

May 2023 Women's Breakfast Talk

Disclaimer: this is an automatically generated machine transcription - there may be small errors or mistranscriptions. Please refer to the original audio if you are in any doubt.

Date: 27 May 2023

Preacher: Dr. Brenda Wagner

[0 : 0 0] I'm a very movement-based person. So first of all, I want to say I am a teacher, I'm not a preacher. One preacher in the family is enough, and I know why you're all here, and that's because you all love James.

So I'm sure it has very little to do with me, and I'm just so thankful. By the way, my other never was I would never be married to an ordained person. I try not to say never any longer.

I feel like God takes it as his personal challenge. So I'm going to talk to you about the brain, the world, and the shepherd, and the biological basis for our spiritual practices.

I want to say our family's been on a bit of a journey around trauma, and because of that, I went to get some counselling for myself. And I actually want to call out my counsellor. Her name is Dr. Hilary McBride.

The reason I went to her was she was a birth counsellor at BC Women's. I'd actually met her at some meetings before she went into private practice. Somebody else said that she was very good, and I thought she would get me because she'd worked at BC Women's.

[1 : 1 1] And I have to say that I learned from that that I had was carrying my own trauma. And I still don't fully know what it is, but she was able to point out to me some behaviours that I had that were very consistent with someone that's experienced trauma.

So this has been a very personal journey for me. None of what I'm about to teach you did I learn in medical school. And nor did I learn it in any of my training, and I practice very differently than many of my colleagues because of it.

When you hear the word trauma-informed care, that's sort of a buzzword in medicine these days. But we're not always doing it right. We don't really know what it means. So I'm trying to do it better.

And I would say that one of the places that I've learned the most from actually is from our Indigenous cultural safety team. Because of the trauma that's held in our Indigenous populations, we've really had to figure this out.

But they just have a way of life that was actually very protective against trauma. And we took that away from them when we sent their children to residential schools.

[2 : 1 8] So most of you know we've moved to Squamish. It was my fault, but James did agree. And the other choice was Africa. So he's never been too keen on Africa until we made a decision to move to Squamish.

He became a counsellor and said, oh, I think I could be useful at Africa. And I'm like, too bad, we're moving to Squamish. So we did that because God put on my heart one day that I didn't need to go to Africa to take care of underservice populations.

There were lots of underservice populations in Canada. And even though Squamish seems like a relatively luxurious place to live, and it is, we serve the communities north of Squamish. So I've had the pleasure of being out into the South Statlium Nations.

A lot of people haven't even heard of the Statlium Nations. If you've heard of Lilewat or Lilewet, that is the Statlium name. So Lilewat is one of the 14 Statlium Nations. And then there's other ones, Nkwakwa, Skitin, Smakrum, and Hoekshaw, that are the nations that also live in Vancouver Coastal Hall.

And this year I went to Helpsick Territory, which is called Wegblisa, or otherwise known by us as Belabella, to be there for a birth. So I'm really thankful that God's given me this new place to practice my trauma-informed obstetrics and gynecology.

[3 : 30] So I'm going to jump right in and just say the ultimate neuroscientist obviously is God. We are, our bodies are so intricate. We are just learning about bodies.

And, you know, some of the new things that we know now are that we're using immune therapy and viruses to treat cancer instead of giving people chemo drugs, which are quite poisonous and toxic.

The whole body, we're now targeting things. But we're still so behind in our understanding of the brain. And I think in medicine, we're very much about the frontal cortex.

And I think actually sometimes in Western Christianity, we're very much about our frontal cortex. So I'm going to really talk today about how our frontal cortex is not where our religion is supposed to live.

And so what I'm saying here is just scratching the surface because we, of course, know that we are fearfully and wonderfully made. And we know that God knew our form when we were in that hidden place, the womb.

[4 : 33] I love the womb and I love thinking about that hidden place. That's why I'm an obstetrician. So, you know, he did create that inmost being. And I think Psalm 139 is like the obstetrician psalm, actually.

And when I think about it, it was this psalm that I memorized for when I was in labor. And so some of the things that we have learned, some doctors don't always get this as well.

So, you know, when I say we, I think I'm thinking of the broader population that a group of people that are really interested in what goes on in the brain. So that includes counselors, psychologists, some people in medicine, not always psychiatrists.

It's quite interesting when psychiatrists tell me something doesn't work, but there's lots of evidence that it does. And it's because psychiatrists, there's a great book that I've got on my resources. It's called Bessel van der, it's by Bessel van der Kock.

It's called The Body Keeps the Score. And he explains how psychiatry was never really viewed as a proper part of medicine until they started making all these psychotherapeutic drugs. And now psychiatrists are doctors because they give drugs, but that's now a lot of what all they do.

[5 : 37] And that most drugs don't actually treat the problem. They mask the symptoms of the problem. So this whole idea of a mind-body dichotomy, though, it's just so unhelpful, right?

Our brains are part of our bodies, and there's such intricate connection between what's going on, particularly in our brainstem, and the whole rest of our body, that to sort of try and separate those two is very unhelpful.

And it's actually done a lot of harm to our understanding of the brain. And what we know is adverse life events, trauma, pain, wounds, interesting thing, by his wounds we are healed.

