

Nourish to Flourish

Integrative Medical Group Visit Programs for Post-Acute Sequelae of COVID-19

Week 2: Our Reactions to Stress

In this session, we will revisit concepts of mindful awareness, learn how stress affects the mind and body, and use body scans to become familiar with bringing mindful awareness to bodily experiences and sensations.

Daily Agenda

- Grounding and Arriving Meditation (GAM)
- Individual updates – Rose and Thorn
- Home practice reflection- Did anyone talk to family/friends about group?
- Breathing exercise – Diaphragmatic Breathing
- Bio-Break
- Health topic: Mind-Body Connection
- Health topic: Neuroendocrine and Immune System
- Health topic: Introduction to Stress
 - » Negative effects of stress
 - » Stress and your body
 - » Responding to stress
- Body scan
- Home practice assignment- Feedback for support?

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Mind-Body Connection

We will discuss the connection of mind and body throughout our eight weeks together. The concepts and practices that we will learn are based upon evidence that they help improve symptoms common to PASC such as brain fog and fatigue. These practices are generally very safe. However, if you experience discomfort and negative effects, please stop the practice and let us know.

The conception of the mind as separate from the body has been a prominent feature of Western medicine. In contrast, Ayurvedic and Traditional Chinese medicine emphasize the connection between mind and body. This connection underlies many approaches to health such as acupuncture, nutrition, meditation, and yoga. These approaches aim to support the healing, regenerative properties of the mind-body.

While the causes and treatments for Post-Acute Sequelae of COVID (PASC) are not well understood, the symptoms of PASC such as brain fog, fatigue, headache, body aches, depression and anxiety are common in other illnesses. In the case of both chronic fatigue syndrome and fibromyalgia, small studies have shown improvements in symptoms with mind-body therapies.

We chose the name Nourish to Flourish and the image of the tree for this group because this reflects the potential of the mind-body to promote healing. Like a tree, our nervous system sends and receives signals from its environment. These signals can promote or prolong the healing process.

Take a look at this image of the vagus nerve as it travels throughout the mind-body. The vagus nerve delivers messages from the peripheral (far away) to the central (center) nervous system. When we breathe deeply and expand our diaphragm, we are engaging the vagus nerve and sending messages of relaxation and calm to our central nervous system. On the other hand, we can carry and communicate stress and tension through our bodies. In the next section, we will discuss more about stress and its effect on health.

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https://upload.wikimedia.org/wikipedia/commons/9/92/The_brain%2C_in_right_profile_with_the_glossopharyngeal_and_va_Welckome_V0010423.jpg

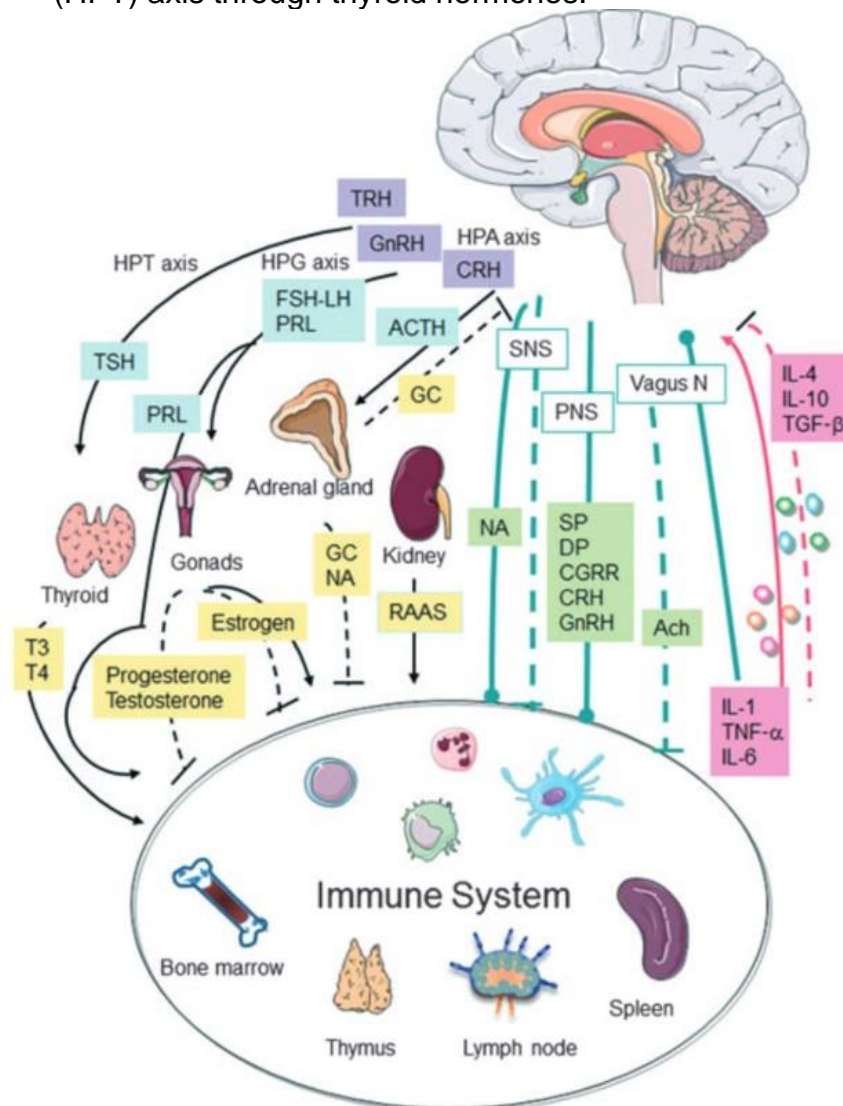
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Cross Talk and Regulation Between Neuroendocrine System and Immune System

