Lab 2 : Lesson 1 - The Biology of Stress Video #2

1 - All About Freeze and Shutdown

This section addresses the following questions:

- Are Freeze and Shutdown the same thing? If not, what's the difference?
- How does the jagged graph of sharp peaks and troughs relate to freeze?
- How can I tell the difference between dissociation and freeze?
- Is social fear of speaking up a form of functional freeze?
- Is it possible to have parts of one's body in freeze?
- How can I tell the difference between being in freeze and rest-and-digest/calm parasympathetic? Can I tell from sleep or immune function?
- If there's known birth trauma, is there automatically freeze stuck in the system?
- If a child learns to cope with physical abuse by 'not feeling it' is that also freeze?
- How long does it take to come out of functional freeze? Is there an order in which body systems come back online?

The freeze response is a distinct mixed state expression of sympathetic mobilization (gas pedal) and mid to high dorsal vagal (E-brake) simultaneously dominant. A charge to "GO" and a charge to "STOP" both happening at the same time. The "deer in the headlights" is the classic representation of the Freeze response. Freeze is often misunderstood to be synonymous with Shutdown, however it is not.

Shutdown is the response of the dorsal parasympathetic state becoming dominant, which occurs along a continuum as a response when Freeze does not lift.

One important point - there are differences between an acute freeze response that comes on as part of a real-time reaction to a survival situation in the present moment, such as with a shock trauma, vs. a freeze response that has become embedded as part of our way of being in the world due to unresolved trauma.

Present moment - When a person with a regulated nervous system that is not living with unresolved survival stress is faced with a survival threat in real time, there is a predictable chain of autonomic responses* - First the sympathetic mobilization energy of fight/flight will kick in; then if that is unsuccessful, the dorsal vagal brake will come on which immobilizes the flight/fight and the freeze response will be activated and dominant.

When the freeze response first kicks in, there is high sympathetic energy running through the system, so for a few moments we will have BOTH, therefore, a mixed state, which gives us the 'deer-in-the-headlights' moment - frozen with shock and fear. Then, if the threat persists, the system will continue to shutdown, also referred to as collapse. This is no longer a mixed state, the high-tone dorsal vagal state is running the show and the system goes into that numb, low to no energy, conservation mode.

**It's important to note that those living with unresolved survival stress already in the system may not experience this kind of clear chain of autonomic states when faced with a real-time survival situation. The system may have learned to bypass fight/flight and go directly to freeze, which is a common indication of early developmental trauma.*

Embedded Freeze and/or shutdown response - An embedded freeze and/or shutdown response can show up in many different ways, depending on where along the freeze-shutdown continuum a person's system was when the response(s) got stuck, and also depending on if that stuck survival response is due to one acute event, a series of events, or a chronic situation of ongoing, persistent threat.

If it's an acute moment of freeze that is stuck in the system, this may present as shock, feeling frozen but terrified, or it may just feel kinda 'herky-jerky' - the system being pulled towards the fight/flight side of that mixed state and then pulled towards the collapse side of things, and it may also be accompanied by mental confusion or thoughts and/or behaviors that are influenced by the mixed state.

If the stuck energy is more in the shutdown side of things the experience may be different. Shutdown serves a physiological function to help mammals not feel the physical pain of being attacked and eaten by a predator -- that's how it evolved, to numb the animal body. As humans, we have the same benefit of shutdown, to not feel the physical pain. We may also have the experience of dissociation. Dissociation is an automatic shift in conscious awareness to be LESS conscious, less aware of what's happening, less present. In this way, dissociation serves an adaptive function of shutdown, for the same reason - to not feel pain. If I'm not aware of being in and with my body it doesn't hurt so much or so bad.

Our higher brain enables us to manage these survival energies, often unconsciously, so an embedded, unresolved shutdown response may manifest as feeling lethargic, hopeless, emotionally numb, or literally numb in parts of the body, with or without dissociation. Or it may be experienced primarily as dissociation: being completely checked out and unable to be embodied much at all.