It actually, the Greek word for wounds and trauma is the same. So it's by him experiencing trauma that we can experience healing, ultimate healing, right?

So what we know now, though, is when you've had that adverse effect in your brain, it biologically changes your body. Some of those changes are immediate. Some of them are long return.

- [6 : 43] Some of them happen in organs that are other places in the body, such as the adrenal glands or your blood vessels or your lungs or your muscles.
- And some of them happen in the brain, too. And some are immediate, and some happen over a long time. But we do know that the Lord is close to the brokenhearted.
- And as we go through this, it's painful and it might be triggering for people. And if you need to sort of switch off your cognitive hearing, then you can do that. Or you can repeat some of these verses, and that's why I've put them in the presentation.
- Because ultimately, reading a scripture verse is a very good way of building a positive neural network and getting you out of that place in your brain where you're traumatized or hurt or carrying a wound.
- So most, I'm horrified, actually, that when I teach medical students or even midwifery students, and I ask them if they've heard of the adverse childhood events study, many of them still have not.
- [7 : 50] I can't believe it's not part of the basic curriculum of medical school. Many of you probably haven't heard about it. And it was actually a doctor that was working at Kaiser Permanente. They have a big health promotion wing because it's what's called a health management organization.
- So they try to manage your health care by keeping you well. So somebody developed this clinic. If you were a smoker, you could go there. If you were overweight, you could go there. And he was working with one client that was very fat.
- We don't use the term obesity. I try not to use that term because it's actually considered a bit of a slur by people who are fat, and they prefer the word fat. And she did great, though, losing weight.
- And not after that, though, a few months after, four to six, I can't remember the exact time, she was back. She'd gained it all back. So he sort of tried to figure out why. Like, she had done all this good work.
- She'd really worked hard. And he found out that it related to a proposition that she'd had at work that involved sex. Because she was now attractive.
- [8 : 49] And she went home, and she just started to eat. In fact, she'd go to bed at night and wake up in the morning, and the fridge would be empty. Right? So a deep psychological need that was even happening in her sleep. And through the course of the conversation, he found out that she was an incest survivor.
- So he said, I should check this. So he went out, and he sent a questionnaire to the patients that he had worked with. And Kaiser has this incredible database. He can pull out people that have an elevated body mass index, sent them a survey.
- 80% said that they had had a history of sexual abuse or sexual assault. But when he presented this information to a bunch of obesity experts, that's what they call themselves, they ridiculed him.
- They thought, you know, fat people lie. Which just shows you we've got a traumatized person that's overweight, and the doctors think they're lying. Right? So we're part of the problem.
- Well, fortunately, there was a young epidemiologist from the CDC in the U.S. that was in the audience, and he went up to them after the talk and said, we have to study it. And they did, using Kaiser Permanente's huge database, they found people that were well, and they found people that were unwell.
- [10 : 03] And they found a direct correlation between the number of adverse events you'd experienced in your childhood and the number of illnesses you had in adulthood. And it was completely related.

The more adverse experiences you had, the more health problems you had. So, also now, we're learning about how trauma even affects our genes.

So from 9-11, that's some of the most recent studying, they actually found that the cortisol levels in the babies were lower than they should have been. So the baby's adrenal glands were not working properly because the mother's adrenal glands had been overstressed.

And that causes long-term developmental impact. This whole idea of epigenetics is how our genes actually make our hair brown or our eyes blue or our skin, whatever our skin color is supposed to be.

How our genes express themselves is actually changed by trauma. Best story I've ever heard about this is the mice. So the mice controls, and I don't agree necessarily with harm to animals.

[11 : 04] I just read the study. I didn't do it. The control mice were exposed to the smell of roses. I'm going to talk a little bit more about smell. And then the research mice got an electric shock.

But they were also exposed to the smell of roses. And after a few attempts of that, if they just exposed them to the smell of roses, the mice actually acted like they'd had a shock.

But that's not the power of the study. The power of the study is those mice's children reacted to the smell of roses as if they'd been shocked, as if they'd been shocked.

And they were never shocked. And their grandchildren also reacted to the smell of roses as if they'd been shocked, and they were never shocked. So just think about that.

I grew up a child of children that had lived through the Great Depression and World War II. And their parents had lived through World War I and World War II.

[12 : 07] Right? So some of my trauma is in my genes. And I can't change that. And even though I saw the incredible biological benefits of prayer in my father's life, it doesn't change the fact that my genes were changed.

And it's a sad thing. And think about the kids that have just been born in the midst of a pandemic. So it's something we all need to be mindful of. So when it says in the scriptures that we're not going to be punished for the sins of our fathers in Jeremiah, I think it's Jeremiah, but this is, to me, this is in some ways just a truth.

This is a truth about our genes, that if our parents have experienced a sinful, painful life, it's going to be handed down to us, and it's going to be handed down to our children. And it's not always their sin.

Sometimes it's the sin of other people around them. So these are some of the things that we, the first ones are lists from the ACES study, living in poverty, living without a parent. That could be through divorce, abandonment, death.

