

# Face, Neck & Head Pain

With Simeon Niel Asher

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## TRANSCRIPT

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APM:

We're back to our daily round of lunchtime CPD. And I'm joined for the second time today by Simeon Neil Asher, the internationally renowned author of the trigger points handbook the international expert in frozen shoulder and trigger points themselves. Simeon, welcome back.

Simeon:

Thank you very, very much. Thanks for having me back again.

APM:

Last time we talked about the language of touch - very relevant as you said, for the situation we find ourselves in at the moment. And today you're going to talk to us about whiplash disorder and occipital neuralgia - head, face and neck?

Simeon:

Well, I think when we started discussing you and I about these, we thought we would give something practical, something that's that you can take home, use clinically and of course trigger points and whiplash are a very important kind of interrelated structure, so, so I thought we'd talk about that today.

APM:

Okay. So as always, we've got a slightly altered version of your slide pack to put up on the screen behind me. We, for the audience's benefit, we will be bringing these up full screen when it's relevant. And once we finish this discussion, we'll be posting the recording plus a downloadable copy of the PDF version of the slides for you to download for your own use later. And you know, if you have any questions about the videos that are in those slides and I'm sure we can get those to you as well. For that, I will depend on Simeon. So where should we go to start with then Simeon?

Simeon:

Well, I thought, let's just go over some facts. Maybe I think I gave you a little video.

Simeon:

So, first of all what to say that I hope people find this useful - so basically whiplash, the estimated costs in 2016 was \$242 billion in the States, \$180 billion in Europe. Whiplash associated disorder, WAD, is associated with an increase in healthcare costs, reduced work productivity, lost earnings and for example, within the first two years after whiplash injury, employment propensity declined by 20 to 25%. Approximately 60% of patients with whiplash associated disorders would go on to become chronic. And it's about 4%, four per 100 people in the US [figures corrected after the event] obviously it can also occur in things like skiing and boxing and diving, snowboarding or after falls as well.

So we classify it as chronic or acute: in terms of acute whiplash that is two to three months; in terms of chronic whiplash it sort of goes on longer than that. And of course, if it's been there for more than two, three months, then we're into what we call central sensitization. So we have a ramping up with the nervous system - and we talked a little bit about that last time - and this is where trigger points have a huge role to play in terms of reducing the nociceptive drive to the nervous system. It's estimated that 85% of people recover within six months, but 30 to 50% of patients who sustained symptomatic whiplash or have chronic potentially more widespread symptoms. And over time these can lead to a variety of clinical manifestations. What's interesting with some of these whiplash injuries we get these sort of micro trauma events that can lead to a real sort of necrotic events within the bone - a relaying of bone, et cetera.

So I think we had a list of some of those symptoms. So looking through it together we can see that in terms of the structures we've got, let's start with the bones themselves. Look, I was talking to an emergency medicine practitioner and they said that it's not uncommon to see victims that have died that are wearing a white tee shirt and have a full lipstick mark of their mouth on the tee shirt. So if you imagine how far your head has to go forward to put a full lipstick mark on a tee shirt, you imagine the kind of forces that are going on through that structure. So anywhere, between C3 and C7 in terms of the bones and of course the facet joints, the occipital Atlantal or Atlantal occipital axial joints TMJ, thoracic spine, the ribs, the shoulders. But in terms of the muscles, which is kind of what we're going to look at today,

there's some real important whiplash muscles. One of them is the sternocleidomastoid. The sternocleidomastoid for some reason has some kind of proprioceptive function, so it often manifests in a whiplash injury way, way into the future in terms of chronic patients. So that's what we're going to look at. The scalenes, the scaleni of course, associated with thoracic outlet / thoracic inlet syndrome.

APM:

Can I just interrupt you for a second. So when you say sternocleidomastoid, it's got proprioceptive function beyond what you might expect in others, is that something that you just learned from clinical experience or is that something which is documented through some sort of research?

Simeon:

I think there's a fair bit of research on that. One of the things about the sternomastoid of course is that, you know, we'll look at it in more depth later - is that when it's symptomatic it causes reduced rotation of the neck and often we get people that have come in, older people that come in and they'd have stiff neck rotation and it's one of those miracle muscles that if you know how to get the trigger points in it, you can actually improve neck rotation really quickly in it. But certainly, it has a proprioceptive function as, as do other muscles as well. For example tibialis anterior this leads into other things. Latissimus dorsi by the way, is a part of the wing structure in birds and it also has proprioceptive functions as well. So the sternomastoid, scalenes, longus colli - now longus colli is one that we don't really focus on much as therapists, but we're going to talk about it today. They call it the psoas of the neck. And of course you've got the, the cervical erector spinae, splenius capitis, semispinalis capitis, a lot of those erector spinae muscles that get this kind of whiplash in them as well. We've got the ligaments as we put here, the alar ligament, the Atlantal axial, apical ligaments - these micro-trauma, soft tissue tears.