However, the most common representation that we see in our society of an unresolved, embedded freeze and/or shutdown response is what we call functional freeze. This means it has become normalized and doesn't necessarily show up in dramatic ways.

Functional freeze can actually show up as the ability to accomplish TONS of work and achieve a lot, especially in Type A personalities. There are many successful business people and incredible athletes who are living with functional freeze. They are only able to be such high performers by not feeling their bodies and what is happening inside. Generally, they don't know they are doing this, they just know they prefer to always be on the go. Always doing, producing, moving is often the only way they feel anything at all. In first responders, for instance, this is very common. The 'rush' of constantly being in a crisis is the only way for them to feel their bodies.

Functional freeze can also show up as limitations; fear of speaking up, not having boundaries, always giving in to others, lethargy, a feeling of no purpose in life, or no drive to accomplish anything. These are all manifestations of trying to stay as small and quiet as possible. In other words, to remain frozen and shut down.

It can also show up completely physically. Parts of the body may be numb and have little sensation, or when someone tunes in to feel what's happening on the inside, there may just be a sense of void, nothing going on. Or it may show up as poor digestion and immune function, and an inability to get a restful night's sleep, because when we sleep or are deeply resting we are supposed to be in a more nuanced and healthy zone for the Dorsal Vagal branch -- which is the low-tone state.

This low-tone Dorsal Vagal state supports digestion, barrier-keeping in the guts, cell repair, physical growth, and immune function. So, if we are living with functional freeze, there may be a tendency when we sleep to dip fully into that shutdown response (high-tone Dorsal Vagal) such that we don't have access to a healthier, low-tone state.

There are many ways freeze/shutdown becomes a normal part of how we react to stress. Usually it is rooted in early/developmental trauma, where the little one could not fight or flee a hostile, neglectful, chronically stressful, or misattuned environment, and so the system perceived that survival response as the only option left, and then eventually just starts to default to freeze/shutdown when stress enters the picture.

It can also happen because of traumatic births or surgical procedures early on, but it's not a guarantee; if the caregivers are healthy and attuned then the little one's system will be able to bounce back from pretty much anything. It can also happen later in life through physical abuse that can't be escaped or defended against; an older child's system may still learn to numb out as a way to defend.

There is no one timeline or sequence to coming out of freeze/shutdown, it will be different for everybody. One thing is the same though, in that it does take time. This isn't something that happens in a session, or a week, or a month. Generally we are looking at months or years, with improvements and gradual changes in physiological function that happen slowly.
Some may start to notice they simply feel more alive or feel more sensation, or have more energy or better boundaries. They may start to speak up for themselves. Sleep may improve and start to be more restful, or immune problems may start to clear up. Digestion may get better. Basically, physiological function

will slowly improve over time, and we see this in improvements in the systems that have been compromised, and in the behaviors, thoughts, and beliefs that have their roots in the unresolved freeze/shutdown response.

2 - How does it feel to have the gas and the brake on at the same time?

This depends on each person. When one is living with freeze and/or shutdown (with the E-brake on) that automatically means there is also big sympathetic activation in the system (the gas), because remember -- in a real-time survival response, freeze only comes on after fight/flight has been unsuccessful, so if freeze has become stuck in the system due to trauma you can be sure there is also fight/flight stuck in the system, though one may not always feel that if freeze or shutdown has become the more dominant state. It can act like a big, heavy, lid that keeps all that underlying sympathetic energy locked away.

The most common thing we see when someone has been living with both unresolved freeze and fight/flight in their system for a long time is autoimmune disorders, what we call Syndromes (fibromyalgia, chronic pain, Crohn's, IBS, etc.). This is because the nervous system is so darn exhausted and confused! We have these big survival energies always running in the background, and over time that wreaks havoc with all the functions the autonomic system is supposed to support: immune function, heart rate variability, breath, digestion, cell repair, etc.