What is Neuroendocrine Regulation of the Immune System?

- Integration between the immune system and endocrine system are essential to maintain homeostasis and overall health. The immune and endocrine systems work in harmony with all other physiological systems at the level of the whole organism. These two systems reciprocally regulate each other, and share common ligands and receptors. Neuroregulation of immune responses is important for survival during both physiological and mental stress, and is accomplished systemically through hormonal cascades, regionally through nerve pathways into lymphoid organs, and locally through neurotransmitters. In turn, the immune system regulates the Central Nervous System through cytokines.
- Systemic Regulation of the immune system through hormones- Neuroendocrine systems systemically control immunological function at the level of the hypothalamic-pituitary-adrenal (HPA) axis through glucocorticoids (GC), the hypothalamic-pituitary-gonadal (HPG) axis through sex hormones and the hypothalamic-pituitary-thyroidal (HPT) axis through thyroid hormones.



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**Reference: Mind over Cytokines: Crosstalk and regulation between the Neuroendocrine and Immune Systems, Sachio Miyake- See Week Two resources for full paper*

Introduction to Stress

What is Stress?

- Stress is our brain and body's response to any demand or change. All animals have a built-in stress response, which is called the 'fight or flight' response. This response developed as the body's way of preparing for a dangerous situation. This physical response comes from a rush of hormones, like adrenaline, that speed up your heart and breathing, offering a burst of intense energy.
- With life's increasing pace, there are many daily events that can trigger stress. Stressors can include your daily commute, crowded spaces, and changes in relationships, work, and money. Long-term stressors can include traumatic events, death of a loved one, and chronic illness.

What is positive stress?

- A sense of challenge or excitement
- A sense of renewed energy
- Paying attention to detail, increased accuracy
- Feelings of excitement and hope
- Increased self-confidence

What is negative stress?

- A feeling that the demands from the outside world are greater than what you can manage.

Negative Effects of Stress

*What are the negative effects of stress on the **body**?*

- Short-term physical symptoms include:
 - Faster heart beat
 - Increased sweating
 - Cool skin
 - Cold hands and feet
 - Rapid breathing
 - Constipation
 - Tense muscles
 - Dry mouth
 - Desire to urinate
 - Tiredness
 - Diarrhea
 - Butterflies
- Long-term physical symptoms include:
 - Pain
 - Change in appetite
 - Asthma
 - Headaches
 - Frequent colds
 - Digestive problems
 - Depression
 - Skin eruptions
 - Aches and pains
 - Feeling of long-term depression/anxiety
 - Sleeping/insomnia
 - Inflammation

*What are some changes in your **thinking**?*

- If you are stressed, you may notice:
 - It is hard to concentrate
 - Lowered self-confidence
 - Lapses of memory
 - Poor judgment
 - Feeling pressured