And of course we know that ligaments take a while to to get better and if they're overstretched, if they've gone beyond their sort of physiological norm, they can take up to six months to recover. So when someone's coming in with a whiplash, you know, we're not quite sure the degree at which these structures have been affected, but of course it's likely that there's going to be a kind of muscular overlay or sort of protective muscular overlay on top of some internal possible derrangements. Also nerve roots, spinal cord, brain, sympathetic nervous system as well. So moving on - the latest thoughts on whiplash are.....there was a group that got together called the Quebec task force and they got together a group of experts and they defined whiplash as a bony or soft tissue injury resulting from rear end or side impact, predominantly in motor vehicle accidents and from other mishaps as a result of acceleration, deceleration, coup, contrecoup mechanisms of energy transfer to the neck. So we're looking at this energy transfer and this energy that's been locked in the muscles approximately...

APM:

Is that now an internationally accepted definition of whiplash?

Simeon:

Yeah, this is the internationally accepted...they call it WAD which is why I'm bringing it up there. So the Quebec taskforce, in fact, what's helpful in terms of sort of presenting your history is if you had to have to do medical legal histories is to, to quote the WAD standard. Approximately 93% of patients in the UK have classified with WAD2. So let's run through those together. So in terms of WAD-0, no complaints; WAD-1 is, is just neck pain and stiffness only with no physical signs; WAD-2 neck pain and muscular signs, decreased range of motion, muscle point tenderness.

And of course it's good to define what muscles you're feeling are tender. With number three, we've got AND neurological signs reduced deep tendon reflexes with weakness and sensory deficit. And WAD-4 is with a fracture or dislocation. So you can see as you go up that scale that it obviously becomes more significant as I said.

APM:

You were talking about deep tendon reflexes and of course whiplash might not just affect the neck. So is that score also including lower extremities?

Simeon:

Absolutely. Absolutely. Neurological signs. Yeah, we can get deep but you can get sort of changes in much lower down in the nervous system. I mean you have to imagine if significant enough that whip can go all the way through the spinal cord and cause upper motor neurone style symptoms.

APM:

So actually the reason I asked is because people might assume, because we're talking about neck face and head that it's only that area which we were referring to in these things, but if they were referring a patient to a GP or anyone else or for an insurance form putting on here that there's neurological deficit or deep tendon reflexes changes.

Simeon:

Yeah, I think that's right. I think it's great to sort of say I think it's WAD-2 and then articulate which of the muscles you think are sort of involved. And then say, you know, we did a, we did a scan of the deep tendon reflexes and we found, you know, a deficit in ankle jerk or..

APM:

I've got some questions that have come in, one of which I'm going to save until later because I know in a few slides time you're talking about medico-legal stuff. But of course we know that osteopaths, chiropractors are not allowed to advertise treatment for whiplash - certainly in the UK I don't know how it is, where you are in Israel..

So given that we can't advertise treatment for whiplash, how do you advise people in this country certainly about putting their services, making their services known to the public?

Simeon:

I mean, generally speaking it will be people that have already been treated by you, you've been treating them for other things then they have had a whiplash. And then will come in and say, you know, I had a car accident. Often they will ring and they'll sort of say, listen, I had a whiplash - is it something that you treat. So, yeah, I think, you know, I want us to be very careful of the advertising standards and advertising claims.

APM:

I'm sorry to dwell on this. I guess there are ways around this in the sense that you can always tell people that you can address neck pain that might've arisen as a result of a motor accident or other trauma and things like that without mentioning whiplash. And so you're treating the neck pain, not the whiplash.

Simeon:

But of course if they've come in with whiplash then it's beholden upon us to make a very specific case history, which is what we're going to cover today as well. And, and to know what these Quebec criteria are,

APM:

Michelle has actually asked whether you think that whiplash disorder could lead to frozen shoulder given your great expertise in that subject as well.

Simeon:

I think it can be one of the predisposing factors, not often, but I can see that you could make a case, especially if someone's, you know, one of the things I see with car accidents is that, you know, someone grips the wheel so tightly that they get all sorts of sort of shoulder issues, rotator cuff. But also interestingly, I've seen people that have injured their feet because they're pushing so hard down on the brake pedal to stop. They can have big toe injuries, tibialis anterior, tibialis posterior, all sorts of. So, so I think it happens so quickly that it has a kind of general trauma. But yeah, I think you could make an argument that the trauma and of course we've also got the seatbelt, haven't we? I mean seat belts and of course the air bags these days, which all can reduce a certain amount of injury but then have other vectors and other sort of mechanical sort of kinematics as well.

APM:

Okay. Rachel's asked whether you think that acupuncture or dry needling can help with trigger points in these whiplash conditions. And I guess you're going to come onto that.

Simeon:

So what's the next slide? So look, in terms of what we've done here is in terms of looking at the symptom, symptomatology of whiplash and what I've done is I've put it here in terms of the percentages. So most people, 92% talk about neck pain and stiffness. About 50% of people talk about headache and fatigue. 50% shoulder pain, I won't sort of go through it all because I won't bore you, but about 30% of people talk about numbness in the arm. And we find that often that's associated with either a plexopathy or brachial plexopathy. We've got the brachial plexus being trapped sometimes under pec minor, interestingly or in the scalenes with a thoracic outlet. But things like blurred vision, difficulty concentrating, dysautonomia sensitivity to noise, irritability, dysphagia - difficulty swallowing, dizziness, and these are definitely kind of neurological symptoms.