This freeze and/or freeze fluctuation with high fight/flight experience can also show up behaviourally or emotionally. Often labeled as Bipolar Disorder, Borderline Personality Disorder and Dissociative Identity Disorder, as nervous system experts we understand these as expressions of always being ON or OFF / HIGH or LOW, HYPER or HYPO, is essentially the system flip-flopping between high Sympathetic arousal and high dorsal vagal Parasympathetic arousal. I.e. Freeze. This may also show up more mildly as episodes of either anxiety, depression or both.

Lab 2 : Lesson 2 - Follow Your Impulses

Following Impulses and its Impact on Others

This section addresses the following questions:

- Is letting yourself cry following an impulse?
- How do others cope when in an office or other environment where it's hard to follow one's impulses?
- How do I follow my impulses when I know it may negatively impact others?
- How can I safely follow impulses around expressing my sexuality?

Following your impulse simply means allowing your body to do what it *authentically* wants to do, and that word, authentically, is the really important one when it comes to understanding distinctions. For example, we have a bodily impulse to drink water and following that is super important. Or we may have an impulse to eat all the cookies in the cookie jar, and that is probably not something we want to follow, because it is not authentic.

What I mean by this is when we've been through trauma, we may have many impulses that are driven by unresolved suffering which are NOT what our body actually wants, instead these cravings are something our psyche is using to manage the bodily experience. And that's ok. You can't chuck those out the window right away because those are part of how we deal. Those coping mechanisms have helped us to survive. But part of healing and evolving means learning to listen to and follow those authentic bodily impulses that may be suppressed.

Allowing ourselves to cry can definitely be a powerful way to follow our impulse. On the other hand, if we cry all the time as part of a downward spiral of despair that is very familiar, then it's probably more of a coping mechanism, not a healthy impulse. Likewise, allowing our anger to express in a healthy way when it has historically been suppressed is a great way to follow our impulse, but lashing out in rage at others or at ourselves is more of a response driven by the unresolved trauma.

So when it comes to following our impulses we need to discern if it's a familiar way we use to cope with something, or if it's more of an organic bodily impulse that will be good for us. It may take some practice to notice the difference, but you'll get there, just keep practicing!

Following our impulses can be as simple as peeing when we need to pee, passing gas when we need to pass gas, and allowing our other biological needs to be honoured. It can be as refined as following your impulses through a department store to the exact shirt you were looking for, or by listening when your body says NOT to go down that particular street. The body knows a lot.

The fact we live and work around others sometimes may make following our impulses feel problematic. How to authentically express our anger and frustration at a co-worker, when standing up, snarling, and wringing the heck out of your sweater generally isn't deemed appropriate workplace behaviour. How to allow ourselves to burp or pass the stinkier kind of gas when we are in a crowded place and fear judgment. Again, there is room for discernment here - is anybody really going to be harmed by you passing gas? Probably not. Will you get fired for snarling and growling on the job? Quite possibly.

Also, the bathroom is your friend. Most public environments have private bathrooms (even in malls there is usually the 'family' bathroom which you can slip

into), or at least a private stall. So this is one solution. Become aware of what you are experiencing and what it feels like you need to do, then take a little trip to the WC for privacy.

Also, it may be that you can refine your impulse. In the example of anger, maybe you can still allow yourself to speak your truth or establish a boundary, and then do the snarling and growling later. And speaking of later, if there really is no safe place to follow your impulses that are arising you can ask them to please wait until you get home and promise your body that you will allow it to do what it needs to do then. Just make sure that you then actually do that!

When it comes to following one's impulses around sexuality, I would say if you are by yourself, then still practice discernment to try and discover if this a healthy impulse or a behaviour that is helping you cope with suffering and allow yourself to explore. If you are talking about sexual impulses that involve another then taking the time to discern is even more important, and so is communication.