Living with someone that's mentally unwell or using substances. Living with abuse, whether that's physical or emotional or mental abuse. And then they don't call out sexual abuse as a separate thing, but sexual abuse at any time, whether you're a child or not, can have a hugely impactful impact on people's lives.

[13 : 37] Recurrent bullying, you know, if it's a one episode, fine, but if you're like a continual target, sexual assault, and later in life witnessing a crime, and obviously then living through a war, a famine, or a pandemic.

These are just some examples. These are some examples of the big T traumas, we call them. But there are also little T traumas, where there's just lots of trauma, or lots of little things that just pile up over time.

The interesting thing, and I'm not really going to talk about it today, but the really interesting, hard, sad thing, is that the more you experience trauma in your childhood, the more it has impact on a whole host of things, like cognitive behaviours and so on.

So I think this, we do need to remember that the mind-body dichotomy just kind of arose from that idea that rational thought exists in our brain, and that because of that, the brain is quite separate from the body.

And it's way more complex than that, and I'm going to take you through Brenda's basic brain description, which I use to simplify something that is super complex, but I use it to try and help explain to my patients some of the things that might be going on for them and why they're experiencing it.

[14 : 51] But this is actually a real brain. So this is your cerebellum here. This is your brain stem. Most of that sort of circular, noodley-looking stuff is the cortex, the frontal cortex.

Not all of it. Some of it is the temporal lobe, the parietal lobe, and they're involved in hearing and smell and some of our auditory processing, and they're sort of sit between that frontal cortex and then this little piece in the middle where you've got the white curly thing.

Some people call it the limbic system. I call it the midbrain. There's lots of little pieces in there. I couldn't even tell you all the names, but the basal ganglia is in there. That's what gets affected if you have Parkinson's, the amygdala, the hippocampus.

And so, I mean, I can't begin to tell you how complex it is, and I am not a neurologist. I went into obstetrics and gynecology for a reason. To neurology is very complex.

So this is the simple one. So you have this thing called the frontal cortex. That's where you do all your planning, your reading, imagine things, you think things. It's where you say, oh, I'm going to go for a run.

[15 : 55] Once you get running, it's more of a midbrain activity, but just putting on your shoes, making the decision to go for a run. If you decide you want to get up and dance, that's okay, I'm going to start dancing.

It's not a reflex movement. You've actually chosen to do that. And then there's the midbrain, and the midbrain is, it takes in information. One of the primary things it takes in is smell, but it's where mostly our memory and our emotions sit.

So when we say memory, that's our trauma. I don't know if any of you saw it inside out, but if you remember that control center, you've got your emotions living there, but that's sort of like your frontal cortex.

They're thinking about what you're going to do. And then the memory maze. And you could go back in there, and you could find stuff you'd forgotten about, like your childhood stuffy, right? And that's actually really what it's like.

There's like this disconnect between them. You have to go back, and some of the balls pop into our frontal cortex sometimes, but a lot of times they're just there until something happens. And then the brainstem, which does all our automatic stuff.

[16 : 59] You're not thinking about breathing right now, but you are. You're not thinking about your heart beating, but it is. You've just eaten this great breakfast. It's digesting. You're not thinking about that, but it's happening.

And then we have some reflex activities that we would do, or when you see a ball coming out, you're going to go like that, right? That's not, you're not even going to think about it. You're just going to do it. So what happens, say, when you see a bear?

This is the example I always use. So you see a bear, and your frontal cortex pretty much shuts down. Nothing's happening there, right? You're not thinking. You're just doing.

Mid-brain. What's happening here? Oh, bears are dangerous. Oh, you know, my dad told me a story about a bear. You're not thinking of it. This is just in there. I've got to do something. So if you're lucky, then it communicates to your brainstem, because look here, really good communication, very little communication.

And by the way, if you have teenagers, the communication between their amygdala, where their emotions are controlled, and their frontal cortex, is actually biologically worse than yours now. And when they say their frontal cortex has arrived in the mail, one 25-year-old male said that, it's because those connections actually do improve a little bit when you get to be between 25 and 30.

[18 : 12] So good luck if your kids are still under 25, but it's worse in boys than it is in girls. I'm sure that's a big surprise to all of you who have boys.

So anyway, your bear brain, your heart rate is hopefully going to go up, should go up. You're going to start to breathe faster, and if you're lucky, you're going to start to run.

But not everybody will do that. That's the fight. That's the flight mode. Some people will think, I'm going to take on this bear. I'm just going to fight him.

Not the best idea, but apparently it does work if you can make yourself really big and really loud. But you have to have seen a bear enough times to have gotten past your midbrain and actually be able to gauge your frontal cortex to look really big and really loud.

And then the bear often will run away. And believe me, I've seen bears. I've experienced this. This is one of the beauties and downsides of living in Swamish. And some people will just freeze.

[19 : 15] They won't know what to do, and they may just stand there. If they're lucky, they might fall over, and then the bear won't see them as a threat and will move. And that does sometimes work.

And actually, freezing comes from learning to if we just play dead. Like the opossum, that's the one that plays dead, right?

Then they'll think we're dead, and we will no longer be interested. Interesting. So I want to tell you one thing, and it makes me sad, because I did fervor one of my children, but that whole idea that you let your child cry it out, that is an incredibly traumatic experience for a child.

