**WASABI – AcceptMap Neuroeducation and Regulation Training**

**1 WELCOME**

Welcome. The following presentation will guide you through a training on how to prepare your mind for the upcoming experience.

**2 NEUROTRANSMITTERS AND THE LIMBIC SYSTEM**

Your brain can turn pain up or down. The higher brain centers that register your thoughts and feelings send nerve fibers down to your spinal cord, where they can increase or decrease pain. With the right kind of mindset, your brain can release chemicals that change pain. For example, it can cause the release of opioids, natural pain-relieving chemicals. Morphine and other painkillers are opioids, too. They work by tapping into your brain’s opioid system; but the machinery in your brain for changing pain is already there.

**3 MINDSET**

Your mindset changes the experience of pain, by changing pain-related signals coming up to the brain from your spinal cord. Some common strategies, like distraction or trying to ignore pain, may be helpful in some circumstances. But often, pain commands your attention. And so, distraction doesn’t always work.

**4 A DIFFERENT STRATEGY**

We are going to teach you a different strategy, which might work in different ways than you think. For this study we want you to let go of any ideas you might have about how to control pain and try out the strategy we are going to teach you.

**5 THE NEURAL PATHWAY 1**

When you receive a painful stimulus, for example, heat on your leg, the pain signals travel to the spinal cord. From there, it travels via the brainstem up to the thalamus and further on into the cortex. This pathway is called the spino-thalamic tract.

Here again, the pain signal reaches the thalamus first.

**6 THE NEURAL PATHWAY 2**

Another brain structure important for the processing and regulation of pain is the vmPFC, seen here in orange. The vmPFC is part of the prefrontal cortex, which allows you to understand the meaning of the situation and how it affects you personally. It is also related to the control of emotions in pain. Anterior cingulate and the circuits in the prefrontal cortex such as the vmPFC work together to govern how you experience pain. These two brain areas release opioids, our own natural pharmacy, to signal to the PAG seen here in yellow, to turn the pain signal off or on depending on the situation.

**7 THE ROLE OF BELIEF**

A big part of whether the brain reduces or amplifies pain is about what it ‘believes’ the pain means.

**8 URGENCY**

One of the things that can increase pain is the feeling that the pain is “wrong,” or “unacceptable,” and the sense of urgency that goes with that. If you feel like you must do something about the pain, but you can’t, that is a very bad feeling.

**9 AVOIDANCE**

So, a big part of the badness of pain is caused by the sense of urgency to do something about it, to avoid it. If you feel the urgency to avoid the experience, it may make the experience worse. It may also make it harder to control.

**10 ACCEPTANCE**

On the other hand, things that can reduce pain are thoughts of openness and acceptance - realizing that you don’t always have to experience these sensations as unpleasant. So, the feeling that the pain is “okay” and “acceptable” can decrease pain.

**11 REDUCED URGENCY**

It will reduce the sense of urgency: For example, even if I experience pain, it is okay. It is not going to damage my skin or finger, so I don’t need to react to it or worry about it.

**12 THREE PARTS**

In the training you are going to learn today, there are three parts.

**13 FIRST PART**

The first part will PREPARE your body and mind for the upcoming session, you will let go of your everyday thoughts and bodily sensations to experience something new. You will practice focusing on the connection between mind and body with full attention. This will make your mind both receptive and in control and therefore better able to practice the acceptance strategy.

**14 SECOND PART**

In the second part you will practice adopting an attitude of ACCEPTANCE. In which you focus on purely experiencing the sensations we give to you. So accept them as sensations that will pass and do not try to fight or avoid them.

**15 THIRD PART**

Finally, you will practice TRANSFORMING the quality of the sensation you are experiencing. This is a practice in mental flexibility.

**16 A METAPHOR**

To illustrate what we mean by ACCEPTANCE and TRANSFORMATION, let’s imagine a musical note being played by different instruments.

Depending on whether this note is played by a trumpet

[[play note 1]]

or a piano

[[play note 2]]

this same note can sound very different. Also, the overall sound depends on what else is being played at the same time –the note can be played together with others that make it harmonious and pleasant, or discordant and unpleasant. This means that depending on the context, you can experience the same musical note in different ways.

**17 PAIN MODULATION**

Similarly, in our study today we are going to give you some sensations, which most people ordinarily experience as painful, though they do not have to be. Like musical notes, these sensations can be more or less pleasant or unpleasant depending on what else is happening in your mind and brain. You will practice accepting whatever sensations you feel, to absorb them and harmonize with them. You are also going to practice transforming the quality of these sensations towards an experience that is more pleasant to you.

