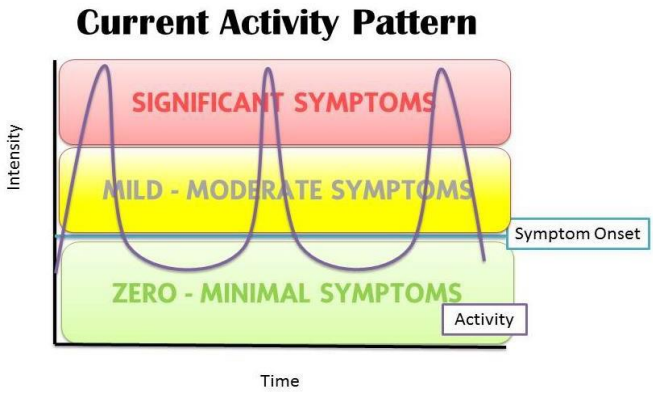
Appendix 2.2

The Pacing Graphs Explained

The green (safe zone) represents when you are symptom-free, or your baseline symptoms. The red (danger zone) represents when your symptoms are increased.

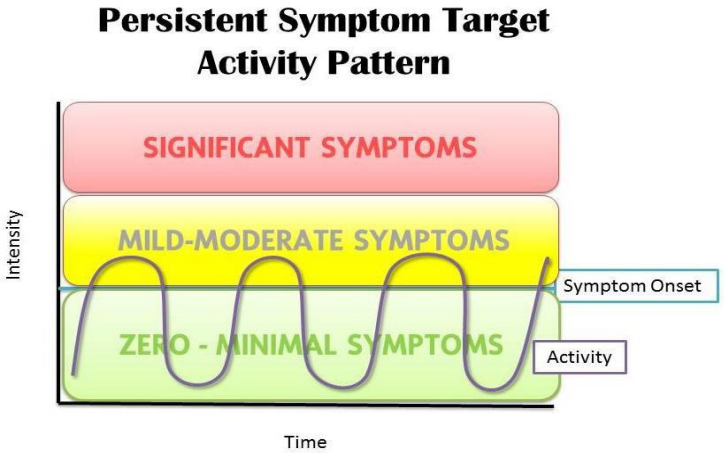
Your Current Activity Pattern may look like this if you continue to work, study, exercise, and in effect push through your symptoms into the 'red zone'. Unfortunately, you end up crashing and may need hours or days to return to baseline.



Your Goal: To gradually increase activity tolerance without significantly increasing symptoms or crossing the symptom threshold (into the 'danger zone'). Therefore, planning and pacing of activities is very important. You need to find the right level of activity whereby your symptoms are either eliminated or manageable, and then as your symptoms are better controlled, you can gradually increase your activity level.

You should aim to remain below your significant symptom threshold to promote recovery.

Use your timer to set time restrictions for activities to ensure that a task is stopped soon after symptom onset (i.e. if symptoms increase by 2-3/10 and then return back to baseline within 30-60 min, this is an appropriate amount). This will allow you to monitor your response to activity and teach you how to self-pace and self-monitor. You need to challenge the system in a manageable way in order to change it.