*What are some changes in your **emotions**?*

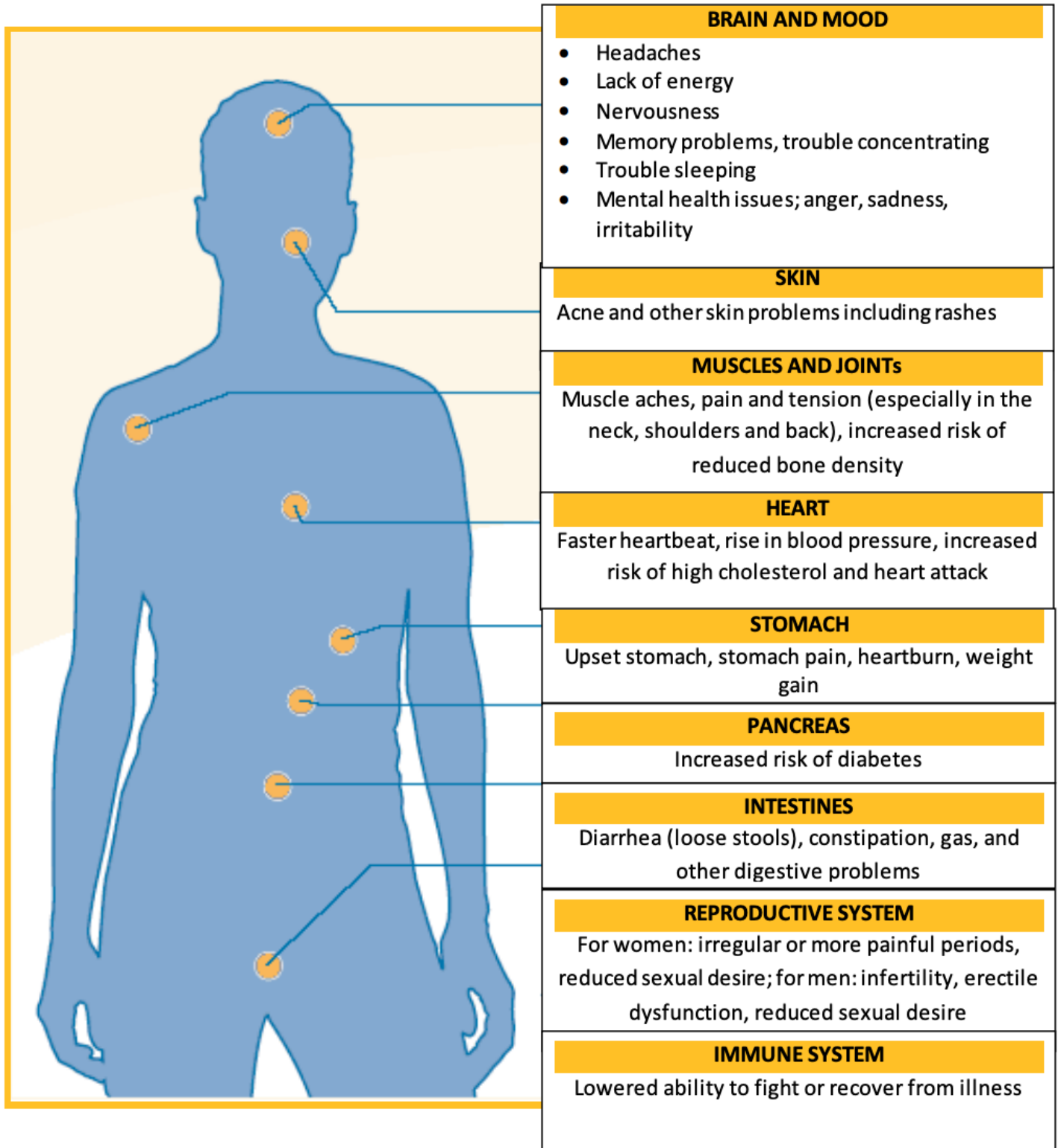
- If you are stressed, you may notice:
 - Resentment

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- Anger/irritability
- Feeling agitated or “on edge”
- Feeling blue, down, hopeless
- Moodiness

Stress and Your Body



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Ways to Respond to Stress

What are some unhealthy ways to respond to stress?

- Increased smoking, alcohol drug use
- Withdrawing from loved ones
- Absenteeism
- Overeating
- Other ideas: _____, _____, _____

What are some healthy ways to respond to stress?

- Deep breathing
- Exercise
 - Start with a 10-minute walk or 10 minutes of stretching during the day.
- Reach out to friend or family member
 - Connecting with people we love can help us feel more relaxed and supported.
- Eating healthy foods
- Listening to music or singing
- Prayer
- Writing in a journal
- Taking time for yourself
- Other ideas: _____, _____, _____

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The Body Scan

This is a meditation exercise to increase mindfulness by bringing attention to your body. Here are a few helpful tips to get started:

- » Sit in a comfortable position that helps you remain alert and relaxed. Your back is comfortably straight.
- » Your hands can be folded together or lay in your lap comfortably. The seat is not too hard, and your feet rest on the floor. If you prefer, you can sit on a cushion with legs folded.
- » At any time during this meditation if a part of your body becomes uncomfortable such as your legs or back, feel free to bring your attention to that sensation and decide to slowly adjust your posture.