They think they've been abandoned, and it starts very early. So all those children that were fervored had a deep trauma that when they cried, no one would come. Right?

And so if you have grandchildren or children that are having children or young women that have heard it, it's a good idea to let your children cry it out, tell them not to. Neurodevelopmentally, it's a very bad idea.

[20 : 18] So this is what, this is sort of the brain, and then the brain on trauma. But one of the things I didn't say is, if we've had a lot of sores here and we're carrying those sores, it's going to be impacted here, and it's going to show up in our bodies.

Right? And it's going to show up in characteristic ways, actually. There's a list. There's a list of things that happen. People get asthma, chronic headaches, chronic pain that's from muscle tightness.

Their heart rates are resting. Heart rate is higher because their cortisol levels are higher. They don't respond to stress as well. If you have an increased startle response, if they hear a loud noise, they're going to be like, oh! Way more easily than everybody else that you know.

They're going to have digestive problems. They're more likely to have high blood pressure. So there's a whole cascade of things that too many alleles here cause here. The other thing is, if you're carrying your alleles here, you never know when you're going to be triggered.

Right? So if you go back to that bear, you see a big black dog, you could fight, you could flight, you could freeze, and you wouldn't have any control over that.

[21 : 23] It just happens. Right? So that's a really severe case. Others of us might just feel really overwhelmed, not able to cope. We might not do the full flight freeze.

And there's another one, fawn. If you've been abused, you usually just want to try and placate people so you'd be saying, nice bear, nice bear. Right? Not going to work, but it's what you do.

So, and we might not always have that bear experience, as I said. We might have a lot of little experiences. And the difficult thing is sometimes we go to a counselor and they're very well-meaning, but if they let you talk about your trauma, you're actually just creating a new memory about your trauma that's sitting in your midbrain.

So, you really need someone that's going to let you talk about a little bit of your trauma and then help you repackage that and bring it into your frontal cortex in a way that's healed.

or create a healing new pathway in your brain. Because that's the other thing I didn't really talk about is we create these neural pathways in our brains, these habits of where our brain goes. And so sometimes that's where they go.

[22 : 28] One other thing I want to say very quickly, if you ever hear anybody that's been named oppositionally defiant, that's a diagnosis, they're freezing. Freezing.

They're freezing and now we label them as being oppositional and defiant. You're taking a traumatized person and you're making it worse. Right? So, so, this is what we're experiencing.

Basically, a biological thing where we experience sin because most of these traumas I've explained come from sin and that leads to our trauma. And we know, Jesus has said, in the world we'll have tribulation.

But take heart, he's overcome the world. So, what has he given us? Well, he's given us spiritual practices so we can build strong, positive neural networks.

And after I thought about doing this, I started looking for it. I found out I was not the first person that had this really idea. There are other people who had this idea before me but it really was my own idea. It was God, God gave it to me when I was trying to think about what can I say to you that would be of value.

[23 : 31] And, and just remember that he said he's not going to leave us as orphans. He's going to come to us and, and, you know, we're going to, we're going to, we're going to do that but for now he's going to come to us but right now we have the spirit of truth.

And the spirit actually is the same word as breath. We'll talk about that a little bit later. And, but that spirit is going to dwell in us and it's that spirit that we can tap into through these spiritual practices that can actually build new neuronal networks.

So what we want to do actually is we want to put packages of good things here though it turns out that a lot of those good things will downregulate some of what's happening here.

But, you know, I gave up listening to secular radio when I was in medical school because I would find myself getting out of the car and seeing beer commercials on my way to school. And I'm like, what the heck?

I should not listen to beer commercials, right? So I started listening to Christian music and then, now if I start to sing in the shower, and you're all glad you're not there to hear that, I sing it or scripture choruses because that's where my brain goes because that's what I listen to, right?

[24 : 46] And so, it's the same thing with a lot of things. If we build those packets of good stuff in our midbrain, it is going to help our brain stem and it is going to help our, it's going to help us build positive neural networks so that in, when we go to a negative network, we can actually use our frontal cortex as we've built those stronger neural networks that are positive to switch into a positive neural network.

We can remind ourselves by reading a verse of a scripture, we might not be able to remember from something we've memorized a scripture verse but we could remember that Psalm 46 is really helpful for me when I'm experiencing trouble.

Okay, so, changing our brain, we need some, we need these things and we need an anchor, so something that we can focus on which can hold us, so, scripture memory.

We need to create, we need warnings and warnings come from creating routines and practices, so the liturgy, saying those prayers over and over, I'm in a hard space, Almighty God from whom those secrets are hidden, right?

We can just go right back to those things that we've learned over, you know, I believe in one God, the Father Almighty, right? We can say those things, there are moorings, they're from creating routines and practices, positive words, we can hear what God's words are to you, to us, he's speaking to us individually, he's Abba, he's our Father, right?

[26 : 12] Just the same way that you could crawl into your Father's lap and he would speak to you, you know, that's the image I remember once, I think this was one of my kids, it could have been somebody else's, but they were right in their dad's face because they were giving their children's moment and they needed their dad's attention and he was ignoring them so he got right up there, that's what God wants for us to do, he wants us to get right up there and to feel safe and to hear his words spoken to us, right?

