IAN MCCARTHY with
MATILDA & CELESTE
JULY 14, 2020

~~ **MATILDA ~~**
KATARINA
MATILDA is interested in the proximal distal relation with the legs coming in and out, doing the frog movement.

MATILDA
Yes. I had hip surgery about fifteen years ago. It was avascular necrosis, in the right femur. I was fortunately to find Feldenkrais within a year and a half of surgery and it really saved my life. But I still get tightness in my life and when I get tired the leg just collapses on me. If I over-use it, it just loses strength and then I cannot even bend it. It hurts and everything. But usually I am okay, I just have to find my hip connection and then it is fine. So, I am trying to learn about the psoas and stuff.

IAN
I have multiple questions. Where is the pain? You get tightness and a loss of strength, but you also get pain. Where is that?

MATILDA
More the IT band and my thigh.

IAN
So the outer quad, the outside?

MATILDA
Yes, but when I go past the limit, past my midline from lying on my side, I actually get some pain in my hip area.

IAN
Is it like a pinching in the groin?

MATILDA
I think so, yes.

IAN
How are you able to do the frog position, what we call a **??** So, if you were to drop the knee out to the side, is it difficult on that right side?

MATILDA
Yes, but I am finding that with Feldenkrais when it is not acting up I can let it fall down sometimes. But that is not constant.
I also find a have to be more aware of my left shoulder. If I feel more connected to my shoulders then it actually opens up more.

IAN
Okay. Do you get any clicking, locking or clunking in the hip itself?

MATILDA
I do not think so.

IAN
Good. Have you had any follow-up x-rays in recent years to show the extent of the avascular necrosis, how it has healed?

MATILDA
I actually had bone graft surgery. It was supposed to last eight or nine years, but with Feldenkrais he said another eight to ten years would be okay.

IAN
Great, good. Very good.
So, a couple of things.. Rehabilitation-wise, have you done much kind of strength work in particular to certain muscles? Have you seen other therapists throughout the last couple of years? Can you just describe to the me the treatment and rehabilitation that you have gone through over the last few years, outside of Feldenkrais, if any.

MATILDA
I have been doing physical therapy. He is very good and is actually the one who helped me through me surgery, so I go back to him whenever I need.

IAN
Good. What have they focused on? I am asking this because I do not want to give advice on something they have already touched on or done before.

MATILDA
He usually has me do clamshells. I had other issues too. He was also helping me with a car accident.

IAN
I see. Did he find that the right gluts were weaker than the left gluts?

MATILDA
I am finding that now. When I get stressed out my right glut becomes weaker, yes.

IAN
It does, okay. Just one or two other questions, MATILDA. If you bring the knee to the chest when you are lying down do you feel a pinching in the hip on that side?

MATILDA
It feels restricted a little bit once it is up.

IAN

Okay, there are quite a few things you can do for that and the first is that the pelvic position actually has a lot to do with what we call the acetabulum, the sockets of the hips.

MATILDA
Yes.

IAN
So your range of motion within those hip sockets can become limited due to the position of the hip, so I am a big advocator of making sure the hip is essentially neutral, because if the pelvis is anteriorly rotated - which you might remember we talked briefly about in the past - you typically drift. You lose motions like hip extension. You also lose motions like hip internal rotation, because you are already internally rotated so it is very hard to rotate internally even more.

MATILDA
Yes, I think that is one of my issues.

IAN
And you can also lose hip adduction, the knee going across the body. So your knee and leg going across the midline.

MATILDA
Right.

IAN
So in a nutshell, when your pelvis rotates forward you typically lose hip extension, adduction across your body, and hip internal rotation. Sometimes that will also create a pinch in the front of the hip.
A couple of things you can do:

8:22.2
If you release your diaphragm on the right side through kind of rotational stretches with breathing, very often that will actually reduce the pinching you get in the front of the hip.
The physiology behind that is that the inner core is made up of the diaphragm on the top, the pelvic floor at the bottom, the transverse abdominus at the front and the multifidus at the back. They say that is the inner box, the inner core.
When the diaphragm becomes restricted or gets put into a less than optimum position that then changes the length tension relationship of the pelvic for, the transverse abdominus and the multifidus.