Home Practice for Next Week

Mind-Body Practice

- Practice body scan once a day, 2 out of 7 days this week
- Guidelines for doing the body scan:
 - Regardless of what happens (falling asleep, losing concentration, being distracted by thoughts, emotions or physical sensations), stay with the practice. You can do it!
 - These are your experiences in the moment. All you have to do is be aware of them even if your mind is wandering.
 - This is not a competition. This is a time for quiet and privacy.
 - Be open to whatever you experience during the body scan.
 - Cultivate an attitude of openness, curiosity and friendly acknowledgement about what is here right now. There is no need to fight off or suppress any unpleasant thoughts, emotions or sensations-or to hold onto pleasant ones.
 - You don't have to like the body scan. The most important thing is to stick with it and see what happens.

Daily Life Practice

- Take a few moments each day to pay attention to thoughts, emotions and physical sensations. Try to notice them without judgment or story. Name emotions... anger, fear, love, joy, sadness, shame, no need to go into why you are feeling them or if they are good or bad.

Health Topic Resources

- Mind Over Cytokines
- Diaphragmatic Breathing Exercises

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- Our reactions to stress videos

Poem

Poem 1: Untitled

All that is important is this one moment in movement.

Make the moment vital and worth living

Do not let it slip away unnoticed and unused

- Martha Graham

Poem 2: Keeping Quiet

Now we will count to twelve
and we will all keep still

for once on the face of the earth,
let's not speak in any language;
let's stop for a second,
and not move our arms too much.

It would be an exotic moment
without rush, without engines;
we would all be together
in a sudden strangeness.

Fisherman in the cold sea
would not harm the whales
and the man gathering salt
would not hurt his hands.

Those who prepare green wars,
wars with gas, wars with fire,
victories with no survivors,
would put on clean clothes
and walk about with their brothers
in the shade, doing nothing.

What I want should not be confused
with total inactivity.
Life is what it is about...

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If we were not so single-minded
about keeping our lives moving,
and for once could do nothing,
perhaps a huge silence
might interrupt this sadness
of never understanding ourselves
and of threatening ourselves with death.
Perhaps the earth can teach us as when everything
seems to be dead in winter
and later proves to be alive.

Now I'll count to twelve
and you keep quiet and I will go.

- Pablo Neruda

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Healthy Recipe: Sautéed Vegetables and Quinoa (Serves 4)

This mood-boosting recipe offers an abundance of fiber and vitamins to fuel your day.

Ingredients

- ½ cup quinoa, rinsed
- 2 tablespoons olive oil
- 1 cup low-sodium vegetable stock (or water)
- 1 medium yellow onion, diced
- 2 cloves garlic, roughly chopped
- 1 bell pepper (any color), diced
- 1 cup of broccoli, sectioned (or use frozen)
- 4 tablespoons sunflower seeds (optional)

Tools

- Large pot
- Large pan
- Cutting board
- Knife
- Spatula/something to mix veggies

Instructions

1. Wash and chop vegetables. Set aside.
2. Heat large pot over medium heat. Add 1 tablespoon of olive oil.
3. Add onions and garlic and sauté until soft.
4. Add the vegetable stock or water and bring to a boil. Add quinoa. Reduce heat and simmer the quinoa until most of the liquid is absorbed, about 15 minutes.
5. In a separate sauté pan, add 1 tablespoon of olive oil and sauté vegetables until tender over medium-high heat.
6. Top cooked quinoa with sautéed vegetables and serve with any additional toppings, like sunflower seeds or lean protein.

Health Benefits

- » Foods high in vitamin B, including quinoa, have a calming effect on the body, improving mood and decreasing feelings of stress and anxiety.
- » Red bell peppers are high in vitamins A, C and folate, which give you more energy and help to repair cell damage caused by stress.
- » Sunflower seeds contain high levels of vitamin E and folate, which help to enhance your mood and increase energy.



Image credit: kirstenskitchen.blogspot.com

- ✓ Use any combination of vegetables in this recipe: the more colors, the better! Zucchini, spinach, summer squash, avocado, carrots, tomatoes, and sweet potatoes make awesome additions.
- ✓ Frozen fruits and veggies can be just as nutritious, and can often be a much more cost efficient option.