He wants us to be grounded, we are not just a brain, this spiritual stuff is not supposed to just happen here, it will happen in our whole body, will link us to the earth that he's created, we're surrounded by the air that he has filled with oxygen and carbon dioxide to make us able to breathe, we can physically breathe in the Holy Spirit, same word as is used, breath and spirit throughout the scriptures, why is that?

Because he wants us to breathe it in, that helps us be grounded to the here and now, knowing that it's filled with Jesus, great grounding prayer for that, St. Patrick's Prayer, right?

You know, the earth beneath my feet and if you like songs, Steve Bell, great song that can remind you, you know, as high as the noonday sun, the little words that you can get into your head. So, deep experiences, the more we do, the more we do these experiences, the more we build the routines, the deeper it gets, the more our brain is rewired.

Actions, being part of a group, doing this together actually is very helpful and then caring for other people, it turns out, is very good at healing the part of, sorry about my typo there, a part of you that also needs care.

[27 : 54] So, scripture reading. You know, I find reading Christian fiction sometimes really helpful and I learned this actually not in the Bible despite having read Deuteronomy multiple times but in a novel about David by Francine Rivers and it was this idea that the king actually had to go and write out the entire law and Saul didn't do that but David did, right?

So, he was first and foremost grounded in the word of God and so, this just tells us how important he was supposed to write it all out which is, as we were just talking at other table, if you hand write something it sits in your brain more fully than if you type it or anything so he would do it in handwriting it out but he was supposed to read it all the days of his life.

Why? Well, it turns out reading is really good for you. Reading calms your heart rate, it changes your whole biology actually, improves your imagination, well, it certainly did that for David, look at the poetry that came out of David reading the scriptures every day, right?

And so, we actually are learning, James, talk to James sometime, he knows way more about it than I do but one of his favorite people, it's partly because he teaches at Ohio State and he loves to dig into me who went to Michigan, they're big rivals.

When there's a good professor at Ohio State because I keep telling him that the law school, the medical school, and the business school of Ohio State, none of them are in the top ten but all three of Michigan's are. But he was a neuroscientist and then he got a PhD in literature too and he's huge about the neuroscience of what reading does for our brains and it really does, it really does and so reading scripture actually about 30 minutes a day of reading is really, really impactful for our brain now.

[29 : 42] Memorizing scripture. So, these are some of the, again, the scripture verses that tell us why we need to do scripture memory but it is about building neuronal pathways that can come back to us.

So, when you talk to people, there was an incredible woman I heard speak about being in a prison camp in Japan, a Japanese prison camp, I don't think she was in, she wasn't in Japan, she was in one of the Pacific Islands, she was there as a missionary thing but what got her through was the positive neuronal pathways that she continued to work on by reciting scripture verses that she had memorized before she got there.

Incredible things that you can store up in your brain. I try to memorize scripture because two of my aunts had Alzheimer's, my mum died young, two of my aunts had, her two sisters had Alzheimer's so I figure that at least if I have Alzheimer's, if I've built a lot of scripture into my brain, then hopefully some of that is what will come out because you lose your frontal cortex but not so much your midbrain.

So, prayer. So, I just, I was just looking this up, I'm always googling, I believe in Dr. Google because I know what on Google is garbage and what is good from a medical standpoint.

Don't Dr. Google unless you've been to medical school or nursing school. So, okay, here is the amazing thing. Twelve minutes of personal reflection and prayer each day makes a profound impact on our brain.

[31 : 13] It strengthens a unique neural circuit that specifically enhances our social awareness and empathy and helps us love our neighbor by developing a heightened sense of compassion and subduing our negative emotions.

That is from Westmount College which is a Christian college in the U.S. in California and it, and the other thing is it also develops the neuroplasticity of our brain.

So, neuroplasticity is something we don't understand very well but what we do know is if we take stroke victims and stop trying to get them to walk the way they've always walked and they can't now properly because part of their frontal cortex is damaged but we actually put them on a floor and teach them to start to learn to crawl like a baby before they develop muscle spasticity they can use a new part of their brain to learn to walk.

Again, not happening a lot in medicine but physiotherapists are doing this work started in the U.K. It's called the Bobath Method and it's quite miraculous but it's using that and prayer increases the neuroplasticity of your brain.

Pretty amazing. Not surprising. The guy who made us gave us a handbook and told us what to do and it's only 12 minutes. I think I didn't time myself but I think I will tonight and see if saying Compline at night by myself covers my 12 minutes.

[32 : 36] But, you know, it's also, you know, it's even in the scripture. You know, my heart is faint. Get me to that rock that is higher than I. It's a place of safety.

Right? If you can't pray anything else, read a psalm and put yourself in it. Right? If you can't do anything else, do that. It's not hard. The words are all there.

You just have to read them and we already learned that reading is also good for your neuronal network. So, meditation. This is something that I think Christians now are a little bit afraid of. We think that the Buddhists invented this.

That is not true. God invented meditation. Right? Buddhists found, and other religions that meditate, found that when they meditated, that was really good for them.

So, they got on the wagon big time. Right? If you look at the, what the ancient fathers and mothers did, some people only talk about the fathers, but now articles are starting to talk about the mothers that lived in the desert.

