie. The mother was not keen on having the snip. And I didn't advise her but I said, I think it could be better if it was released. And I know it's controversial area. And I know that sometimes there's a predisposition to snip when it's only a slight tie as opposed to a really big tie. So how you make that decision, I think has to be a longer functional assessment of how the baby, if it's a baby, how the baby's feeding. And there again, is there anything else going on with that either child or adult, which would mean that the tongue is not as supported in its activity as one would wish, which may or may not be to do with the tie. So, the tie could be there, but it may not actually be the problem. So that I would have to clarify that in my mind. Before I went any further, actually.

Steven Bruce
Ashley's asked whether you have any thoughts on the effect of dental orthodontic braces on the voice and the emotional development of children?

Ashley Stafford
Huge. So, the emotional one, I won't necessarily, I think you've got to talk about orthodontists in at least two ways. I've got to say a traditional orthodontics where they're just moving the teeth, which I think is not only a waste of time and money, but actually very damaging, because you go through all this agony and then five years later it all comes back again, because they just moved teeth around. Or whether you go to functional orthodontists of which there are now many, who will work with chiropractors and osteopaths and possibly physios, I don't know, to help slowly open up the middle of the face, open up the maxilli, get the zygomi working properly. And the whole thing is a real blessing. A massive blessing. And I went to an amazing conference, it's now about 10 years ago and there was this incredible picture of a pair of identical twins. And this family for some reason, it was never discovered why, but they were sent to two different orthodontists and they were identical twins, they had pictures taken and they were of Asian origin, they had very narrow faces and really big snaggly teeth. It was not a pleasant thing for them to go there. Otherwise, lovely eyes and you know, all sorts of lovely potential. The one of them went and had her teeth straightened and the other one went to a functional orthodentist and it took longer and slowly slowly, the maxilli were gently encouraged to open, the face opened, the cheekbones opened, and there was this, I mean quite staggeringly lovely facial symmetry and structure and the teeth were settled in beautifully. The other girl had two, I think two teeth taken out, top and bottom, and had braces to straighten because her mouth was apparently too small, in inverted commas. And her teeth were straight, but her face was still pinched and caved in around underdeveloped maxilla. So, if psychologically, it sort of really depends, isn't it? Is it more damaging to have pointless steeth straightening? I would say so, what a trauma to go through. On the way

through, of course, they often do, children and young adults and even greater extent adults can suffer a lot problems but as they tighten and try to bring the jaw forwards and they're opening. And I think functionally I work a lot with that on those, the vomer, the palatines, actually on the maxila itself, and rebalancing the whole of the facial apparatus with the cranial base and getting the jaw, when we're working with a jaw, I get the patients to do self-massage a lot. But knowing that that actually isn't really the answer, but it gives them something to do and it feels nice, well actually it feels horrible, if they do it properly, they cry that. But there's a really excellent technique for releasing the jaw, which some of you may well know, it can be either administered by the practitioner or self-administered and this really works well on the pterygoid muscles. So, this obviously is masseter and temporalis but often the muscles on the inside, the pterygoids, they are the balancing ones. So, you've got external and internal structures on either side. So, if you get your thumbs up behind your eye teeth, if you've still got them and fingers are on your cheekbones, you lean on your elbow, and you pull asis if you're gonna pull your face apart, and you breathe in deeply and you yawn and you breathe out, you do that three times. Yawning and looking up, gets all these muscles working. Do one more. And then you wiggle your jaw. And you realize, oh, that's really, really free. And it really has a fantastic response on these pterygoid muscles, which can really grab the jaw quite as much as masseter. In fact, I think more, because I think being internal, they're not really, I don't think they're really to do with chewing so much. They're more sideways movements. So, masseter and temporalis tend to be, which you can release. But if you've got other muscles holding, so that's a great one for those. So, you can encourage, even show it, they get that good effect. And then you can show them how to do it. The weight of your head on your thumbs, pull apart and really yawn in an aggressive way. When you yawn, by the way, everything opens, you go into cranial external rotation, so does the neck, so does everything and you really open the body. And if you're exaggerating that here on the yawn, so your pterygoids are gonna go into external rotation too. So, it stretches the attachments of the pterygoids. It's a great exercise that, it's not as painful as the other one.