And actually there are often symptoms that we see with patients that have trigger point issues in sternocleidomastoid. So, so again, that's one of the important things, ringing in the ears and face and jaw pain, I mean TMJ syndrome, people clenching when they're having a car accident or bearing down or all of these things. So it's a, it's a global kind of injury as it were. So, I think as we said before, it's beholden upon us to take a good case history. And I've been doing this a long time, 30 years as an osteopath and over the years have had to do a lot of medical legal reports. And I think for me, I usually run through this kind of checklist with people and the reason I do it, I think it partly jogs their memory as to what happened in the accident because it's easy to forget.

So I've kind of developed these questions that often lawyers have asked me as well and I've developed them in a way that kind of just...they come in sometimes going through this process can bring those symptoms on as well. Just sort of bring it to the surface, can make them feel a bit sort of dizzy and stuff. So I like to start with the date because that's really important - the actual date of the accident. Then the time of day and when you get the time of day, I ask them about the weather conditions. Was it raining? Was it sunny? And the reason I do that is sort of partly to take them back into the trauma, but also obviously if it's a wet road it might be slippery. So we can look at those factors there. Then I ask them the make of their car sometimes the color of their car apart from the fact that it looks better on a full legal report, it sort of brings them, again to ground them back to the accident.

And then the make and model of the other car. Often they can't remember that but, but let's say, you know, I was driving a sort of a red Nissan Micra and I was hit by a white Ford transit van. Not that we shouldn't make any, you know, pre preconceptions about Ford transits. But it's important because then you know, you've got a big car hitting a small car and you can think of the forces that are going on there. So even just with that it gives us a lot of data and then of course what

happened, and it's important to hear from the patient's perspective what happened. I was stationary at traffic light - someone hit me from the left, they hit me from the right - and we write all that down. And then really important - were they taken to a hospital?

Was it bad enough to be taken to a hospital? If they were, which hospital, how long were they kept there? What tests did they have done? What was the diagnosis? If not, did you go to your doctor? Because over - certainly in Israel - you're supposed to by law report a car accident or a bike accident, a cycle accident within three days of it happening by law. So did they go to their doctor and did they report it? And these are really important, of course, coming to the last one in terms of medico-legal considerations, legal claims, and then of course the symptoms. What's, their major symptoms - now we went through that list before. So you've now got a list of the major symptoms that you could ask them or you hear them out. What are the symptoms? Of course, if they had it two years ago and they're still getting dizziness now, that might make you think of perhaps a, you know, perhaps a TMJ disorder or something else or urological.

So who did they, did they have treatment? Who did they see? How many sessions did they see, what did they have done, where were they treated? And then of course, just the last thing. Are those super tentorial kind of things that are going on in that therapeutic relationship in terms of have they got are they claiming insurance on it? Is that motivating their, sort of symptoms? Not, not necessarily consciously. You know, subconsciously some people won't heal until that final paycheck has come. So these are all things you have to ask yourself.

APM:

Certainly in this country we tend to assume that people are wearing seatbelts when they're in a car, but I guess we also need to make sure that we've ascertained whether they were driving or not so that we know which direction the torque.. might've occurred. Which I guess you'd put in there almost as a standard, wouldn't you?

Simeon:

You know what? I forgot to put that in.

APM:

Stephanie has sent us a message saying she's been hit twice by white Transit. It's beginning to sound Stephanie that it's your fault. Not the Transit's. Sue's asked about assessing for concussion. Do you do that because some symptoms are suggestive of concussion from that list that we had a few slides ago.

Simeon:

I don't really do that unless, you know I'm fresh at the accident obviously. But I would think that you can ask if they've had concussion. And certainly there's a lot of shock now. That's one of the big symptoms. Shock, dazed and confused. I mean, I

don't know about you. I've had, I had a pretty nasty car accident when I was younger. Did you ever have one?

APM:

I've had one or two.

Simeon:

And there's a lot of shock. I remember being, I was in a Golfand I was hit on the side really hard - span out of control. I hit cars, parked on one side, went to the middle of the road, span the car around. And I just remember.. What I remember was this surreal experience. And my car radio was still playing the music I was listening to and I was like in trauma. So I think, you know, like all accidents, there's a degree of sort of dissociation that goes on with the patient. I don't check particularly for, for anything.

APM:

Mary's asked about nausea. Could that possibly be another symptom?

Simeon:

Definitely. Definitely. Yeah.

APM:

And this is going to be a big fat rabbit hole to drag you down. Pip Slack has asked isn't true frozen shoulder related to rheumatological conditions?

Simeon:

I mean, well let's put it this way. Associated with the thyroid associated with some rheumatological conditions. It depends what you mean by true frozen shoulder. Let's leave that there.

