

BRAIN RECOVERY DIET HANDOUT



NUTRITION TO SUPPORT BRAIN RECOVERY IN PCS

This diet is designed as a guide to reducing foods that promote inflammation and increase the foods that support brain function and healing.

The duration of the nutritional plan is at least **4 WEEKS** unless otherwise specified by your healthcare provider. This may be extended if progress is made.

1 - HYDRATION

• The goal is 3-4 L daily of water, herbal tea and soup.

2 - AVOID ALL REFINED SUGARS AND CARBOHYDRATES

- Refined carbs promote inflammation which impairs nerve cell healing.
- Avoid bread, pasta, white rice, cookies, candy, milk chocolate, pop, etc.
- Avoid high starch foods such as potatoes and corn, replace them with non-gluten-containing starches and whole grains (2 servings daily MAX).
 - o Such as; sweet potato, quinoa, brown rice, beets, carrots, zucchini.

3 - REDUCE OVERALL CALORIC INTAKE BY ABOUT 30%

- This is the most evidence-based way of promoting brain recovery.
- Eliminating all refined carbs and sugars will reduce overall caloric intake.
- This is NOT a ketogenic diet but it is a reduced carbohydrate plan.

4 - EAT MORE FRUITS AND VEGETABLES

- Fruits and veggies are full of neuroprotective antioxidants.
- Eat the rainbow consume at least 8 different colours of fruits and veggies.
- Smoothies are a good option to increase fruits and veggies.

5 - ALL MEALS NEED PROTEIN, VEGGIES & GOOD FATS

- Each meal should include protein, veggies, and good fats (including breakfast).
- 50% of your plate should be plants/veggies 2 different types.
- Eat good fats 2-3 servings a week. Such as;
 - Fish salmon (wild), sardines, herring, mackerel, anchovies
 - Flaxseed, walnuts, coconut oil, medium-chain triglycerides (MCT oil) chia, grass-fed butter

6 - NO ALCOHOL

• Alcohol impairs brain repair and increases inflammation.

7 - DO A 4-WEEK 100% GLUTEN/WHEAT-FREE TRIAL

- Gluten, the protein found in wheat is known to cause gut inflammation in most people. This inflammation may influence brain recovery and the resolution of inflammation post-concussion.
- Avoid wheat/spelt bread, pasta, pastries, couscous, barley, etc.
- Instead, consume sweet potato, quinoa, brown rice, beets, carrots, zucchini, or millet.



SAMPLE DAILY BRAIN RECOVERY DIET PLAN

ON WAKING

• 1 tall glass of water mixed with the juice of ½ of a lemon/lime (500mL)

BREAKFAST

- Smoothie: ground flaxseed, almond milk, a handful of organic kale, frozen organic blueberries/raspberries/cherries and a high-quality protein powder (whey, rice)
- Full fat Greek-style yogurt topped with walnuts, pumpkin seeds, fresh blueberries and a dash of cinnamon and 1 tsp virgin coconut oil
- 2 free-range eggs with seasonal veggies sautéed with turmeric and ½ avocado

SNACK

- 1 tsp almond butter
- A handful of walnuts, almonds and cashews
- A cup of green tea

LUNCH

- Organic carrots and broccoli with hummus
- Spinach and kale salad with organic, in-season fruits topped with grilled free-range chicken in an apple cider vinegar dressing, with a side of steamed broccoli
- Quinoa, cucumber, red pepper, onion and dried cranberry salad. For protein add shredded turkey or chicken or beef.
 Served with an apple cider vinegar dressing
- Avoid caffeine after lunch

SNACK

- A handful of walnuts, almonds and cashews
- High-quality protein powder or repeat smoothie
- Fresh vegetable juice

SUPPER

- Vegetable soup with quinoa
- Grilled wild, salmon, sautéed vegetables in a gluten-free tamari sauce with fresh ginger

POST DINNER

- A cup of fennel/ginger/mint tea
- Fresh ginger infusion: 1-inch piece of fresh ginger and turmeric grated into warm water. Steep for 5 minutes and add honey and lemon to taste.

