



CONNECT website
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Patient and Family Resource Booklet Regarding
Concussion Symptoms

Based on Rivermead Post-concussion symptoms Questionnaire (RPQ)

INTRODUCTION TO: The Patient and Family Resource Booklet Regarding Concussion Symptoms

DEVELOPMENT: The Patient and Family Resource Booklet Regarding Concussion Symptoms is an educational resource that was constructed as a part of a CONNECT Knowledge Translation initiative. The booklet was assembled through an environmental scan encompassing all 10 CONNECTing clinical sites. Each site was contacted by CONNECT’s knowledge translation lead and were invited to provide the patient education resources currently in use at their site. The majority of materials obtained during the environmental scan were included in the booklet with the exception of resources requiring payment. Accumulation of 111 resources, including: videos, webinars, podcasts, handouts and webpages, occurred between February to April 2022.

DESIGN: This booklet is organized into sections, each discussing common concussion symptoms addressed in the Rivermead Post-Concussion Symptoms Questionnaire. Each section provides information regarding “Why you may be experiencing this symptom” and “What you can do about it” as well as links to collected resources that pertain to that specific symptom. Also included are: resources addressing supportive self-management strategies for symptoms (mindfulness, pacing/planning and exercise), return to work/school/sport resources and other general concussion related materials. All of the resources provided in this booklet are available for use with internet access anywhere in the province and at no cost.

USAGE: This booklet and most of the resources have not undergone an evaluation. We do not recommend distributing this resource directly to patients as the booklet has not been evaluated. The length of the booklet may not be appropriate for use by the general population. It may best serve as a patient education resource booklet for practicing clinicians to utilize, and perhaps consider specific components to share with patients as warranted.

We have no plans nor budget to move this resource forward at this time. We do however, welcome your suggestions for next steps and comments from you or other team members.

Please email David Murty at: david.murty@unityhealth.to

CONNECT has gathered these existing resources from the concussion clinics in the CONNECT network for you and your family/supportive friends to review.

The clinics contributing to these resources include:

- Hamilton Health Sciences
- Lakehead University, Thunder Bay – Ridgeway Clinic
- Sudbury Sport and Exercise Medicine Concussion Clinic
- Sunnybrook Health Sciences Centre – Traumatic Brain Injury Clinic
- St. Joseph’s Health Care London – Parkwood Institute
- St. Michael's Hospital, Unity Health – Head Injury Clinic (SMH)
- The Ottawa Hospital Rehabilitation Centre - Centre for Rehabilitation Research & Development
- University Health Network, Toronto Rehabilitation Institute – Hull-Ellis Concussion and Research Clinic
- University Health Network, Toronto Western Hospital – Canadian Concussion Centre (CCC)
- Western University – Fowler-Kennedy Sport Medicine Clinic

How are these resources organized for me?

The first series of resources focus on specific common symptoms after a concussion. The Information will be presented to you as follows:

- **Why you may be experiencing this symptom** (a bit about your biology)
- **What you can do about it** (some self-management strategies)
- **Additional resources** (links to videos, information sheets and websites)

These are followed by resources about other supportive strategies that are not symptom specific. These include:

- **Mindfulness**
- **Pacing & Planning**
- **Exercise**
- **Returning to activity** (work/school or sports)

In addition to the resources in this booklet, here are supportive websites you may find helpful:

- Ontario Neurotrauma Foundation - Brain Injury Guidelines, Patient Version
<https://braininjuryguidelines.org/concussion/index.php?id=154>
- Every brain heals differently
<https://smh.andornot.com/en/list?q=every+brain+heals+differently&p=1&ps=20>
- Smart Concussion Advice Tool – SMART CAT
<http://www.stmichaelshospital.com/UnityHealthRivermeadQuestionnaire/>
- My Guide: Concussion
<https://concussion.vch.ca/>

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Rivermead Post-concussion symptoms Questionnaire

After a head injury or accident, some people experience symptoms which can cause worry or nuisance.

We would like to know if you now suffer from any of the symptoms given below. As many of these symptoms occur normally, we would like you to compare yourself now with before the accident (i.e. over the last 24 hours). For each one, please circle the number closest to your answer.