In osteopathy there is a model of tensegrity. That is big in Feldenkrais too. So if you look at that model, if you change the structures of the top it will change the whole structure of the bottom, back and front etc.
So the low lying fruit, and the quickest way to change a hip impingement syndrome in either left or right hip is to actually work on your diaphragm and your rib cage mobility,

interestingly. You tend to see almost instantaneous increases in your hip range by just working on the diaphragm and rib cage.

That is the first thing, which is pretty cool actually. The interrelationship of the body makes it very very interesting.

10:11:5
The second thing. Very often if you train the abdoMATILDAs to become flatter and bring the rib cage down into a depressed position that will increase what is known as the faber test, which is actually like the frong position. [I will just show you on the table here.] Here, then dropping the leg out to the side. So you can see I have okay range of motion, probably a little bit tighter in my neck.
But if you were to get a band and tie it to something behind you and pull the bands down to your sides and then repeat the test, very often you find the hip drops out further. That happens because when you pull the bands down to your side this way, to create tension, it gets the ribs down, depresses them down, tightens the abdoMATILDAs, rotates the pelvis back and then all of a sudden your leg may drop out more to the side.
It is not a guarantee that will work, but is worth testing because it will tell us that if all of a sudden you have a much larger range of motion in the faber test - dropping the knee out to the side - it tells you that your hip is being restricted due to a loss of core stabiility.

So, synopsis, when you bring the bands down that pre-engages your core. If that suddenly produces extra range of motion in the hip, it is a very good indicator that some of hip tightness is actually not down to mobility restrictions but is actually the result of core, lumbo-pelvic, instabilities.
Again, that is not going to work for everybody, but if it is does it very much helps to guide and direct your rehabilitation. If it did work for you it would be less than optimal to keep on trying to stretch your hip when you really should be working on stability of the lumbo-pelvic region to produce mobility.

13:16:5
The other thing I would say about the IT Band tightness, that is an interesting topic even amongst practitioners because the IT Band itself is of course not actually a muscle. It does not contract, but it does become short a lot of the time out of positional problems. If it is put into a position where it is in a shortened state, of course it is not actually contracted because arguably fascia does not contract. I mean, it does contract, but not the IT Band like a muscle does.
So very often the IT Band tightness that people feel is actually the vastus lateralis muscle, so the outer quad. You can see, the seam of my trousers here is the location of the IT Band. But just a few centimetres ahead of that is the vastus lateralis, and interestingly, if you look at the anatomy, that also appears posteriorly behind the IT Band. So where you think you are

digging into your hamstring at the back, again if you look at your anatomy, that actually is the vastus lateralis.

So, if you have got a weaker right glut minimus, medius or maximus, which are responsible for keeping the leg in external rotation, the body will try to pick up the slack by contracting the vastus lateralis, which is also an external rotater. It may end up doing twice the work to try to pick up the slack for the weak glut minimus and maximus on the right hand side. So very often if you get tightness in that area it is a symptom of the under-activity of the gluts, whatever fibres rotate externally.

MATILDA
Yes, that does make sense. When I had my surgery they cut through some of those muscles.

IAN
Exactly. The old way of doing a hip replacement was cutting right through the middle of the glut maximus and even twenty years later, no matter how hard you work on it, it is very difficult to regain the full hypertrophy and size of the muscle. So you are up against it for sure, but it is not impossible because neurologically if you can get strong enough it will not be an issue for you.

MATILDA

I have felt that 97% of the time it has been strong, except when I get stressed out. So I have to really work on getting it sorted out. I also find my SI joint is stuck as well. It seems like the right side.

IAN
Usually it is the right. I have some interesting insights for next week's topic on the ab and adductors, but there is actually a very common pelvic pattern in the body known as the Left AIC Pattern which predisposes us as humans to have a slightly weaker minimus maximus on the right hand side, because of the way we are constantly standing on one leg.
17:01:6
I will go into that more next week, but in the Left AIC Pattern position the right SI joint actually becomes hyper-mobile, too much movement. Now, as an osteopath even I cannot tell the difference, whether my SI joint is hyper or hypo mobile. I just know it is painful. So, there is a possibility it good be hyper. Without feeling it I cannot know, but if you have a weaker glut on the right side I would hazard an educated guess that it might be hyper-mobile.