Impulses and the Freeze Response

This section addresses the following questions:

- Are repressed impulses the same as shutdown/freeze?
- If you are in shutdown, does it still make sense to follow your impulses, even if they are to sleep and stay alone?

Not being not allowed by others, or not allowing ourselves, to follow our impulses can definitely be a major cause of unresolved freeze in the system. And then, not being able to hear, or follow our impulses can also be an expression of that same shutdown.

If we are living with a lot of shutdown and our impulse is to sleep all the time and isolate ourselves, then these are most likely not completely authentic impulses, but are instead ways we have found to stay safe and manage our trauma (though this may also be intertwined with one's authentic nature if they are more introverted). We don't want to just ignore these by overriding our fear and forcing ourselves to be social or more active, but we DO need push to ourselves out of our comfort zone a bit, and this is well supported by doing good trauma work, both in this program, and also maybe with some one-on-one work. Having a safe, therapeutic alliance can be a good way to start pushing at our edges in a context of safety and attunement.

Lab 2 : Lesson 3 - The Biology of Stress Video #3

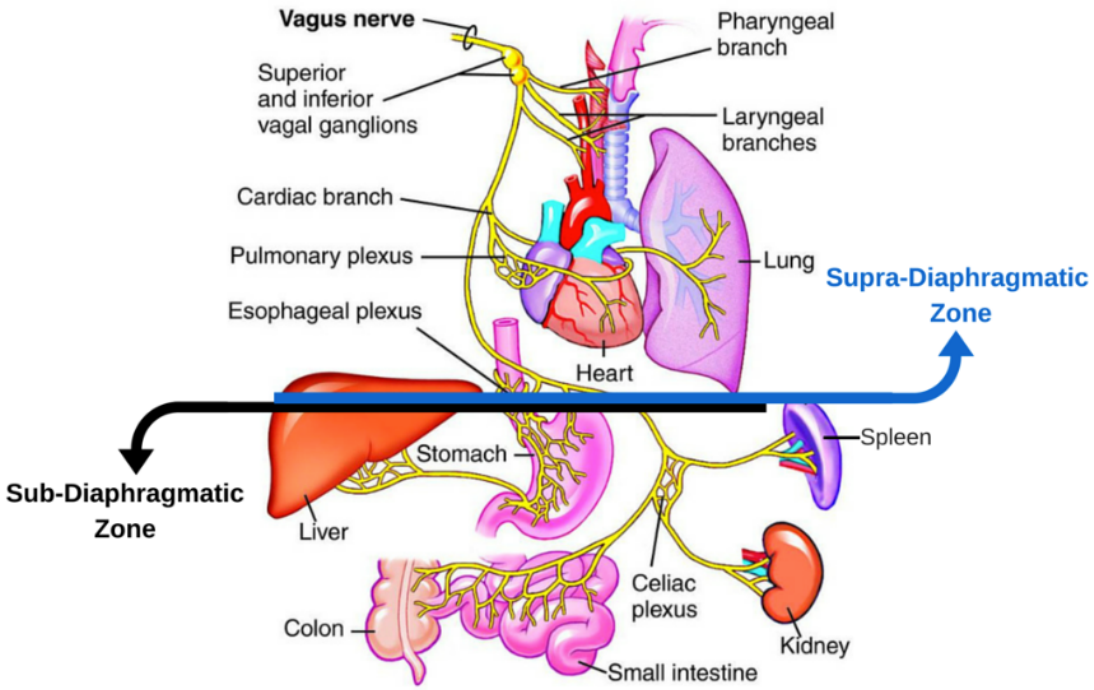
The Vagus Nerve and its Functions

This section addresses the following questions:

- I want to visualize the vagus nerve, is it really a whole tree of branches?
- When I experience a panic attack, the pattern is usually that I get very overstimulated, and then feel my heart rate suddenly calm down. Is this the dorsal vagal getting flipped on to slow things down?
- How can a little dorsal vagal be good for rest-and-digest and a lot of dorsal vagal be damaging to one's gut? What if there is almost no dorsal vagal, how does that impact the gut?
- Can we calm the system with gentle pressure (like a pillow on abdomen)?