Simeon:

Okay. So what I thought now is we just talk about trigger points. So we covered them last time. The three defining factors of a trigger point are a tight or taut band of muscle. And a hypersensitive spot within that band of muscle and also referred pain. So when you find the tight band of muscle, you find that type of sensitive spot. And then when you hold it for more than five to 10, 15 seconds, you feel this referred pain map. And we're going to be exploring some of those maps together now. What I've put here in this diagram is also just to include at the end there. That's the Tom Myers book to say that of course myofascia is a continuum. So in terms of looking at the shoulder neck muscles, they do feed into other myofascial kind of..meridian for want of a better word.

So perfect. This is subscapularis muscle. If you look at the referred pain, you can see it goes to the back of the wrist as well. That's the thing about referred pain is that it



isn't necessarily dermatological in origin. So the other thing about trigger points as well is that the longer they're there, the more nociceptive input they put to the nervous system. So if they're there as a result of a trauma and whiplash is certainly one of those traumas that can cause trigger points is that they can have an effect locally and centrally. Last time we talked about the warping of sensory perception. So what we're going to see today is that a lot of those dysautonomic symptoms of headache, vertigo, vertiginous feelings can be from trigger points in the clavicular head of the sternocleidomastoid.

So just go to the next slide...and that trigger points have a hugely important role in perpetuating a whiplash associated disorder. In terms of what we call peripheral and central sensitization, which is where if things have been there for more than sort of up to say two, three months, we've got this kind of increased nociceptive drive. And what happens is this lowering of the sensitization of structures. So what that means is the body becomes more sensitive and other perhaps less threshold stimuli might be more painful. And after three to six months, we stop getting actually frank changes between three and five vertebrae above and below the sort of the area of trauma. Again, this kind of what we call gnosis, this sort of dorsal horn wind up where we get this increase in nociception. This nociceptive drive which lowers the threshold for other pain syndromes. So relieving the whiplash relieving the trigger points in these muscles can be hugely beneficial.

APM:

I'm going to interrupt you again - David Barton's asking whether you are, you are privy to any information about where the headrests make a difference, whether they're properly adjusted, how do they affect the outcome of whiplash type accidents?

Simeon:

Well they do - headrests / child seats. All of these ergonomics absolutely make a big difference. The headrest hugely important that it's obviously, you know, fitted properly and it's adjusted properly for the driver can reduce significant, reduce a whiplash injury.

APM:

Where is the, where is the proper place for a headrest?

Simeon:

It does vary. I think what, what's good to do is to, you know, bring your head back as if you were going to have a posterior trauma, and make sure that it's sitting so that you're minimizing that, that sort of posterior force. A good mate of mine actually makes kids car seats so we can get as much data as you want on that. Crashtest dummies and all that stuff.

APM:

And interesting here just bearing out what you said earlier on, Carol said that she was actually in the Paddington train crash. Horrible experience. And apparently her whiplash symptoms come back every year in October. She's been diagnosed with costochondritis, fibromyalgia and of course at the time had PTSD. So a lot of the symptoms mentioned on your slide and someone who's anonymous said they were told that their symptoms would go as soon as they got their payout, but they never did.

Simeon:

Yeah, I think there's another kind of emotional layer that comes around these traumas. You know, we see it in other, in other physical conditions, we can't be blind to it. That there is an emotional overlay as well. I don't think it is all emotion because I've had people that have had their claim completely settled and still come in for treatment and say, listen, it never really went away. And now I've got a bit of money I want to sort it out.

APM:

David's asked, if you've got an opinion on why the symptoms often take two weeks to appear?

Simeon:

I think it's a lot to do with the structures. In general trigger points, pain can take sort of 7 to 14 days to appear. And again, it depends on what structures are irritated.

You know, ligaments have a poor nerve supply, have a poor blood supply, they can take a week or two, but you're absolutely right that the, often there's a delay in symptoms of up to a month, you know, that's something we see clinically a lot. So what's next? Are we going to explore with my friend Dr G?

Bob Gerwin - so I'm very privileged to have Dr Gerwin as one of my teachers. And also now we're working together on a project and this is some, a set of videos we made let's put it this way - he's one of the founders of... The trigger point movement. So I don't know if you want to make it a bigger screen. Okay. So we're going to hear from Dr Gerwin - neurologist, head of pain medicine at John Hopkins and trigger point guru.

APM:

How did you come across this fellow?

Simeon:

Wow. It's a long story, but I connected with him about eight years ago when he came to Israel to give a series of workshops on trigger points, trigger point medicines, huge in Israel now, but maybe 800 or 900 doctors, medical doctors, mainly GPs that use it in their surgeries and I'm part of a, I was part of that whole movement. One of the first people. He came over - he's a author of many books that we'll talk about him another time. Let's hear from the man..

Video of Gerwin:

Longus colli - is an anterior cervical muscle that is deep in the neck and situated just...anterior surface of the cervical spine. The muscle is particularly vulnerable to sudden flexion / extension motions of the neck that will stretch it. In particular, it is vulnerable to whiplash injuries and it may cause a persistent pain in what is now known as whiplash associated disorder or the disorder associated with multiple muscle and neurologic problems that have occurred after whiplash. Trigger points in muscles that are affected by whiplash may persist for a long time if not treated. There are studies that show, for example, that pain persists for as long as 17 years, which was the duration of that particular study after whiplash occurs. So that whiplash is not necessarily a trivial condition and the pain of whiplash needs to be identified as to its origin and needs to be treated. And among these muscles that are affected by whiplash is, as I mentioned, the longus colli muscle.