[33 : 32] They went to the desert and they meditated. And people would come to them and they would know their stories before they came. Where do you think they got that from?

They weren't telepathic. Right? God, through his spirit, gave those fathers and mothers the stories of the people that were coming to them that were hurting. So, they didn't need to tell their own story because that would create another traumatic memory.

They knew their story. They knew what they needed. Right? And they were able to, through the work of the Holy Spirit, bring that into that moment and provide healing. So, it's in there.

Psalm 46, that was the one I learned during the pandemic. I couldn't sleep at night. I would go to bed wondering how best to get pregnant women who are COVID positive from their room to the operating room and make sure that the whole team wasn't going to have a nervous breakdown in the midst of that.

Right? And that makes it pretty hard to sleep. Right? So, I started memorizing Psalm 46 and I would say it to myself. But it's right there. Be still.

[34 : 39] That's meditation. It's stillness. And in that stillness we will know that He is God. And then we will turn to praise. Right? For God alone my soul waits in silence.

That is meditation. It's deep, deeply rooted in the Christian scriptures. It's where the Psalms probably came from. Outpourings from moments of meditation and being still before God.

And He's going to help us be in perfect peace. whose mind is stayed on you because He, why? Because we trust in you. Right? We'll stay our mind on Jesus.

That's what meditation is. Try it. There are meditation apps you can use them. They are very helpful to teach you to stop, to stop thinking and bring yourself back to meditation.

And they're, you know, I do think Christians beat themselves up a lot. At least I do. And maybe it's because I went to Catholic school but I don't think it's all the Catholics. I think we do beat each other up a little bit.

[35 : 40] Your quiet time's not long enough. You're not spiritual enough. Whatever. But, but actually we just have to, if our mind gets distracted, if we notice that, we just need to bring it back.

Right? If it's helpful, you can have something that you say and I'll talk a little bit more in a minute about breath prayers. It's a way of starting meditation. Liturgical offices.

Interestingly enough, I found this on a Reformed Christian, Reformed Church of America website and they were linked to Christianity Today and they were talking about the liturgical offices and about Tazay.

I don't know if any of you have sung Tazay but it's, the idea is, it's a, you say the words over and over in a song to help you get to that point where you can just focus in on God.

And then, really, saying compliment or morning prayer, saying the confession, all of those things. I don't know how you guys feel but I'm now angling deep in my bone. It's making it hard to find a church in Squamish.

[36 : 42] Because when you go to church and you say those prayers, it connects to every spiritual experience that you ever have had when you say those prayers. So, even if you're having a really bad day, you're tapping into that amygdala and that hippocampus to actually do something to your brainstem which is going to affect your breathing and your heartbeat and all of those things and it's going to make you feel safe.

It's not going to heal your trauma but it's going to give you a place of safety in the midst of it. Right? There are great counselors out there, by the way, that heal trauma and James is one of them but you can't see him necessarily but you could call him his pastor and he gives you a little bit of counseling for free but really, there are things you can look for so if you're someone that wants to go for some counseling and thinks there's some trauma there that you need to deal with, please talk to me and I'll give you some ideas of what to look for in a counselor who's practicing evidence-based ways of actually healing trauma.

Turns out, gratitude, an incredibly great way to heal trauma so if we can turn to thanks and remember positive things about God and be thankful it actually, again, builds positive neural networks that takes us out of our pain and towards something that we know is promising and good and so if you just journal, it's very important that you write it down but you just journal five things that you're thankful about every day, it will improve your physical, emotional, mental health.

Right? It just, it just, it's a small thing. Just a word about journaling, journaling is very helpful but if you journal about bad experiences, you're actually just creating another experience that's bad.

So there's lots of evidence now in the medical literature that says that when we journal, we need to keep our journaling positive. So one of my simple journaling things is I start with the alphabet and I try and think of a name for God or a name for Jesus or, and we would sometimes play that game with our kids when we would be out on a hike and I go through that alphabet and it's a very simple way of journaling that puts my eyes on him and not on me.

[38 : 51] Right? Because that's where the healing is. And let me tell you, I don't, I'm not great at all of these spiritual practices. Actually, I started, I got my little, I don't, I should, my little prayer book out, my little booklet that we've had since we've been doing the liturgical offices through the pandemic.

What a great and positive way to help us heal through the midst of trauma. And I've started, after I've been reading all this, I've been like, okay, I've got to get back to that, say that office every day, at least once a day.

It's very helpful. But I love this idea of breath prayers. Again, practiced by the earliest Christians, the desert fathers and mothers. It's a way of breathing with parakletos, which is the word of the spirit, which is the same as breath.

It's the same word. And they, many people think that the actual word *selah* in the psalm was to remind people to breathe.

You can say words of a psalm. When you do that, the Lord is my shepherd. I will not want. I will not want. Exhale longer than inhale.

[39 : 58] It tells your brain that you're safe. If you're seeing a bear, you're not exhaling long, you're exhaling fast. If you're sitting in a calm place and you're safe, you can focus on your exhale.

