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COVID Long Hauler Self-Management

In this volume we will be reviewing three common COVID symptoms: brain fog, fatigue and shortness of breath and providing treatment considerations and guidance on how to improve these symptoms and some tips on how to get started!

**Keep in mind this is educational in nature and it is always best to check in with your medical doctor or rehabilitation specialist to determine which strategies are best suited for you.*

Brain Fog

Fatigue, post-exercise malaise and cognitive dysfunction (or brain fog) are among the most common symptoms reported by COVID long haulers 6 months post virus.

Brain fog can show up in many ways, you might be unable to concentrate for long periods, or troubles focusing on a conversation or a specific work task, you may be easily distracted or just find that you are thinking slower and with less clarity.

People often report having difficulties with making small decisions, remembering day to day tasks and even finding “words” when speaking. Often times there is associated headaches, visual disturbances, nausea and dizziness.



What things might be contributing to the brain fog?

As we know, COVID is a systemic condition impacting many body systems, including physical, cognitive and emotional. Rehabilitation considerations including thorough examination of sleep, diet, stress and exercise.

Recovery from brain fog is multifaceted and it is important to consider all of the contributing factors. We have outlined below some considerations and treatment ideas to help improve your brain fog symptoms:

SLEEP

- Avoid blue light exposure close to bedtime – blue wavelengths decrease the hormone melatonin that is essential for deep REM sleep
- Maintain a regular sleep / wake cycle and ensure the room is quiet and dark
- Weighted blankets are also effective in calming the nervous system to aid with deep sleep
- Create a bedtime routine: have a bath, warm tea, diffuse lavender oils, & meditate
- Avoid daytime napping if possible
- Limit caffeine intake, avoid after 3:00pm
- Magnesium has been proven to aid with quieting your nervous and preparing your body for sleep and helping to create a deeper more sound sleep
- Melatonin has been shown to synchronize the circadian rhythms, and improve the onset, duration and quality of sleep. It acts as a power anti-oxidant as well.
- Regular exercise! (see below)



DIET & STRESS

- Vitamin B12 – contributes to the formation of red blood cells and the maintenance of your central nervous system, deficiencies in B12 will leave you feeling fatigued
- Vitamin D – supports brain health and development and decreased levels have been associated with cognitive problems and depression
- Omega 3 fatty acids are found in fish oils play important roles in brain function and development
- Consider an anti-inflammatory diet (avoid gluten, dairy and processed foods) – the inflammatory response plays a crucial role in the manifestation of COVID
- Chronic stress can create many issues including the ability to “think clearly”. Stress creates a sympathetic response in your system which diverts energy away from typical functions and towards the stressor. Consider implementing meditation, yoga and counselling therapies to reduce the impact of stress
- Keep yourself well hydrated
- Continue to eat and drink fluids to support your body’s ability to fight the virus and support your body immune function – you need to replace your body’s fluid losses and this your respiratory secretions
- Drink clear fluids every hour
- Rehydration drink recipe – Mix the following in a pitcher :
 - ½-3/4 tsp sea salt
 - 1 cup of juice (orange, grape, apple, cranberry)
 - 3 1/2 cups of water



COGNITIVE STRATEGIES

- Break up activities and cognitively demanding tasks throughout the day into manageable durations (60 min task – break it up into 3, 20 mins blocks)
- Limit the amount of distractions present when attending to a task (remove visual and auditory distractions)
- Break down complex information into a graphical format to simplify the information
- Repeat back information and ask for clarification
- Use audiobooks and Podcasts for stimulation if your eyes fatigue quickly or if your vision is blurry with reading
- Strategies to help with word finding:
 - o Try describing the word in different ways. Say as much as you can about the object or concept. Use associated words. This strategy is called **circumlocution**.
 - o **Description**. Use a more focused way to describe the word. Similar to a definition. E.g. What is it used for? What does it look like? What parts does it have? How is it shaped? What colour is it? How does it feel? What is it made out of?
 - o Give a **synonym**. Say another word that has the same or almost the same meaning.
 - o Phonemic Characteristics. It may help to think about which letter/sound the word starts with, the length of the word, how many syllables the word has or if the word rhymes with another word.
 - o Give the **category name**.
 - o Give yourself **extra time** to think of the word.



FATIGUE & SHORTNESS OF BREATH

Fatigue is one of the most commonly reported symptoms amongst COVID19 long-haulers. Reports are indicating that even those long-haulers who initially had mild symptoms of the virus; fatigue levels can range from mild to severe.