Not experienced at all	No more of a problem	A mild problem	A moderate problem	A severe problem
0	1	2	3	4

Headaches	0	1	2	3	4
Feelings of Dizziness	0	1	2	3	4
Nausea and/or Vomiting	0	1	2	3	4
Noise Sensitivity, easily upset by loud noise	0	1	2	3	4
Sleep Disturbance	0	1	2	3	4
Fatigue, tiring more easily	0	1	2	3	4
Being Irritable, easily angered	0	1	2	3	4
Feeling Depressed or Tearful	0	1	2	3	4
Feeling Frustrated or Impatient	0	1	2	3	4
Forgetfulness, poor memory	0	1	2	3	4
Poor Concentration	0	1	2	3	4
Taking Longer to Think	0	1	2	3	4
Blurred Vision	0	1	2	3	4
Light Sensitivity, Easily upset by bright light	0	1	2	3	4
Double Vision	0	1	2	3	4
Restlessness	0	1	2	3	4

Other difficulties

Neck Pain	0	1	2	3	4
Balance difficulties, unsteadiness	0	1	2	3	4
Others – Please specify	0	1	2	3	4

Headaches

Why you may be experiencing this symptom

- Headache is the most common symptom following concussion, between 30%-90% of people experience headaches after a concussion.
- The exact cause of post-traumatic headaches (headaches that occur after a head injury) is still **unknown**, but there are multiple theories about why they happen:
 - Impaired descending modulation: A head injury may result in tearing of the brain's long connecting nerve fibers, which happens as the brain shifts and rotates the bony skull. This negatively affects a pathway in the brain that reduces the pain signal, resulting in a headache.
 - Neurometabolic Changes: Research suggests that head injuries cause increased energy use by the long connective nerve fibers in the brain. This causes stress and damages these fibers, resulting in a process that mimics Migraine auras.
 - Trigeminal Sensory System Activation: The trigeminal nerve is one of 12 pairs of nerves attached to your brain. It is responsible for transmitting touch and pain sensation from your face and head to the brain. Head injury increases inflammatory processes in the brain, which can affect the trigeminal nerve. This could result in headaches due to increased pain sensation signals from head to the brain.
 - Meningeal irritation due to craniotomy: Membranes around the brain and spinal cord are called meninges. Craniotomy, which is a surgical procedure that involves making a hole in the head, could lead to irritation of the meninges causing headaches.
- Headaches can also be due to other factors such as whiplash and the over use of medications

What you can do about it

- **Sleep:** It is important to go to sleep at the same time each night and wake up at the same time each morning. Avoid day time naps.
- **Regular meals:** It is well known that skipping or delaying meals can trigger headaches in some people. Please consume breakfast (ideally a high-protein breakfast), lunch and dinner and avoid delaying or skipping meals.
- **Hydration:** It is thought that dehydration can be a trigger for headaches in some susceptible individuals. As such, it is important to maintain good hydration – this means consuming 4-6 drinks per day of water, juice, milk or other non-caffeinated beverages. Regular daily caffeine-

consumption (i.e., coffee, soft drinks) should be avoided as caffeine consumption and withdrawal can precipitate headaches (when an individual does not consume caffeinated beverages regularly, a caffeinated beverage may be helpful to minimize intermittent bad headaches). Diet soft drinks should be further avoided as, in some, aspartame may trigger headaches.

- **Manage stress:** It is well known that in many individuals; stress, worry, anxiety or anger can be a significant trigger for headaches. These symptoms are particularly common in individuals who have sustained a traumatic brain injury and, as such, can have a major impact on the frequency and severity of post-traumatic headache. As such, using relaxation strategies, doing activities such as meditation, yoga, and exercise can assist with coping with stress and avoiding stress induced worsening of headaches. The assistance of an occupational therapist, psychologist, GP-psychotherapist or psychiatrist may be necessary.
- **Exercise:** In the initial period after a traumatic brain injury, physical rest is often endorsed. However, as the weeks go by, inactivity is frequently counter-productive and a sedentary lifestyle without any cardiovascular exercise may, in some, perpetuate the headaches. Accordingly, a brisk walk (particularly a morning walk outside), riding a stationary bicycle, walking or jogging on a treadmill or elliptical machine or swimming can be very helpful in headache management. An exercise program should be undertaken as tolerated with gradually increasing duration and intensity. For some, exercise triggers a headache and in these individuals the intensity and/or duration of the exercise should be reduced or an alternative exercise should be trialed.
- **Self-management techniques:**
 - Apply a cold or hot pack to your neck or head
 - Tie something tight around your head
 - Stretch and self-massage your head, neck and shoulders
 - Perform breathing exercises
 - Use visualization or other mindfulness-based exercises
 - Go to a quiet place
 - Lie down
 - Go outside to get fresh air