Simeon:

So I think the next slide is on cervicogenic headache, isn't it? So one of the things about headache is tension type headache, TTH and, or cervicogenic headache. So, cervicogenic headache means headache that's generated by structures of the cervical spine. So these can be structures like the ligaments, the facet joints but of course also some of the muscles, and that's what we're going to look at today, which is the splenius capitis splenius cervicis and the suboccipitals especially, and the sternocleidomastoid. So these are all muscles that refer pain into the head and into the back of the head and the neck and cause headaches. There's also, as we said, some some postural connections there. And, what we can see is that there's the frank changes in the neurology and the neurological system in terms of the, the ganglion and the nuclei in terms of pain processing the longer these trigger points are there.

So let's cover some of those muscles now - it's always good to go back to some anatomy. So what are we going to do first? We're going to do longus colli. So the longus colli is, as we said, it's the psoas of the neck. So yeah, sometimes regarded as the psoas of the neck intimately connected with whiplash, as Dr Gerwin said - these are some of the symptoms. We can see here it takes its origin from the anterior part of the cervical spine. And in terms of pain map, it can refer into the ear into the ipsilateral eye. It can refer also into the contralateral neck as well.

And we get symptoms like posterior, anterior neck pain, tenderness, TMJ pain, dry mouth, sore throat, persistent tickle / cough in the throat, dysphagia and odynophagia. So trouble swallowing and painful swallowing. Again, just in the software, this is where we lifted the Gerwin thing about how to do needling and how to do sort of examination. So inside the software we've got some incredible.. Gerwin's knowledge of functional anatomy is next to none. It's absolutely incredible. So, so it's good just to be able to look at those images together. So the longus colli can be treated with needling. Obviously it's deep in terms of the deep needling..dry needling into the neck. You have to know the technique pretty well. It's not dangerous really, but we could also get there digitally. If we find that

sternocleidomastoid and come a little bit behind it and we feel the transverse processes of the cervical spine and run slightly anteriorly, you can get to the fibers of the longus colli there as well.

And it can be equally as effective to do some sort of trigger point release work there. Sort of hold and release technique.

APM:

Just a bit about trigger points. Simeon, Jonathan has asked whether there's any explanation for the referred pain that you say is characteristic of a trigger point.

Simeon:

Well the referred thing's interesting isn't it? It's not dermatome. It's not myotome it's not scleratome. The first guy was in the 30s, a guy called [inaudible] who what he did was he injected anesthetic and he mapped out the patches of anesthesia that people felt and he did it in sort of 30, 50, 60 subjects. And he mapped out where, where they were. So many people had them in the same place and then some of them had them in other places, which is why on the maps you see some areas are strong, which is where most people have the symptoms and other areas are sort of more, more dispersed. And of course the trigger points themselves as a whole story, whether you have active trigger points latent trigger points, satellite trigger points certainly with the whiplash you're talking about satellite trigger points, which can be multiple trigger points. I have my own theories about trigger points, how they're woven into the nervous system, but we won't explore that now. Okay.

APM:

Mark's asked how you spell the trigger point chap's name, by which I mean, I suspect he doesn't mean Simeon, Neil Asher, I suspect he means Bob Gerwin.

Simeon:

It's Dr Bob Gerwin - such a generous teacher. He is a hugely inspiring guy. Sadly at the moment - he's fine, but he's obviously not going to be doing teaching for a year now. He's 83 and is locked up in Washington. But we'd be doing this project together, but Gerwin must've been the co-author on at least a thousand or close to a thousand joint papers. He gave the forward to the Travell and Simon's new book. He actually introduced Dr Simons to Dr Janet Trevell. I've got this lovely footage and I'm proud to call him a friend and a mentor.

APM:

Have you ever been treated by Gerwin?

Simeon:

I have.

APM:

Lauren sends in a message saying that he's great, but not everyone can take his treatments cause he uses 0.3 gauge needles.

Simeon:

Yeah. 0.3 is the standard needling. Well, to be continued..his technique is the technique articulated by Trevell & Simons, which is what he calls the 'twitch'. So he, he'll go in and he'll get twitches out of the muscle until it twitches to fatigue. But, but to be honest, he's an incredibly sophisticated needler and his treatments are not necessarily that painful. But if you're going to needle someone, I would say his treatments are the gold standard really in terms of needling. But there are other ways of doing it. I mean, it depends if you think pain is a bad thing.

APM:

Do you want to move on to the next muscle group?

Simeon:

Why not? So the longus colli I thought is important because we forget that it's there. But of course in terms of the psoas of the neck, just to finish the longus colli, often when we see someone with a disc pathology and they take an MRI, we see a loss of lordosis of the neck, and it's the longus colli that causes that loss of lordosis. So it's involved also with other cervical pathologies. So moving we've got the sternocleidomastoid. So sternocleidomastoid muscle has a two pain maps, a sternal head, and a clavicular map. So it's worth saying that contraction of both sides together flexes the neck.