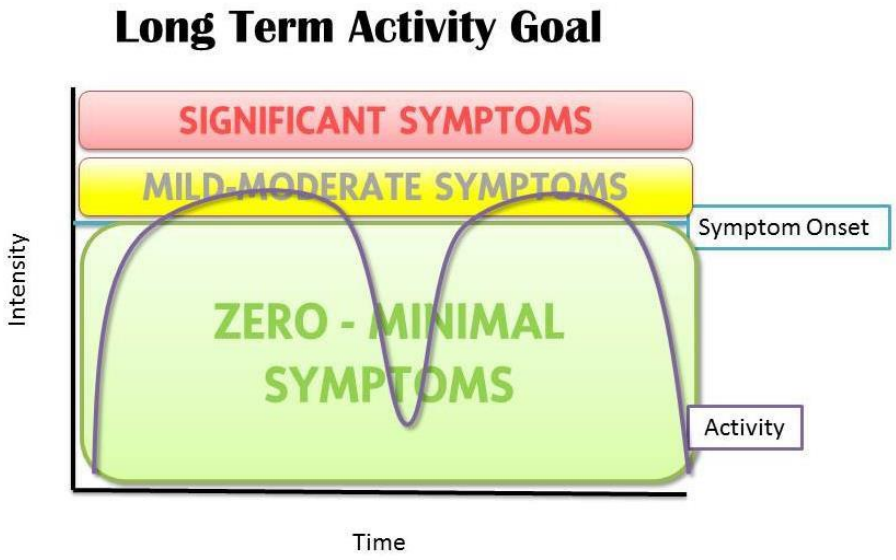


Additional Strategies

- Start with shorter bouts of exercise or activity with rest in between OR
- Try switching between different types of activities (e.g., switching from reading to walking).
- **Doing nothing at all will not promote recovery, but doing too much each day may cause prolonged symptoms.** Therefore, completing structured, paced activities throughout the day with rest breaks as appropriate is ideal.

- **Use a Planner/Agenda/Technology**
    - Plan your day in advance. This promotes scheduling of necessary rest breaks into your day, and activities across a number of days, rather than trying to 'push through' and get things all done at once.
    - **If you have memory issues,** an agenda or technology aid may assist you, with remembering appointments, upcoming tasks/commitments and sending out reminders (in the case of technology solutions).
    - **Track your activities** to help you determine any cause and effect or patterns of setbacks which may occur during your recovery. Tracking activities and symptoms in the notes/journal/agenda can also help with determining if there is a relationship between certain activities and symptom onset.

Using strategies to plan and pace your day will help you reach your **long term activity goal** to be able to engage in activities for longer periods of time without making your symptoms significantly worse, and eliminates the need for prolonged recovery time.



Using a Timer for Planning & Pacing

What is it? A timer on your microwave/oven, cellphone, or a digital timer from the dollar store should have an alarm/beep/light that notifies you when the set time has elapsed.

Why? A timer is very important for recovery and for helping you get back doing the day-to-day activities you did before your injury. After brain injury, you have or will experience various symptoms which may be worsened by overstimulation. Overstimulation may include too much "going on" (e.g., sights and sounds) for the brain to process. It is important for you to learn to recognize how much overstimulation it takes to bring on your symptoms (e.g., headache, tremor, fatigue, etc.).

Temporal (time) awareness in brain injured patients may be disrupted as well, resulting in individuals "pushing through" symptoms to finish tasks. Additional challenges may include difficulty starting/stopping activities and over or under-underestimation of the passage of time. A timer is a good way to promote pausing, rest, and evaluation of symptoms and to give the brain a break before the symptoms become problematic. It also helps to "reset" your internal clock, as time estimation skills often improve with continued use of a timer.

How to use it: Set a timer for a defined amount of time (e.g., 20 minutes), and then take a break from the task for a defined amount of time (e.g., 10 minutes). Breaks should consist of resting or doing something that encourages focus on something that is not up close. For example, if you read for 20 minutes, then perhaps take a walk for 10 minutes, rest or grab a healthy snack. This will give your brain the break it needs for recovery and to prevent onset of symptoms.

How to progress: Over time, longer work periods (relative to rest), may be established using a timer and increasing the on-task time in increments of 5 minutes every few days. Your goal is to work relatively symptom-free or without a lasting increase in symptoms.

Summary

- Many patients return to activities too quickly, or participate in symptom provoking activities for too long.
- We encourage you to participate in activities below the level of symptom onset in order to gradually build tolerance. As tolerance increases, symptoms may not occur as quickly, and many patients begin to recover and have less symptoms as time progresses.
- Stay conscious of the significant symptoms zone (red), even when symptoms begin to subside, as it is easy to slide into old habits of pushing through symptoms.