So breathe in, hold it for a bit, and make sure your exhale is at least two seconds longer than your inhale. That resets your brain and lets it know you're safe. So I didn't put a scripture verse on here because I found this by Taylor Burton Edwards.

I can't remember what website I found it on, but it's actually so interesting. So when we share a meal, make music, join a choir, introduce ourselves to someone new, express personal thanks, forgive someone, pray for 10 minutes, focusing on, and we focus on compassion.

As we build these activities as basic patterns in our lives, repeated in reliable ways, it appears to reinforce the pro-social effects of oxytocin over time.

What is oxytocin? Well, it's the bonding hormone. It's what we release with orgasm. It's why if women don't have an orgasm with sex, they don't want to have sex.

[41 : 10] It's a, that's a talk for another time. But, and I'm happy to come back and talk on that too. So, it, but if building oxytocin, when we sing corporately, our oxytocin levels rise and it helps us bond to that person that's close to us.

Again, just thinking about how the Jews worshipped and how we saw their worship and how Jesus participated in their worship, we see how important it was, corporate worship, for connecting, being part of a community.

So including the word and the table or confession of sin and the sharing of the peace of Christ in any style, it helps us do all these things. It helps us build our neural networks. It helps us feel connected.

Oxytocin, if you breastfed ever, you remember that somewhat relaxing, euphoric feeling that you would feel after you would get a letdown and that's oxytocin. So that's it.

As a gynecologist and obstetrician, I had to finish on oxytocin. So I'll tell you one, do I have time for one more quick little? You do, and you can take a couple questions.

[42 : 18] Okay, all right. So for years, people told me that when you're induced, it hurt more. I'm like, you know, labor just hurts. Well, I was wrong.

When we, when you make oxytocin in your own brain, it's in your brain. You make it actually in the, in your pituitary gland and it's made in your brain and some of it stays in your brain and the rest crosses over and goes to your uterus and makes contractions happen.

When we give you oxytocin through an intravenous, it does not cross the blood-brain barrier. So women who are in natural labor get a natural euphoric feeling that women who are induced do not get.

Unless they induce them with prostaglandin and then they get their own oxytocin. But it, it's actually true. Inducing labor does hurt more because you don't get what God intended with that natural feeling that's in your brain.

So we are fearfully and wonderfully made. The intricacy of the, the body which includes our brain and how it all works together is quite incredible.

[43 : 30] The sadness that I feel is that we're just learning this now and we're just learning that, you know, if I just treat your blood pressure and I treat your pelvic pain and I treat your migraines and usually you're now seeing three different doctors and maybe a gastroenterologist because you're very traumatized, no one's actually talking to you about your trauma.

And so, our medical system really isn't working well for many people because many people have, do carry trauma. We know that for women and I didn't talk much but different people are impacted differently by trauma.

There's something about where you're at when it starts and, and how long it goes on for and all those things but, but, you know, we need integrated care that actually focuses on, on healing.

So, from a medical standpoint, some, sort of, the brain and the body piece, when the body says no is quite helpful. Get more met to him. He was a doctor in the downtown.

He sighed. He learned from experience. He, he's become very popular now and well known. He, he describes in his most recent book, I think it is, or maybe it's one of his other books, he describes the impact that it had on him being separated from his mother because he was Jewish and hungry and his mother put him in the care of a Christian family when he was an infant to make sure he survived.

[44 : 49] The Body Keeps the Score is kind of the, it's a very heavy book. The first part is about the neuroscience. If you're someone who has trauma or has experienced trauma, you might want to read the second part of the book first because it talks about all the great ways that trauma can be healed and there's, there's good evidence around it.

What happened to you, I'm only part way through. It was Oprah Winfrey and Bruce D. Perry. Bruce Perry is actually one of the original child trauma specialists and he's written a book also called The Boy Who Was Raised as a Dog.

It's like 12 stories of children who have complex developmental trauma from big traumatic things and other kids that have trauma including when a policeman told him that a patient needed a psychiatrist or needed a doctor when he's like, these kids don't need you that I come out of Waco, Texas and he said, well, I think she does actually go take her pulse.

She was sleeping 130 to 140 and the security guard was like, we need a doctor and he was like, I am a doctor. I'm a psychiatrist. I am a doctor and that's why they need my team.

So he learned a lot of stuff. He was the person that first said that kids who have oppositional defiance are just freezing. And then some spiritual resources I came across, this spiritual resource, soul shepherding actually.

[46 : 04] It's a psychologist and a pastor. I think he's both and they've got a lot of good resources. This faith word, how spiritual disciplines can free the body from the wound of trauma. It's an African-American within the RCA church and he talks about the trauma the African-American community has experienced and how the church can actually be intentional about trying to heal that.

So I'm happy to take some questions. I know this is really heavy. After we've done a few questions, I'll just lead you through a quick grounding exercise that's with our senses, the senses God gave us to just help any of you that maybe are feeling a bit overwhelmed and triggered from the conversation today.

I'll go back here first. So I've had some PTSD and one thing I've found pretty interesting and helpful is learning about polyvagal. Oh, sorry.

Oh, yeah, polyvagal. I described polyvagal just in the same term. Yes, essentially it's a polyvagal theory and it's extremely helpful. It talks about the three circuits. And it's, anyways, I've experienced some PTSD guys and it's something that's been really helpful.