- In the past I was not receptive to talking with a loved one as a way to calm down. Recently, I've noticed that I am receptive to this. Is this a sign that my ventral vagal is functioning better?
- Can kids in mid- to late-teens grow their vagus nerve by being in connection with a loving parent?
- Can social engagement be enough to repair a ventral vagal nerve that never fully developed due to neglect?

Yes, the Vagus nerve is very much like a tree, but with two trunks! One trunk is the Ventral Vagus and the other is the Dorsal Vagus. The Ventral Vagus enervates parts of the face and the organs above the diaphragm, while the Dorsal enervates all the organs below the diaphragm. Below is a picture. While it doesn't show the two 'trunks' specifically, it shows all the organs both parts **enervate.**



The Vagus nerve plays a huge part in Parasympathetic function, which is to down regulate the Sympathetic Nervous System. In other words, it helps to calm us down. The Ventral Vagus is the part we really want to do this. It is the part that governs social engagement and lets us, by engaging with safe people, or by making sound, or hearing soothing sounds, gently take the foot off of the 'gas', which is the Sympathetic. The Dorsal Vagus, on the other hand, is more like the emergency brake. When a lot of energy goes into it (we call this High Tone Dorsal), it activates the Freeze, or shutdown response. This will also bring us out of Sympathetic, but it is a survival response and not very good for us when it has become the go-to option.

On the other hand, 'Low Tone Dorsal', when a less amount of energy is in this system, is VERY good for us. The Low Tone Dorsal state lets us rest, digest, and repair our cells. It supports immune function and barrier keeping in the gut. When we have more access to the Ventral Vagal part of this system, we will also have more access to this healthy 'Low Tone' state. This is optimal. With unresolved trauma in the picture though, it is much more common to flip between high Sympathetic activation (Fight/Flight), and High Tone Dorsal (Freeze). When this is the case our gut is impacted because we don't have nearly as many acmes to healthy digestion and barrier keeping in the gut.

One way we can start to access more healthy ventral function is through things like containment. A weighted blanket or pillow on the abdomen and chest is one example, which usually sends a signal of containment and safety to the organs there, which in turns helps the Vagus. Another way is by engaging with safe people, which stimulates the Ventral Vagus. If we have been through trauma, we may have a strong resistance to engaging with people in general because our system interprets all people as potential threats, so if we notice an improvement in our ability to interact with others in a calming way this is a big sign that our

Ventral Vagal function is improving and less energy is going into the survival responses. It's never too late to do this! We may never get to be exactly as we would have been had we not been traumatized in the first place, but huge improvements can be made in the functioning of our Vagus Nerve through safe relationships, such as with an attuned therapist, friend, partner, or caregiver.

Q: In a session with an SE therapist, I partially completed an early event by stomping, and initially felt release but then felt increased stiffness. Is this usual?

Yes, this is not unusual. If we complete a procedural memory which has been wanting us to do something to protect ourselves this can help the muscles and fascia come out of bracing, which is like a kind of sustained preparation to act. Also, it may be helpful to revisit this action in a slower, gentler way. Going through the same kinds of motions and images/emotions, but with more awareness and less force.

Q: How do I nurture my system into knowing it is safe to be calm?

This may sound over simplistic, but it's true that really it just comes with practice. Keep practicing the lessons in the course, particularly the Orientation exercises, Follow Your Impulse, and being aware of, and using, your resources. When we have lived with unresolved trauma for a long time it takes time, practice, and the right tools to communicate new information to our system.

Q: How can positive emotions, like joy, enthusiasm, excitement) feel like too much for one's body?