Steven Bruce
I can imagine all those people not on camera practicing it as we speak.

Ashley Stafford
I hope they are.

Steven Bruce
One last question, because we're running very short of time. One last question. And you'll have to be quite quick on this one. Amanda says she has a child with speech difficulties which induce immense anxiety and they also worsen with stress. They can't speak when put under pressure or put on the spot. Could that be birth trauma induced? And I'm guessing the implicit question is what can be done?

Ashley Stafford
Gosh, it's difficult, isn't it, when it's out of context. But in principle, the things I would look at, yes, I would look at birth trauma, but in terms of what's the history, or was it forceps, was it an assisted birth or any of the other possibilities? Because that could well induce a constitutional stress if you like. I would definitely

work with the breathing. Because I would imagine the breathing pattern will be disturbed. Did Amanda say that the child under stress just couldn't get the words out?

Steven Bruce
She says the child can't speak when put under pressure or put on the spot.

Ashley Stafford
Yeah, well, first of all, I'd like to observe that to see what's actually happening. And that's one of the areas I'm sure Amanda's already thought about the breathing pattern, which will be potentially really, really high. And that will be part of the bottling up process on a practical level. Being so wound up you can't get the sound out, can't speak, completely bottled up. So, to practically work on the thorax and the diaphragm to release, that actually reduces tension, as we all know, at a fundamental level, because the breathing pattern when it's like that induces stress so it's a vicious circle. So, structure on a practical level, I would certainly go there.

Steven Bruce
I'm sorry. To fill you in slightly, Amanda says it was a prolonged labor with a ventose delivery.

Ashley Stafford
Ah, were they ever constipated as a baby?

Steven Bruce
We don't really have time to do full case history at this point.

Ashley Stafford
Well think about the ventose as sucking everything up. And if that hasn't been released again, then the child might be held in a fixed internal rotation pattern through the body which sucks everything including the diaphragm up. Therefore, they're fixed in a position of stress. That's certainly worth exploring, to see whether that pattern is present and find a way of releasing it, either cranially or work on the diaphragm and the thorax.

Steven Bruce
Amanda says yes, in answer to your question.

Ashley Stafford
Can't remember what the question was.

Steven Bruce
Constipation.

Ashley Stafford
Oh, yeah, yeah, good. That's a good indication that you can work with that technique to see if you can engage the internal rotation pattern, which I think will be quite strong, and in releasing the cranial diaphragm try to work through to the thoracic diaphragm, but the voice will then sink and not be up all the time.

Steven Bruce
Ashley, it's been great fun listening to you, listening to you and seeing your demonstrations, seeing the quality of your waistcoat buttons as well, it's been a real treat. I've got loads and loads of people on here saying how wonderful they found this and just leaping off my screen. But Carolyn says she loves the way you're linking the emotional element into this. Sam thinks the lazy tongue exercises are fascinating and there's lots and lots of other questions coming in. I mean, I always say, almost always say, to my guest, will you come back again. I'd love to get you in the studio and do some of this so that we can do some proper.

Ashley Stafford
That'd be good, I can use you as a model.

Steven Bruce
No, no, no, no. I'm always the interviewer. Rodecca, Robin, Carolyn and others, I'm sorry if I didn't ask your questions. But we'll get him back. We'll definitely get him back. Ashley, that's all we've got time for, thank you so much.

Ashley Stafford
Well, it was real pleasure. I wasn't expecting it to be a pleasure, because I thought I don't know what to talk about. But now, you made it so easy, Steve, thank you very much.

Steven Bruce
False modesty, I think. I think actually knows what he's talking about and loves to talk about it and I've enjoyed listening to it as you can tell.