HEALTH ALTERNATIVES FOR PROCESSED SUGAR & FATS

AVOID

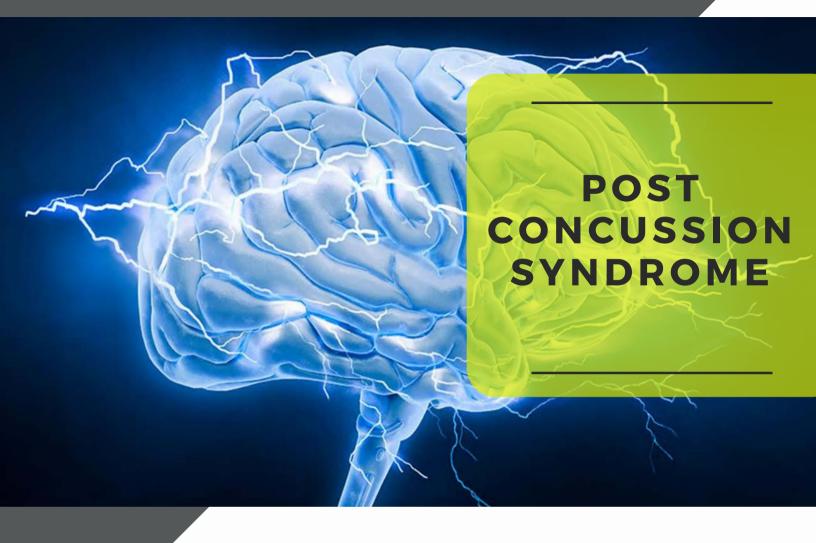
- White sugar, sucralose, or artificial sweeteners
- Canola, Corn, or vegetable oils

REPLACE WITH

- Stevia, coconut sugar/sap, dried date powder
- In limited quantities: sucanat, raw honey, maple syrup, molasses, xylitol, monk fruit
- Avocado & Coconut oil med/high heat
- Olive oil low heat or salad dressings
- Flaxseed Hemp Oils, not for cooking, use for salad dressings







SLEEP HYGIENE HANDOUT





PROPER SLEEP AFTER A CONCUSSION IS CRUCIAL

- Evidence demonstrates that poor sleep quality after a concussion has a detrimental effect on your cognitive function, energy, mood, and healing processes.
- It's not just about the AMOUNT of sleep you get, but the QUALITY is extremely important.
- This handout provides some tips for how to maximize your sleep after a concussion in order to facilitate recovery.

SLEEP ACTUALLY BEGINS FIRST THING IN THE MORNING

- Sleep is entirely dependent on what you do during the day!
 - Sunlight during the day tells your brain it's daytime.
 - Darkness at night tells your brain it's nighttime.
 - Lack of sunlight (or blue light) during the day and artificial light (screens, bright rooms, etc.) at night creates a confusing picture for your brain which disrupts your body's natural circadian rhythm.
- Concussion on its own affects your circadian rhythm.
- It is therefore EXTREMELY important to RESET your rhythm after a concussion by using the "hacks" contained within this handout.

BLUE LIGHT: DAYTIME = GOOD, NIGHTTIME = BAD

- Blue Light throughout the day is GOOD!
- Blue Light at night is bad (use blue-blocking filters ONLY after 7 PM and avoid all screens and devices in the evenings as they emit blue light which blocks the release of sleep hormones).
- Do NOT wear blue-blocking filters on your glasses during the day as this contributes to sleep difficulties at night by confusing your brain as to what time of day it is.

OTHER IMPORTANT "SLEEP HYGIENE" TIPS FOR CONCUSSION RECOVERY:

1 - YOU NEED A VERY DARK ROOM

- Absolutely no light from anywhere!
 - No electronics, No lights,
- Use blackout curtains, etc.
- Your brain produces the hormones needed for sleep in the complete absence of light.

2 - KEEP YOUR ROOM COOL (ABOUT 20°C / 68°F)

- Your core body temp needs to be cool to induce sleep.
- Increased temperature will wake you up and prevent you from reaching deep, restorative sleep phases.

3 - EAT LAST MEAL AT LEAST 3 HRS BEFORE BED

- Late meals, large meals, carbohydrates at night, and alcohol all keep your body temperature high as your body works to metabolize food.
- Night time is for resting...not metabolizing.
- Have your last meal be earlier in the evening 6 pm (at least 3 hours before bed) and lower in carbohydrates.

4 - NO CELL-PHONES IN THE ROOM

 Mobile devices are light sources, and the electromagnetic frequencies can be stimulating to your nervous system.

5 - NO SCREENS 90 MINUTES BEFORE BED

- No devices, screens, or blue light exposure within 90 minutes before bed.
- Dim the lights in your house and wear blue-blocking eyewear.
- This will help with melatonin release to initiate sleep and contribute to natural circadian rhythms.
- Devices also tend to be stimulating (social media, emails, etc.) you want to use the 90 minutes before bed for relaxation!