This is spot on. Thank you. I didn't invent all this, by the way, I just wrote with these really smart people. Thanks for your done a fantastic synopsis of all that stuff that you read.

[47 : 25] My question is about young people who experience long-term trauma or some kind of illness or whatever who end up being more mature than their peers before they're trained to partner.

That's very funny. That's a really good question. Possibly it's that they've learned to mask their emotions because emotions are dangerous.

So they don't, they've learned very early on in life to have to control them. Maybe they've had increased brain maturation, I don't know, but I actually think it's the former, not the latter. many people who have had trauma, a form of freezing is dissociation.

You just use your brain to go somewhere else. So when they're in difficult emotional situations where their peers become emotional, they just dissociate. And if you talk to people that have been traumatized, that is a big issue for them and they do dissociate and when they try and integrate, it's very painful.

I don't know. Now there was some more. The first time, sorry, the first time you mentioned freezing, you did kind of bring up, I don't think you did bring up our reaction but I'd like you to unpack that if you can.

[48 : 48] Is it vulnerability or a fragile sense or some kind of trauma we're not aware of? It would be very helpful to me. You know, when we become flooded with emotion, some people will react and other people will freeze.

It doesn't necessarily even have to be trauma but when you see that happening, like I'm pretty reactive, just ask James. He's gotten used to it, he loves me still which is amazing. It's how we've learned to deal with our feelings.

So sometimes people were in a family where they were taught to shut down their feelings, feelings weren't okay, emotion wasn't expressed, anger particularly wasn't expressed. Remember, it's one of our five or six primary emotions.

I say six because there's four heart emotions. I say negative things because no emotion is negative to me now. And two that are good, excitement being the second, good one, joy and excitement.

But, you know, if we've grown up in that family then we've learned a behavior of just shutting down when those emotions come. So for some people that's all that it is. For other people it's actually like if you went and checked their pulse and they were sleeping, it's almost like a hibernation effect.

[49 : 52] And for other people actually they're not hibernating, they're like that girl sleeping on the couch after the Waco experience where their heart rate is actually super fast and their bodies are just churning but they're not moving.

And so there's different types of freezing as we learn. It all looks the same, right? So that kid who stands up in the classroom and the teacher gets called on them and the teacher keeps asking them a question and they're just overwhelmed, they're just frozen, right?

And then the teacher gets angry sometimes if they're not like there aren't any trauma-informed teachers. We tried to create a few on our journey and some learned and some didn't. But yeah, we have two kids that experience significant childhood trauma.

So we're on a long journey but it's brought us both to where we're at which I think is a good thing. Thank you. Yeah. Rebecca, thank you.

What a really amazing talk. Yeah, someone mentioned just spot on and from my own limited research in this area and personal experience is so spot on.

[51 : 14] And I think it's also incredible that you're bringing this conversation to people of faith that I think typically historically my body connection has really lived on in a church setting or a faith community setting.

and so to begin that conversation integrating as well and seeing our bodies as something that's beautiful from inside out and deeply connecting and part of the restoring process as we restoring ourselves we are restored by the love of Christ.

And I just think it's a beautiful example of that. So thank you. Okay, I think I'm going to finish off now. One thing I didn't put up in the resources last night until I was finishing these slides is Dr. William McBride who is a believer by the way she's an English believer she used to be part of the St. Pete's congregation before she moved to the island.

She has done a series of podcasts called Other People's Problems and that where her clients agreed to let her tape some of their interviews their names were changed but you hear a bit of the conversation between her and her client and then an explanation from her as to what is the thing that they're unpacking.

And yeah so we're just going to pray but before we pray we're going to just do this grounding exercise using the senses that God gave us. So just kind of settle into your chairs feel your feet on the floor feel that chair behind your thighs feel your back resting on the chair maybe you've come with some aches and pains today it's okay to feel those too and then I just want you to open your eyes and look around you and find five things that are blue you don't need to say them out you can say them under your breath if you want just find five things that are blue it's nice that lots of people are wearing blue today and then what I'd like you to do is just think about four things that you can touch so really feeling your legs what do you feel when you touch what's in your feet what's in your back and then three things that you can hear I'm very quiet you might hear the projector humming traffic on the street the breath of your neighbor and think about two things you might be able to smell sometimes they're pleasant smells sometimes they're what our memory tells us is a bad smell it's just what our brains have made up and the one thing you can taste if you don't have a good taste in your mouth you can think about the yummy food that we have today you can think about bacon which for some reason is something that really helps me feel calm they say it's all those mornings that I woke up and my mom was cooking bacon in the kitchen and I knew I was safe and we thank you

[54 : 27] Jesus you gave us our bodies you made our senses you taught us ways to calm our bodies you care about our wounds it is by your wounds that we've been healed you were nailed to the cross you took our trauma all of our trauma into your body and you gave up your spirit but you rose again you give us hope and we know there'll come a day when there will be no more trauma no more tears no more sadness but until then you've given us the spirit to indwell us to heal us we can breathe him in we can feel safe and we can let go and be held in your arms Abba Father in Jesus name we pray Amen is there'll be something that pays very time to get with him as