So while we're talking, as we said before, the sternocleidomastoid, very much involved in whiplash injury. You know the way to find it - it rotates to the opposite side. So your right one will come out when you're turning to the left. So there are two heads: a sterno and a clavicular head. In terms of pain maps, they both refer slightly differently. So if both sides contract together, we get flexion and it draws the head forwards as raising the head from a pillow. And it also raises the sternum as well. So we're seeing here the pain map for the sternal head; the clavicular head, has a different pain map: look, it's very specific in the ear and just above the eyes. So unilaterally it will tilt the head to one side. It's absolutely associated with atypical facial neuralgia, hangover headaches, postural dizziness, altered sensory autonomies, lowered spatial awareness, ptosis, persistent, dry tickly cough, sinusitis, chronic sore throat.

And then these dysautonomia things like epiphora, conjunctivitis, dizziness. Vertalgia - but interesting how the two different heads have different referred pain patterns.

APM:

None of these broadcasts are ever meant to be sales pitches, but that is some flipping cool software you've got going there. I remember looking when I first saw 3D anatomy maps, you know, you could strip off the muscles and stuff like that. And

this is, it's just giving us that from all angles and the pain referral stuff and the needling. And the history and everything else.

Simeon:

I built it in something called 'unity' but basically unity is a gaming platform, so we can do things with this avatar. We can make it move and do pressups, some pushups and, and it's totally a amazing environment. But yeah, thanks for saying that. I mean it's been a huge project. What we've done now is integrated the Gerwin videos. But it's only just launched literally in the last two weeks.

APM:

So for a huge, huge learning tool as well as a helpful diagnostic tool.

Simeon:

What's nice also is that we can show the patient what's wrong with them. So they'd come in with facial pain and we can say to them, actually, look, I think your problem's coming from here. And then we can also email some self-help to the patient from the software as well. So it enhances their experience, especially if you're going to do some painful work and you're going to put a needle here and they'll say, but it hurts me here, why would you do that? So it's part of that whole therapeutic relationship. Anyway, thanks for saying that. Yeah, it's been a huge project but lovely, nice opportunity to use it for teaching as well. So let's move on to the scalenes shall we with the anterior, medial and posterior. While we're coming to the scalenes the way you can diagnose the posterior scalenes, which comes from the second rib. The other two come from the first rib is that..So, so basically there are three components, as we said before, it can be associated with brachial plexopathy or brachial plexus and the thoracic outlet syndrome. The way to sort of diagnose the posterior is that you put your fingers on it and you get the patient to sniff and when they sniff, you can feel the second rib to raise with sniffing, not the first rib and you can feel it. But look at this pain map, very extensive anterior all the way down the side of the arm - it looks almost looks like C5, C6 dermatome, doesn't it? So as I said before, one of the cool things with the software is we can add some animations into it, which is great for teaching. And also, you know, some of these pain maps sort of are in funny places, so it helps to do that, but it actually has a pain map all the way down through to the rhomboid / periscapular area as well. So an extensive pain map, and of course, small thinunipennate muscles, which when they're active, kind of entrap some of the brachial plexus along with pec minor, you get what's called a double crush where you get pec minor and scalenes and it can cause thoracic outlet syndrome. Hugely important in whiplash, which is why of course we're bringing it up. So longissimus thoracis - we're going to get Bob again to explain the thoracis. Now of course there is spinalis thoracis and iliocostalis group of the erector spinae also of course we know that the erector spinae doesn't necessarily erect the spine.

Video of Gerwin:

Referred pain from the longissimus, thoracis and iliocostalis muscles in the back tend to be inferior and they can be referred a considerable distance so that the upper thoracic may be referred to the lower back. The lower back may actually go into the buttock and appear as gluteal pain. Referred pain from the iliocostalis, longissimus, multifidi muscles may also be referred ventrally or anteriorly and be felt on the anterior surface of the body, which could be quite misleading and make the clinician think that there's a local pain problem in the anterior trunk. These trigger points can be absolutely disabling and they can be crippling and relieving a major trigger point can be quite dramatic, with a patient unable to move before treatment and able to get up and walk around after a single treatment - it can be quite dramatic. On the other hand, it could be lower grade and chronic and be treated effectively, manually, or by needling. And of course in those situations the results are satisfying, certainly not as dramatic as when treating someone who is absolutely incapacitated with paraspinal, longissimus or iliocostalis multifidi trigger points.

Simeon:

I mean, if you look at the anatomy, you can see that these erector spinae run up the spine and you can imagine what that whiplash is going to do to that thoracic spine in the upper back. And it's the, the thoracis / longissimus group that often get these trigger points, as he said, they can radiate anteriorly and cause what you might think is sternocostal chondritis, but actually it might not be chondrosis it might be longissimus thoracic pain.