6 - GET UP AT THE SAME TIME EVERY DAY

- ALWAYS get out of bed at the same time every day.
- Sleeping late delays the build-up of adenosine which causes the drive to sleep at night to lower.
- It also prevents us from getting early morning light exposure which is very important.

7 - GET 30 MINUTES OF SUNLIGHT IN THE A.M.

- Get 30 minutes of direct sunlight first thing in the morning.
 - o Or you can use a 10,000 lux lamp.
- Research has shown SIGNIFICANT improvements in sleep for concussion patients who do 30 minutes of morning blue light exposure for 6 weeks.

8 - DO NOT MAKE DAYTIME NAPPING A HABIT

- Napping may be necessary for the VERY early stages of concussion, but DO NOT make this a habit!
- This lowers adenosine sleep drive and affects our sleep at night.
- Daytime sleep is lower quality sleep so sacrificing good quality nighttime sleep for lower quality daytime sleep is not a good idea.

9 - ONLY USE BED FOR SLEEP!

- Don't do work, eat, watch TV, etc. in bed.
- If you get into bed and you can't fall asleep within 20 minutes, get out and go somewhere else and then come back.
- If you're having trouble sleeping try listening to a podcast or audiobook (something not super interesting)

10 - AVOID CAFFEINE AFTER 12 PM

- Avoid caffeine at all after 12 PM (Noon)
- · Avoid alcohol in the evening

11 - EXERCISE!

- EXERCISE!! (once allowed by your clinician)
- Exercise builds up adenosine which is the primary driver for nighttime sleep.
- Exercise earlier in the day so that it doesn't increase body temp and stimulation at night.

12 - USE RELAXATION TECHNIQUES BEFORE BED

- Try using relaxation techniques before bed
 - Meditation
 - Mindfulness
 - o Breathing techniques, etc

13 - FOLLOW THE CONCUSSION RECOVERY DIET

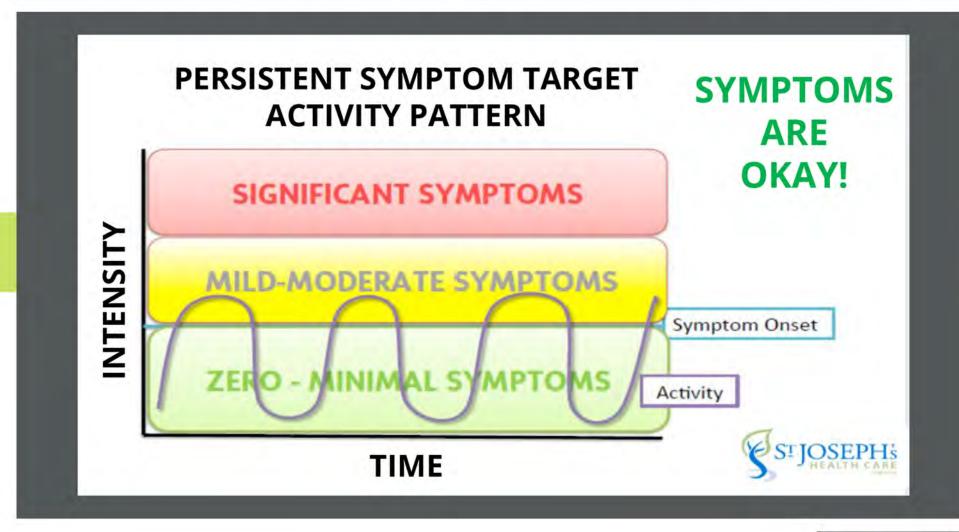
- Proper nutrition and gut health are extremely important for good quality sleep.
- Concussion affects your gut permeability which can lead to chronic inflammation which is a sleep disrupter.
- Follow the Concussion Recovery Diet as closely as possible.
- If you need additional support, seek the care of a Functional Medicine or Naturopathic Doctor.





COMPLETE CONCUSSION MANAGEMENT

HoW MuCh tO PUSH IT tho???



Symptoms tell us:

- What is going on
- What we need to address
- What threshold you need to reach to rehabilitate the cause of your symptoms



REPAIR. RESTORE. REBUILD.

easthillphysio.com f @ &

2906 26th Street Vernon, BC, V1T 4T7 T • 250.545.2922 F • 250.545.2982 easthillphysio@telus.net

401-3210 25th Avenue (Sterling Center) Vernon, BC, V1T IP1 T • 250.542.2655 F • 250.542.1494 EHphysio@telus.net