Anything that is 'high energy' can feel like too much to a compromised nervous system, even emotions we perceive as positive. Though important note, there is no such thing as a negative emotion. The Sympathetic Nervous System is ON when it comes to both excitement and threat, and if we have unresolved trauma,

particularly early/developmental trauma, it can be very difficult for the system to distinguish between these things, it all just feels like too much.

Lab 2 : Lesson 4 - Finding Potent Posture

What If this is hard to do, or brings on a big response?

This section addresses the following questions:

- Do you have suggestions for how to do this if it's painful for me to stand?
- I have Postural Orthostatic Tachycardia Syndrome (POTS) so standing or sitting upright with legs down for even a short length of time can be challenging. Do you have any suggestions?
- I found the potent posture exercise tricky. I am not sure I could find the sweet spot. In this practice, is the sweet spot somewhere we are standing completely still?
- The first time I did this exercise the whole dynamic changed when Irene said sway like a tree in the wind. I thought before that I needed to be stiff like a board/the stool she spoke about in Part 1? I'm still not fully understanding the instructions. I think my body is quite accustomed to what it 'should' do from ballet and yoga, so need to 'break through' that?
- I have a fear of falling that gets activated with this lesson. Do you have any suggestions for how to work with this?
- I also found it quite activating. Leaning forward - my heart rate started to increase like at the start of a panic attack - on the edge of something -

maybe linked to vertigo, which I started experiencing out of nowhere some years ago? Leaning back the 1st time, it seemed more of my natural defences came on board to keep me stable, such as my arms wind milling, but the 2nd time of doing the exercise, I felt sensation rising from going both forwards and backwards. Teeth clenched, tensing in diaphragm, 'knot in my stomach' and 'lump in my throat'. A feeling of chaos in my sternum at the midpoint between my breasts. Even Irene's words about the brain stopping you from falling seemed triggering. I was drawn to do this exercise again but would be grateful for advice of where to go with this relatively strong response to such a simple exercise!

- I learned my natural standing position is tilted slightly forward with my eyes cast downward and my shoulders curled forward. I got the sense that standing like that is normal for me because it helps me feel ‘smaller’ somehow. It makes me feel hidden. Is this potent posture? It’s where I can definitely breathe the easiest, but part of me still feels like it’s not right because of the trying-to-hide-in-plain-sight energy that I feel is attached to it.

If standing is very hard to do for a long time, then there are a couple of things you can do. One is to simply do less - just do a couple minutes and then leave it. The other option is to play with these principles in sitting. You can do this by sitting on a chair such that you can feel your sit bones clearly, which will mean sitting up straight with the legs touching the floor. Then try the exercise pretending your sit bones are your feet - so you can still lean one way or the next and play around with the posture in sitting that feels the most effortless. If sitting in this way is also too hard you can do the same thing sitting on the floor with legs crossed and the thighs supported by pillows. If all of these options are too hard than just leave it,

there will be plenty of other exercises to work on, and many of them are done laying down.

The point of this exercise is to find the sweet spot; the posture that requires the least amount of effort from our muscles, because our skeleton is what we need to use to provide the support. If we have a lifetime of unconsciously leaning a bit forward or back, right or left, slouching or hyperextending, then this may be tricky and require a bit of practice. This is ok! Remember, these exercises are not meant to be done one time and then left behind; ALL of them provide insight into ways that we can fundamentally change the way we live. They are all a progression.

Potent posture is meant to be dynamic. It's not about finding some rigid stance that is stiff, like a board, but about finding a way to organize our posture such that it is efficiently supported by the skeleton, which frees up the muscles such that we would be able to move in any direction without some kind of preparation. It's not about what is 'right' or what we 'should' do, it's about finding the best possible organization for us, and that is meant to translate into all areas of life - walking, chopping vegetables, sitting at the desk, etc.