MATILDA
It is also connected to the knee, when the knee does not open out. There is also compression of the spine, the lower back is not lengthening and I feel that is putting the pelvic out. Evening out the length of the lower back is what helps me feel better.

IAN
Do you find that your right lower back gets tighter than the left?

MATILDA
Actually the left side is really guarded. I can feel it compressing more on the right side.

IAN
Okay, so the left side feels guarded but the right side feels more compressed. Do you know if you have a tighter hip flexor on side than the other?

MATILDA
I also have a herniated disc, so...

IAN
Okay. The evidence is changing very quickly on this in the last five years in particular, so the good news is that I can almost guarantee that all four of us in this conversation right now have herniated discs in our lower backs. By the age of 80, 98% of us have degenerative disc disease, a narrowing and bulging or herniation of the discs.
So from a psychological perspective it is important to remember that it is okay to have a bulging or herniated to a certain extent, that as long as the lower back and core are stable they never

need to become symptomatic. They can actually remain asymptomatic.

MATILDA
I do not really worry about it.

IAN
Good. You do not need to. I just want to reassure you that that diagnosis by itself does not really mean too much because like I said if you MRI'd all of our backs, statistically speaking, at least half or three-quarters of us are going to have a bulging disc. I am 32 years of age and do not have any back pain but I would most likely have a bulging disc in an MRI. So, that is important.

20:14:1
Anyway, getting back to your situation. Rehabilitation-wise it sounds like you should be:
1. Mobilizing the rib cage and diaphragm, particularly the right side because the Left AIC Pattern predisposes us to have a tighter right rib cage and diaphragm and oblique, etc, because our right diaphragm is actually larger than our left. In almost all cases really if you release that you will actually have more hip flexion without pain. So it should get rid of that pinch pretty quick.

The faber, frog, movement limitation would be best assessed through the bands going down to see if the leg drops out further.

If it does, great, then you know you need to work on abdoMATILDA strength, but if it does not make any difference, then scrap that. It will not change anything for you.

Regarding the IT Band tightness, any form of myofascial release to the vastus lateralis, the outer quad muscle, I would do before doing any glut strength work. There is a goal in rehab where we say 'mobility precedes stability'.
So you have got to take activity away from the muscles that are overworking before trying to activate the weaker inhibited muscles.

My last question, outside of clamshells are you doing any other exercises that strengthen the glut minimus and medius?

MATILDA
I go for a walk daily and try to do Feldenkrais maybe once or twice a day, but I do not get to do it as much right now with moving and our house project.

IAN
Right, you are pretty busy. Okay, I am not a big fan of the clamshell exercise because muscles do not work in isolation and I am not a big advocator of picking a muscle like the glut medius and individually strengthening it through a thera band exercise, like the clamshell. Muscles work in chains and patterns and from a motor control perspective it is important to

increase the strength of the muscle within the chain as opposed to strengthening it individually and opening the whole chain starts to operate efficiently.

23:26:8
So I might just show you an exercise instead of the clamshells.

MATILDA
Well, actually I do not like the clamshells. When it is painful I just use it as a test. My favourite is actually just lying on my side and just taking my hand from forward to back. I think that opens up the rib area, like you say.

IAN
That is a great one. I will show you two things. I have a stretch I show mostly to desk-bound people, because very often you will find if the thoracic spine is restricted that people's hip extension is restricted so that their flexors are in a shortened position.

So I will show you an advanced stretch to progress on from the thoracic opener.
I will also show you a glut minimus medius maximus biased exercise, not isolated but working to a pattern. That is actually called RNT - Reciprocal Neuromuscular Training.

25:25

Okay, I am using a foam roller here but honestly you can use anything. If you have a ball, yoga blocks, even a stack of towels will work just great.

Put your leg fully on your side to start with. Step one is to put the top leg at least 90%. Then you will go opposite hand, opposite leg, so hand here and hand here to grab the opposite leg behind you.
Lay fully on your side, inhale, exhale and then rotate and come back.
This is stretching my left quad and hip flexor. By having my knee up it is getting my right glut. By the twisting I am stretching my rib cage, thoracic spine and abdoMATILDA fascia.
The key to this is remembering not to tense your neck, so when you are doing this your neck must be fully supported on the pillow.
The second thing to remember is you do not want to roll back from the lower back. You have to keep your belly button close to the floor as you are rotating.