For some, their fatigue limits their ability to get out of bed, walk, or climb the stairs. For others, they are unable to stand for prolonged periods of time in order to put away laundry or do the dishes. Fatigue can impact all daily activities including tasks of employment, household responsibilities, caregiving duties, grocery shopping, and many others.

Activity Pacing & Preventing Symptom Exacerbation

For many COVID19 Long-haulers, starting an exercise program can be daunting and even frightening, as many are afraid to exacerbate or worsen their symptoms. Activity pacing is a crucial concept to keep in mind as you start increasing your daily activities – including household duties, employment, physical activity, etc.

Self-monitoring and frequently checking-in with how you are feeling is an essential first step. Ask yourself the following question: “How am I feeling on a scale from 0-10?” (0 being no symptoms/feeling “normal”, and 10 being “the worst I’ve ever felt”).

This rating from 0 to 10 should encompass all your symptoms; fatigue, brain fog, headache, pain, emotional status, etc. Now, keep this number in mind as you start an activity (exercise, computer work, household chores), and force yourself to take a break and/or stop the activity once your score has increased by 3 points on the scale.

This equates to a 30% increase in your symptoms, which is enough to have ‘challenged’ your body systems, but not so much that it will leave you debilitated for the rest of the day. Here are some examples:

- If you are planning on going for a walk, and you currently rate yourself at a 5/10, you must take a break, or stop exercising once you hit an 8/10.
- If you are going to read the newspaper, and you start off feeling like a 3/10, you should take a break and rest once you hit a 6/10.
- The most challenging situation: If you are feeling like a 0/10 or 1/10, and want to take this opportunity to vacuum the house and do the dishes, you MUST still take a break and rest once your symptoms have increased to 3 or 4/10. Despite the fact that you'll likely still feel able to work at a 3/10, you've already increased your symptoms by 30%, so you must consider taking a break. Once your score has gone back down, you may return to your activity.

It is strongly recommended to have an assessment performed by a Registered Physiotherapist. This assessment will help to determine where you should start with your exercise program, and ongoing treatment will help to safely advise on appropriate exercise progressions.

Gradual Return to Activity & Exercise

It has been well documented that losses of muscle strength and cardiovascular endurance can be seen in as little as 2 weeks of someone being inactive or significantly reducing their physical activity levels.

When considering someone who has suffered from COVID19, especially for those who had prolonged illnesses and inactivity, the expected strength and cardiovascular losses are significant.

Therefore, it is important to consider a gradual return to exercise and activity once recovered from the acute phase of COVID19. Even if someone feels "back to normal", a gradual return to exercise is strongly recommended. Examples of a gradual return to exercise is as follows:

- Walk indoors / outdoors for 5 minutes, 3x/day. Progress to 10 minutes 2-3x/day after 7-10 days.
- Walk indoors/outdoors for 10 minutes 2x/day, and perform light aerobic exercise for 5-10 minutes 1x/day, then progress to 15 minute walks, and 10 minutes of light exercise after 7-10 days.
- Walk indoors/outdoors for 10 minutes, 2x/day, climb up/down stairs for 2-3 minutes 1x/day. Progress to walking for 10-15 minutes and stairs for 5 minutes after 10-14 days.

Breathing Exercises

Our current understanding of the COVID19 virus is that it can cause inflammation in the lungs, and reduce total lung capacity (the amount of air our lungs can hold). Many COVID19 Long-Haulers experience some degree of difficulty breathing, feeling like they “can’t take a full breath”, or “become easily winded”.

Breathing exercises can be an effective way to improve lung capacity and decrease feelings of chest tightness and discomfort, however; in the initial phases of the virus, or if someone is significantly breathless (defined as uncomfortable or fast breathing), breathing exercises should only be prescribed by an appropriate health care professional.

For those who are not breathless, the following exercises can be performed. It is recommended to complete 2 repetitions of each exercise, then breathe normally for 5-10 breaths in order to prevent lightheadedness, dizziness, or shortness of breath.

Pursed Lip Breathing

- Inhale slowly through your nose for a count of 2
- Purse your lips, as if blowing out candles or blowing air through a straw
- Breathe out slowly through pursed lips for 4-5 seconds

Forced Expiratory Technique of ‘Huffing’

- Inhale through your nose
- Hold your hand 2-3 inches away from your mouth, open your mouth
- Exhale with some force as if you were fogging up an imaginary mirror
- You may feel the need to cough afterwards

Diaphragmatic Breathing

- Sit comfortably, place your hand over your abdomen
- Breathe in deeply through your nose, allowing the air to reach the bottom-most part of the lungs. Your belly should fill with air and your hand should rise
- Exhale through your mouth, the air should leave your lungs, and your belly should flatten