**18 FOUR IDEAS OF ACCEPTANCE**

In this session, keep the following four ideas in your mind when you experience these sensations.

**19 THIS WILL PASS**

Number one: This will pass.

**20 THIS WILL NOT HURT MY BODY**

Number two: This will not hurt my body; it does not mean anything bad for me in the future.

**21 MY ABILITY TO HANDLE IT WILL MAKE ME STRONGER**

Number three: My ability to handle it will make me stronger.

**22 IT IS AN OPPORTUNITY**

And number four: It is an opportunity to practice acceptance and get better and better at it.

**23 CLINICAL PRACTICE**

We’ll do this practice here in an experimental setting, but the principles are very similar to strategies that people are using to deal with real clinical pain, anxiety, and fear in real life.

**24 NEURAL PRACTICE**

There is one more point: Everything you do or think gets “stamped in” to your brain over time. Every thought and action gets easier and, eventually, more automatic as you continue to do it. So every kind of mental training is a practice, just like this training we are doing here today. It may be easy for you, or it may seem hard at first. The key is to find what works for you, and practice it. Do not worry right now about how well you can do any of these phases. Like with any practice, you will gain more & more control over time over your ability to transform and shape these experiences.

**25 READY?**

Are you ready to practice?

**26 PRACTICE INTRODUCTION**

Now we’re going to do a practice that involves getting comfortable and focused on your body. This will prepare your body and mind for the upcoming session.

**27 RECEPTIVE MIND**

You will be making your mind receptive. Better able to receive and practice acceptance. To practice, you will need to let go of everyday thoughts and focus on sensations in your body. By doing this, you will practice focusing on the connection between mind and body with your full attention.

**28 EXPERIMENTER PREPARE FOR ACCEPTANCE PRACTICE: IMAGINATIVE EXERCISES**

[No Audio]

**29 IMAGINATIVE EXERCISE 1**

Imagine the thermode burning against your pressed skin.

The ‘negative’ sensations you are feeling are composed of two parts. The sensory experience itself and your judgment of its ‘goodness’ or ‘badness.’ With acceptance, you are disengaging the brain circuits related to the ‘badness’ from the sensory experience.

Locate the sensation on your skin. Notice the sensation, but do not try to respond or react. Simply experience it for the sensation that it is. Feel how it feels pressed against your skin.

**30 LETTING GO**

If you do notice yourself reacting or feeling like you need to do something quickly let that feeling go and return to focusing on the sensation with curiosity to see how it evolves moment by moment. Remind yourself that at this moment there’s nothing to do. Just feel the sensation. Remind yourself that this is just an experience. It will pass by.

**31 IMAGINATIVE EXERCISE 2**

Imagine the thermode burning against your pressed skin.

* Notice the sensation.
* Focus on where the sensation is in your body.
* Think about what this sensation feels like.

Now we will show you three ways of transforming the sensation. One or more of these ways will work for you.

**32 SPREADING STRATEGY**

If the sensation feels localized to one part of your body, one thing to do is to make it dull and spread the sensation out to nearby areas. If it is too hot, change it into spreading warmth. Imagine being in a warm bath. You might instead want to change it into spreading cool numbness or some other sensation. Whatever makes the sensation more pleasant.

**33 EXAMINING AND REMOVING BAD QUALITIES**

Another thing to do is to create an object from the sensation you are experiencing.

* What does this object look like?
* What color is it?
* What shape is it?

Now use your imagination to separate the sensation from the ‘badness’ of the sensation. For example, if the sensation feels like a red ball of fire, drain the color from it to remove the ‘badness’. Then, examine the sensation alone without the ‘badness’.

**34 TRANSFORMATION STRATEGY**

You can also try transforming the image into something else. If the sensation looks like a red ball of fire, transform it into a nice warm rubber ball. If it looks like a sharp knife, turn it into rubber: dull the edge. Transform the sensation object by changing how it looks or sounds.

**35 DISRUPT THE PATTERN**

You must pay attention to pain for it to hurt. All feelings are represented in brain patterns. Those brain patterns are influenced by which aspect of the experience you pay attention to and what else is happening in other parts of your brain. Transforming a feeling is a practice in engaging those brain patterns and disrupting their usual course.

**36 TAP INTO ACCEPTANCE**

While practicing these strategies, can you remember the feeling? When you see the following instructions:

* Focus on your breath.
* Feel your body float.
* Accept the following sensations as they come.
* Transform negative sensations into positive.

Tap into the feeling.