That will help to open up both the rib cage. It is a bit more advanced than what you were doing, but it will also help to open up your hip extension, the flexors, quads and abdoMATILDA fascia. It actually changes the deep crossed fascial chains in the body.

Basically it brings your left shoulder as far away from the left foot as it physically possible and opens up those crossed fascial chains in the body.

MATILDA
That sounds good.

27:40:2
Now, do you have an elastic type workout band at home?

MATILDA
Yes.

IAN
I will tie it on to the wall here, but if you were laying on the floor and had a **?** band bad? glut, so you had it tied here and could tie it to something that does not move, you then step into the band so it is pulling across in this direction.
Then bring your left knee to your chest. Ideally of course this hand would be done by your side but for the sake of the video I am just holding it here, okay.
So from here you are going to raise up and slowly back down. This feeds a bad pattern in your brain, meaning if I have a weak minimus maximus my knee is going to cave in, and very often your brain will be unaware of that. It is a subconscious thing where you are causing a ?..? collapse of the knee inward.

When the band pulls your knee inward it exacerbates your pattern problem so much it actually makes the brain consciously aware that your hip is now in an abductor position, forcing you to use your abductors and external rotators keep you out of that position.

So you are biasing the external rotators and abductors as your hip is going into a flexion and extension pattern where you are walking around in [echoey sound]

So that is a really nice progression of the clamshell and logically you can make that even harder by bringing it into a standing position. You do the same with the lunge.
I will tie it on to my table for a sec. There, so if this is tied on to my desk you can step into it, and you can do a lunge position. If you do it this way the band is pulling this way you are having to fight to push against it.

Those are three big things I would work on for the hip on that right side - the diaphragm and rotation in the thorax. And if the band does increase your faber then you work on abdoMATILDA strength and if ?? check for accuracy ?? not do some soft tissue work to the vastus lateralis, the outer quad, with rolling, self-massage, whatever you want to do... fascial release etc. Then lastly follow that up with some RNT bridges progressing to RNT lunges to strengthen the external rotators.

One last question, do you know if your left hamstring is longer than your right? If you were to lay on your back and bring each leg up can you go higher on the left than the right?

MATILDA
Yes, that is right.

IAN
If you can make it here next week, the whole pattern I am going to discuss might be applicable to you because there is a possibility that your right gluts are in a lengthened position because of a pre-programmed pelvic position that we humans are typically in. It is a bit more difficult to train muscles in a lengthened position because they are already overstretched, so then we need to get them in a shortened position first to add strength.
If you cannot tune in then I am sure we can get the notes to you.
//
~~ **CELESTE ~~**

CELESTE
I have had a problem with my knees since I was 12.

IAN
They are dislocated, subloxed?

CELESTE
Yes.

IAN
So the kneecap.

CELESTE
Yes. The fortuna went out of the kneecap, both knees, and very often. So I learned to do movements in order to make them get back and then I feel down. When I was 16 the left knee had surgery. They changed the ligaments in order to give me more stability, but I did not want to do the same thing with the right one because it was not a nice experience.
So I have been living with dysemmetry with the left side strong and the right side dislocated.

IAN
And it still happens?

CELESTE
Well, not really because when I ?? did / gave b... ??

IAN
Yes..

CELESTE
I wanted to strengthen my abdoMATILDAs because my core is very weak and my pelvis was always moving, changing. So I did some work. And after that I would go up the stairs with my child and my right knee could not bend more than 90%.
The problem has been for a very very long time, so they are very very weak, and I cannot do the symmetrical work you told me to do because my right leg is not in the same position as the left one.

But my core is very weak, so I think I need to work there. I have been hearing you about the diaphragm and I think my breathing is not right

because I do the strengthening when I inhale. I find when I do the opposite it is better, but it is not automatic.

IAN
First, I have a couple of questions because kneecap subloxing is not normal. But there is one condition that it is very very common in, so I want to ask are you now or have you ever been able to put your palms flat on the floor.

CELESTE
Yes, I can.

IAN
Can you touch your thumb off your forearm, can you bend this [demonstrating 37.21.9] back to touch? Can you do that on both sides? Okay, you can.
Would you bend your baby finger back as far as it will go. Okay, right.

Do you consider yourself to be double-jointed, very very flexible. When you were a child or teenager did you show your friends how you could bend things in certain positions?