APM:

Simeon - what do you think about this? When you're talking about trigger points, some of them might actually be acupuncture points but the approach to using them in patients is completely different.

Simeon:

Wow. Okay. So it's a big one. I've got so much to say on that. There is a whole form of acupuncture, of musculoskeletal acupuncture, which predates even the classical Meridian structure. As you know, Steve, my cousin is a acupuncturist, head of the British acupuncture council. And we have these debates - a lot of the early osteopaths, that went to study acupuncture looked at these musculoskeletal points. So there's a big crossover between musculoskeletal acupuncture and trigger points. But in terms of the authentic Meridian points, it's not so clear of that correlation, but there are what they call [?] - ouch points we would say - there's a whole ouch acupuncture thing, which are very much connected. We would say in the acupuncture world that of course, you know what they were discovering were trigger points.

APM:

I've got a list of questions. I suspect we aren't going to make it through all of your slides at this rate because of the number of questions that are coming in, but

probably it's a useful thing to answer those. Elspeth has asked what would cause bilateral elbow pain? She had it off for a road traffic accident. She said it was exquisitely painful.

Simeon:

There are two things I'm thinking immediately - I'm thinking is that she was gripping the wheel, that unconsciously she overloaded the wheel there and that that it's probably from local structures of the sort of the elbow joint structures themselves, which can be as you know, kind of buggers to treat sometimes. Anconeus trigger point can cause elbow pain, lower part of triceps trigger points. Triceps itself refers down to the elbow. So it's possible she was gripping so hard that she developed triceps trigger points and anconeus.

APM:

Thank you. We've also been asked by Hannah whether you think there's a, there's a deeper question to this, perhaps whether you think the ergonomics of cars are more fitting for average men's bodies as opposed to women's, which I guess to me says that, do you see that there are, there's a greater preponderance of whiplash disorders in women rather than men?

Simeon:

There are actually, it's a good point. The whiplash, I mean, I haven't got the stats with me, but from what I've read whiplash tends to affect women more aggressively than men. And of course this is one of the reasons why when you get a car you should adjust it ergonomically for you. And of course if your husband or wife or partner is different, you have to adjust every time you get in it because you can mitigate some of these factors if you get the ergonomics of the car right,

APM:

Which must be a huge advantage of those very sexy modern cars where you press a button and it automatically switches everything to how it was when you last got into the car. Hannah has asked about behavioral change due to micro-brain damage, ie changes in anger expression, personality changes and so on, particularly after multiple incidents such as boxing, Rugby.

Simeon:

Definitely, definitely in the literature, definitely in the literature.

APM:

I need to reassure some other people that who've asked whether all this stuff will be available in the written notes. Every single time we do one of these things, Simeon's slides will be available as downloads. And we also of course do a full transcript, which will be available in a day or two's time once somebody has finished doing that. I forget who's doing today's transcript..so many people I've dealt with, but it will



go up very, very shortly. I think it might be Crispin doing today's transcript. Melanie has sent an observation for you. She said that she snapped the attachment of the SCM clavicular head on the right. She said it was the most painful and debilitating thing she's ever done to herself. She couldn't move her head or neck at all and it was awful. I guess you didn't need to be told with that, but horrible to have had that experience.

Simeon:

Horrible. Let's do greater occipital neuralgia. Let's finish with that because greater occipital neuralgia is the most frequent of all neuralgias. Also known as C2 neuralgia, Arnold's neuralgia, occipital neuritis - first described in 1821 as we can see, and it's characterized by recurrent headaches located in the occipital region either unilateral, bilateral, paroxysmal, night pain, lancinating pain and it's part of the scalp contribution as well. Trigger points have a huge role to play, especially the obliquus capitus superior. And I think we're going to finish with a video from Dr Bob Gerwin who is going to tell us about the connections.

APM:

Greater occipital neuralgia - how does that equate to tension type headaches or cluster headaches and things like that?

Simeon:

It's certainly connected to whiplash. So greater occipital neuralgia as we said, is a neuralgia. So it's a lancinating, burning, neural pain that people can get after whiplash very commonly after a sort of trauma of the head and neck. And there's a big debate in neurology and the neurologist is, you know, 'what's it come from and where's it come from?' But, but actually we, we as trigger point people think that it's related to this oblique capitus superior trigger points which we're about to..

APM:

Okay, we'll move on to Mr Gerwin..Dr Gerwin

Video of Gerwin:

Oblique capitus inferior is located in such a way that C2 the greater occipital nerve loops either around the nerve on its way up to the back of the head or in some cases penetrates the muscle, the greater occipital nerve or C2 can be entrapped by the oblique capitis inferior muscle as well. Which is one of the causes of occipital neuralgia. The suboccipital muscles are highly related to proprioception and to small adjustments of the position of the head. The most accessible of these muscles and the only one that we will be needling is the oblique capitis inferior which originates and inserts between the transverse processes of C1 and the posterior process of C2. The greater occipital nerve or the C2 nerve wraps around the oblique capitis inferior muscle on its way up to the back of the head. In some cases it penetrates the muscle. The greater occipital nerve is susceptible to compression by

the oblique capitis inferior muscle, thereby creating an entrapment syndrome. The entrapment syndrome is manifest by occipital neuralgia. Remember that the oblique capitis inferior runs between the transverse process of C1 and the posterior process of C2. The transverse process of C1 can be located just below the inferior or caudal tip of the mastoid process and the posterior process of C2 is the upper most palpable posterior process since C1 does not have a posterior process. C2 or the greater occipital nerve wraps around the oblique capitis inferior and sometimes penetrates the muscle on its way up through the occipital notch into the back of the head and is vulnerable to being entrapped by the oblique capitis inferior causing an entrapment syndrome manifested by occipital neuralgia. One can get occipital neuralgia without entrapment as well, but I think from a clinical point of view in a patient with occipital neuralgia, it is always worthwhile treating the occiput, the oblique capitis inferior to see if that will ameliorate the symptoms of occipital neuralgia. Likewise in cases of occipital neuralgia, one can inject the region of the greater occipital nerve at the level of the oblique capitis inferior and at the level of the occipital groove, in an attempt either to diagnose or to treat the occipital neuralgia.

Simeon:

I mean one of the advantages of having a neurologist who loves trigger points - and by the way he loves a lots of manual therapy as well, loves osteopathy, chiropractic and physio - is that it's so lovely to hear a neurologist talk about the anatomy and the muscles and this is our language, you know, this is what we deal in. I saw you smiling. Steven, just one thing - I just got a message from my technical guy saying that people are actually trying to download the app and it's getting a bit trapped. So just bear with us guys. It's all brand new and we're going to sort it all out.

APM:

Well, on that subject Simeon I've got a number of questions here. People asking how they access the app, how can they download it.

Simeon:

Well we've got [www.triggerpoints3D.com](http://www.triggerpoints3D.com) and on Facebook, I'm running a whole trigger points 3D Facebook group where I've put up a trigger point of the week and we explore it together and I'm just giving a lot of stuff away for free. I mean I do this, I love trigger point stuff...but the app itself, you go to [triggerpoints3D.com](http://triggerpoints3D.com). It's all on there. We'd be delighted to welcome you to explore trigger points. And I think the thing about the app is that we have this trigger point hub, which I think you and I are going to do something on where we can post lectures and workshops and all sorts of stuff.

APM:

Jess has asked if you get someone coming to you with what you've assessed to be whiplash associated disorder, where's the first place that you would start to look?

Simeon:

Well, I would look at range of motion. That's the first thing I do. I get them to sort of assess range of motion with without palpation and then do it with palpation. Again it's somewhat symptom-based so if they're getting these neurological symptoms, I definitely want to check the scalenes and the sternomastoid. If they've got decreased range of motion - rotation, then I'd check that again. If they've got a loss of cervical lordosis, they've come in and they've had an MRI or CT, then you can reckon longus colli is the one. But the ones that we explored today sternomastoid, longus colli, erector spinae splenius capitus cervicis - we didn't have a chance to do it. They're the guys that I think are the key ones for whiplash injury.

APM:

Okay. Scott has sent in what's actually quite a useful observation here in terms of communicating with patients because he says it's amazing how whiplash is played down in the UK and it's a bit of a ho-hum thing when you go to A&E or elsewhere. But actually after 48 hours, tissues start to change. So it's important we start doing something about it early.

Simeon:

You're right, absolutely right. Yeah, absolutely. When someone comes into me the first time, I tend to be very gentle with them. I don't want to do anything too aggressive, certainly. So I will usually do - hate to say it - that cranial stroke functional kind of approach at the beginning just to, to feel what's gone on there. After a few weeks where things have manifested, then you can start to, I would start to be more heavier stuff, but, but definitely definitely at the beginning, the fresher the better because, you know, it's like the whiplash goes into the tissues, this momentum, this energy and if we can get it before it goes in and that's better.

APM:

And last one - Rod has asked, in your experience after you've been treating trigger points, how long is it before patients start to feel some relief and how many appointments would you give them over what sort of length of time?

Simeon:

So generally the way I was taught is we would do one treatment a week apart for three weeks and then we'd assess it after a month - then after maybe another month, it depends on the chronicity of the condition, but generally three times one a week, once after a month, then once after two, three months as long as things are looking good. However, if it's chronic, we might do one a week for up to seven weeks and then leave it for a month. But you know, how long is a piece of string..But certainly in terms of needling, I wouldn't do more than one a week for...usually it's one a week for three weeks and we leave it a month.

APM:

Thank you. Simeon and I perhaps should point out to our audience, you've very kindly said that members of the Academy can have a 25% discount?

Simeon:

I know it's a lot, right? They have to bear with me. We're just launching the software and you guys will be our first people to help use it.

APM:

So that's on our member benefits page and if you are a member of the Academy, you log in on the members' benefits page - you'll see the method to get that discount. Simeon, brilliant. We've got you in a week's time or just under a week's time - next Monday moving on to the shoulder and epicondylalgia and so on. Brilliant to have you with us again. Thank you so much for sharing your knowledge. Thanks for introducing us to the app, which I know we'll see a lot more of.