Additional Resources

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
CCC Webinar Series Week 7 – Headaches (2021)	Dr. Marie Slegr, MD, FRCPC, Neurologist (CCC)	1:01:37	https://www.youtube.com/watch?v=KlvVA_AqpMk&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - Provides a detailed talk about the different types of headaches and their treatments - Both lifestyle and drug options are discussed

Written Resources				
Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Post-Traumatic Headache Management	Complex Injury Outpatient Rehab (Hull-Ellis)	4 pages	https://www.uhn.ca/TorontoRehab/Clinics/Hull-Ellis_Concussion_Research/Documents/Post-traumatic_headache_management.pdf	<ul style="list-style-type: none"> - This resource briefly describes “post-traumatic headaches” (headaches that occur after head injury) and factors that may make them worse - Factors such as exercise, caffeine and pain medications are discussed in detail - Talks about ways to manage headaches such as lifestyle and non-drug strategies
Concussion Recovery Tips: Headaches and Concussion (2019)	Sunnybrook Health Sciences Centre	~ 3 pages	https://sunnybrook.ca/content/?page=bsp-concussion-headaches	<ul style="list-style-type: none"> - This very brief resource provides a few simple tips that may be helpful for dealing with a headache and for preventing future headaches

Feelings of Dizziness

Why you may be experiencing this symptom

- Dizziness is a common symptom experienced in up to 80% of people within the first few days after concussion.
- Dizziness is often related to injury of the “vestibular system”, which is a group of structures located in the inner ear that give us our sense of balance and tell us the position of our body in space.
- The most common cause of problems with the vestibular system after concussion is due to a condition called Benign Paroxysmal Positional Vertigo (BPPV).
- People with BPPV often have brief episodes of vertigo (a spinning sensation) and nausea when quickly shifting their position or turning their head.
- Dizziness can also be caused by post-concussion headaches, autonomic dysregulation (a sudden rise in blood pressure), some medications or other inner ear disorders.
- Other mood related symptoms of concussion like anxiety can also worsen the dizziness.

What you can do about it

- **Avoid sudden changes in position:** If you find that things seem to spin round if you sit up suddenly after lying down or if you turn your head sharply, it is best to take your time and use slow controlled movements or changes in position until it clears.
- **Go slower:** Don't worry if you do find that you are a bit unsteady on your feet, or bump into furniture, or maybe drop things. Just take everything you do a little more slowly. Your brain is the control centre for your whole body. It has to make sense out of all the messages coming in from your eyes and ears and other senses, and to send the right signals to the right muscles for you to be able to do anything. So give yourself more time to do things.

Additional Resources

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
CCC Webinar Series Week 5 – Dizziness Post Head Injury (2021)	Dr. John Rutka, MD, FRCSC (CCC)	1:03:13	https://www.youtube.com/watch?v=yJq4JOQc05o&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - An in-depth look at current research into dizziness due to head injury - Topics include the typical way to deal with and treat dizziness, physical therapy manoeuvres and vestibular rehabilitation therapy (VRT)

Written Resources				
Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Concussion Recovery Tips: Dizziness and Changes in Balance After Concussion (2019)	Sunnybrook Health Sciences Centre	~3 pages	https://sunnybrook.ca/content/?page=bsp-concussion-dizziness	<ul style="list-style-type: none"> - This resource talks about some of the causes of dizziness after concussion and what you can do if you experience it - Strategies discussed include slowing down, staying active and preventing falls

Nausea and/or Vomiting

Why you may be experiencing this symptom

- There are neurological connections between the brain and gut.
- When there is trauma to the head, it can lead to disturbances in the neurological signaling within the brain.
- The stimulation of vomiting-centers in the brain can in-turn cause you to experience nausea and vomiting after concussions.