CELESTE
Yes, well I am too flexible, yes.

IAN
I hope you do not mind me asking about your systemic health here now, but have you ever had any gastro-intestinal problems, like digestive issues?

CELESTE
I used to live a not very good digestive system.

IAN
Do you have a family history of any cardiovascular related diseases?

CELESTE
Yes, my mother and my family.

IAN
Did you mother, grandmother, any sisters or do you yourself have any varicose veins?

CELESTE
Not too much. It does not hurt. But small ones.

IAN
When you go to the dentist do they have to give you extra anaesthetic?

CELESTE
No, but I now have some...

IAN
Bruising, right. How is your circulation? Do you have cold hands and feet?

CELESTE
Cold feet, not too much but some.

IAN
Did you dance when you were younger, maybe ballet or any form of gymnastics?

CELESTE
No, I could not do that because of my knee.

IAN
Have you ever heard of something called Benign Joint Hyper-Mobility Syndrome?

CELESTE
No.

IAN
It is a hereditary connective tissue disorder which does not just affect the musculoskeletal system, your muscles and joints, but can also affect your heart, lungs, gastrointestinal and even reproductive system. It is a genetic disorder where there is a laxity within the connective tissue.
So I asked you those questions because there is something called the Brighten Scale where the objective criteria is if you score more than 5 out of 9 in the testing. Now you actually did because you listed five things. So you objectively test as having Benign Joint Hyper-Mobility Syndrome.
But as well as having those objective measurements, you must also have subjective criteria. The prominent one is joint subluxation, a history of joint subluxation.

I kind of perked my ears up when you told me you had dislocated your kneecaps when you were a teenager, twice, and also from the history and test we can say with approximately about an 80% certainty that you have Benign Joint Hyper-Mobility Syndrome.
That is both a good thing and a bad thing. It is good because it actually may give justification to why you have digestive tract issues. It also ties in with why your mother might have had heart issues or why you have varicose veins or other things - fatigue is another big one.
So, I will forward to you two medical articles that are actually crazy easy to read. You might just need to google some of the words but for the most part they are easy to read, so I want you to see if they resonate with you. It might tie a lot of things together for you that you saw as

completely unrelated but actually are very much related. So, that is the good news, to have a diagnosis.

The bad news I suppose is that there is no official cure for it. But there is a management, and 99% of the stuff you need is not mobility treatment. It is very much stability and strength training. The good news is that this syndrome gets less problematic as you age, because we naturally become stiffer. So all of a sudden the kneecap is not as mobile as it used to be and it usually becomes less and less of a problem.

KATARINA
We will all read those articles, as part of the project.

IAN
Sure. They are from a professor based in London named I think Rodney Graham, and Jane Simmons. They are two of the leading experts in the world, so I will forward you those articles. They are extremely useful to have.

You will also need a bespoke, or guided, strength and conditioning and stability program. It may be a bit more than I can do for you here, but if you go to a therapist where you are living and say you have Benign Joint Hyper-Mobility Syndrome, at least then straight away they know what they are dealing with. because it is very very commonly misdiagnosed or completely missed, so not even thought of.

So, last week we were talking about hamstring strength and you say it has been causing you knee pain to do those things?

CELESTE
Not so much pain, but difficulty to stand or sit up or walk up and down the stairs. I was thinking of the quadriceps and the abdoMATILDAs and that was a good idea. So getting my back back, following the abdomen

and then when just walking I start feeling the quadriceps. So that was nice for me.

IAN
Very good. And with the history of kneecap subloxation, you are obviously going to need strong quads. So overall you will need a lot of strength and eventually once you get stronger the best thing for you would be to actually do some strength work, in a gym or even at home.

CELESTE
I like pilates, with machines.

IAN
Brilliant. Great start. That is a very very solid starting platform for sure. Non-weight-bearing, under controlled supervision. Ultimately we would like to supplement that. So you could do pilates let's say twice a week to start with and then perhaps do some whole and mat pilates - there is a lot of stuff online now for free. But eventually once you are stronger and very very good at that, maybe a few months time you can start proper resistance training.
I know people are afraid of that, thinking of someone in their 50s and 60s lifting weights in a gym, but in reality this what we all should be doing. All the evidence suggests that.