It's not uncommon when playing around with this exercise to get activated. This is because we are challenging lifelong habits of posture that are often unconscious and are associated with the trauma we carry. We may hunch or try to stay small and unseen. We may hyperextend or puff ourselves up so to appear more confident than we are. We may have areas of our body that are frozen and difficult to feel, which may lead to always favouring one foot or the other. Whatever the habitual posture is, it's likely that it is associated with keeping our unresolved trauma managed, so when we start to challenge that, the charges can come bubbling up.

If this is the case, then do less. Work with the exercise (and all exercises) until you start to feel things arising, then stop. Orient to safety, let yourself settle, come back to it later. Maybe even the thought of doing this brings up something! If that's the case, you could also try just listening to the recording without doing anything at all; just listen and stay oriented to the safety in the environment. Then maybe try a bit, leave it, come back. Bit by bit - there is no hurry.

Baby Liv

This section addresses the following questions:

- I'm not sure I understand the baby Liv videos. Is this just a sign of how disconnected from my body I have become?
- How does not crawling affect the NS development? And do I need to crawl now in order to help my NS?

The purpose of the Baby Liv videos is to show how a little one naturally progresses through different stages of development: from laying on the back, to learning how to turn over, crawling, and eventually finding her feet. We get to see how her system organically unfolds and finds different options as she is led by her curiosity. When this is allowed to happen, the development of the different muscle groups and how they function also support the development of the brain and nervous system and the ways in which they are able to relate to the environment and the self. These developments are interconnected.

Many of us who have been through trauma did not get this. Our environment was stressful, and/or we were never allowed to roll around and play on the floor and explore with curiosity. Many of us were strapped into seats or put into different devices meant to keep us occupied. There is even the common practice called

'tummy time', in which a parent places their baby on their tummy in an effort to force them to figure out how to start crawling. All of this is quite bad. The system is meant to organically unfold led by curiosity - as is demonstrated in the videos. When this natural process is restricted, interrupted, or not allowed to progress slowly and sequentially there is a negative impact not just on the developing muscle groups, but on the brain and nervous system as well.

A lot of this damage can be repaired though, and the nervous system can rewire, or even link up wires that were never connected at all. Playing on the ground, exploring, crawling, letting our curiosity lead us (which are all fundamental principles of Feldenkrais) - these are all ways in which we can start to do that work, along with all the rest of the exercises and learning in this program.

Q: Why do we hold our breath when stressed?

This can be due to a few reasons. Our posture may not support our diaphragm easily dropping down and so the breath is strained, and we unconsciously hold it. It can also be part of a survival response - holding the breath to stay quiet and hidden.

Q: When we stop bracing and being tense, will our muscles be ok? Or will they forever have some damage from all the tension?

Yes, they can recover! The body is incredibly resilient and repairable, especially so when the nervous system is regulated and we are not continually bracing.

Q: The key to this exercise isn't adjustment when we notice the holding pattern, is it? Are we meant to pause, notice and follow the impulse related to it?

Actually, with this particular exercise, the key is about adjusting to find better, more efficient options for our physiology. BUT...you certainly could do what you suggest as well, and that would be awesome! These lessons are meant to

become a lived part of our experience and intertwine organically, so finding a bracing pattern and then following your impulse to see what it may want to do, or what emotions that bracing may contain, is also a wonderful idea.

Q: I just did potent posture exercise and I got triggered by seeing myself in the window. How do you suggest that I deal with this?

If you get triggered by seeing your own reflection, there are a couple things you can do. One, practice this someplace you can't see your reflection. See how that goes! If that is alright, then maybe see what exactly is happening when you see your reflection- what is getting triggered? Does the breath change? Do you become rigid? Are there memories, images, or emotions that arise? Maybe explore this in a titrated, curious way - see exactly what is happening in the body, and then let yourself settle, orient to the environment (but not your reflection :), then maybe try again, see if it's different. Leave it, come back later. Explore!