I published something recently on my instagram about how stretching does not prevent injury. There was a large scale meta-analysis study with over 23,000 subjects to look at whether stretching prevents injuries and they found no correlation. However, resistance and strength training statistically reduced over-use injuries in the body by over 50%.
So that tells us we need to move away from thinking about mobiility and more towards strength training.

In my opinion, I think the reason you started to feel your quads more activated is that every muscle in the body needs to work within a certain length. If it is too long it is weak. If it is too short it is weak.
So, going back to what I think you said about weak hip flexors, that very often happens. Tight hip flexors are weak hip flexors. Long hamstrings are weak hamstrings.
So hopefully when the hamstrings start engaging more with a bit more posterior rotation, the quads go into a slightly longer position and then all of a sudden the connectivity in the brain starts to fire those muscles a little bit more efficiently.

So, yes, pilates would be a great start for you because I know particularly on the reformer machines they do a lot of activation work where you bring the legs up and push down. Those are really good exercises for hamstrings, and that will bring your quads and hip flexors back online working efficiently again.

Now, we need to make sure you have some at home stuff. How are you feeling with the bridging stuff I gave you last time?

CELESTE
The problem there is my right knee did not bend. So one foot is farther than the other and it is not equal.

IAN
That is actuallly okay. That just makes the exercise slightly harder, but I will show you one thing here.

9:50:17
The further your feet are away from you in that direction, the more hamstring bias you get. The closer your heels are, the more glut you get. So if you cannot bend the knee past 90% on the side, that is actually not

the worst thing. It just means you are going to focus more on lifting through your hamstring as opposed to your glut.

CELESTE
Okay.

IAN
It would be more difficult for you if you were not able to straight the leg. Then you would find it a lot more difficult to get hamstring stuff.

The other one you could do lay on your back, with a straight leg on top of a table or chair, and do some single leg hamstring raises. If that is too difficult, where you cannot actually get your butt up, no problem - just pull up and hold and do isometric holds. For example, if you get to here and cannot go any further just hold ten seconds and slowly lower back down. Then as you get stronger you will notice that you will be able to get higher and higher.

CELESTE
That is good, okay.
Do you think my problem gaining weight has to do with this syndrome.

IAN
It can do. I am not an expert in that area, because obviously that has a lot to do with endocrinology and things like that. I have some basis but am not a professional there.

CELESTE
If it affects all the organs.

IAN
Yes, it can affect your thyroid for example, I believe. And certainly it can affect your digestive system for sure because if you have a slower

digestive system you have food sitting longer in your gut. Now, again, this is not my area of expertise but potentially one would logically think you might gain extra weight from that, because everything is slower.
It is very common in Benign Joint Hyper-Mobility Syndrome to have low blood pressure and low digestive motility. It can even affect the reproductive system. Everything is looser and slow and does not happen as well as it should do.
That is why they get varicose veins, for example, because they are kind of a laxity and sloppiness of the veins that ultimately culminates in pooling of blood. Sometimes you get varicose veins. Sometimes you get poor circulation in your feet and hands because there is no rigidity to the cardiovascular structures that need rigidity to contribute to fluid dynamics in the body.
So weight gain seems very plausible. I cannot 100% guarantee that, but it seems plausible to me that it would be one of the issues.

CELESTE
Thank you.
is
KATARINA
In the bridges, do you want us to roll off the top of the quad first?

IAN
Yes. Like I said earlier, mobility always precedes stability. So for me I always think it is good to just do a little bit of mobility work to the muscles that are in a shortened position before activating the muscles that are in a lengthened position. That is the kind of general rule of thumb I give to most of my patients.

That weird sort of rotational twisting stretch that I showed earlier, [the Br...??], is a fine example of a stretch or mobility exercise that you could do prior to doing bridges or core work or things like that.

KATARINA
Thank you very much. Maybe Alicia will be able to come back next week too.

IAN
The more the merrier. Next week should be interesting because I was thinking about Ab and Adduction, and the pattern I mentioned called the Left AIC Anterior/Interior Chain Pattern, that we are predispositioned to be in as humans because of things like our larger right diaphragm, heavy liver on the right and hemisphere dominance. We are kind of on our right sides more than on our left.
So, that may end up tying into what we are going to talk about next week.

Thank you all. Have a lovely week.

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