What you can do about it

- **Eat smaller meals:** Your nausea may improve if your stomach does not feel as full. Try eating smaller meals but eating more frequently.
- **Drink liquids:** You may find water or ginger ale easier to keep down when you are feeling nausea.
- **Try blander foods:** You may find eating blander foods like crackers and bread easier to keep down if you are feeling nausea.
- **Avoid overmedicating yourself:** An antiemetic once every few days is ok, but please avoid taking one every day. This medication can make you feel tired, groggy and forgetful.
- **Look for other causes:** Please discuss with your family doctor other causes of your nausea/vomiting aside from your concussion/brain injury.

Noise Sensitivity

Why you may be experiencing this symptom

- The exact mechanism of noise sensitivity in patients with concussion is unclear.
- It is thought that noise sensitivity is directly related to biochemical, mechanical and inflammatory brain responses following a concussion.

What you can do about it

- **Ask for a quiet environment:** When your brain is fully awake it uses part of its energy to dampen down noises that would interfere with what you are doing. After a mild brain injury your brain may not have enough energy to spare to do this, and you may find that most noises bother you. Explain to your family and friends and ask them to keep the noise level down if they can.

Additional Resources

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Caring for Yourself After a Concussion: Noise and Light Sensitivity (2020)	Shannon McGuire, Physiotherapist (Parkwood Institute)	17:34	https://www.youtube.com/watch?v=HYUxm8CL2PQ&list=PLvD7HhN5mi-ML63F7N0F6oj1yilrUJmw&index=4	<ul style="list-style-type: none"> - This video includes tips on managing symptoms as well as former patients' experiences with concussion - This video deals with noise and light sensitivity following concussion and includes strategies on how to reduce and manage these symptoms - This video is split into two sections; the first 6 minutes talks about noise sensitivity management strategies and the rest of the video is about light sensitivity management

Written Resources				
Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Caring for your brain – Noise sensitivity (Patient Handout)	St. Joseph's Health Care London (Parkwood Institute)	2-3 pages	https://www.sjhc.london.on.ca/media/8494/download	<ul style="list-style-type: none"> - This handout can be used to assist with noise sensitivity after a concussion - It includes strategies for how to manage noise sensitivity, how to cope with noisy environments, how to build noise tolerance

Written Resources

<p style="text-align: center;">Regional Acquired Brain Injury Outpatient program, Hearing</p>	<p style="text-align: center;">St. Joseph's Health Care London (Parkwood Institute)</p>	<p style="text-align: center;">~2 pages</p>	<p style="text-align: center;">https://www.sjhc.london.on.ca/regional-acquired-brain-injury-outpatient-program/patients/hearing</p>	<ul style="list-style-type: none"> - This webpage generally addresses most hearing problems that can occur after a head injury - Provides advice on how to help your hearing, what to do when everyday sounds are too loud and when hearing protection is recommended - This resource also speaks about tinnitus or ringing in the ears and strategies for dealing with this. - Also includes a cellphone application (Sleep Pillow app) which may be useful for people dealing with ringing in their ears
<p style="text-align: center;">Concussion Recovery Tips: Noise Sensitivity and Tinnitus (2019)</p>	<p style="text-align: center;">Sunnybrook Health Sciences Centre</p>	<p style="text-align: center;">~2 pages</p>	<p style="text-align: center;">https://sunnybrook.ca/content/?page=bsp-concussion-tinnitus</p>	<p>-This short resource talks about some of the causes of noise sensitivity and tinnitus (ringing in the ears) and gives a few tips on what you can do about it</p>

Sleep Disturbance

Why you may be experiencing this symptom

- Sleep disturbances are very common after a concussion especially if there is pain related to the injury.
- Greater than 50% of people experience issues with sleep after concussion.
- There are many different types of sleep disturbances that are common after head injury, which may be linked with various underlying causes. Some of these include:
 - Insomnia: difficulty falling or staying asleep, and/or difficulty getting restful sleep.
 - Sleep apnea: Breathing problems during sleep, such as snoring or breathing that stops and starts.
 - Narcolepsy: Daytime sleepiness and uncontrollable episodes of falling asleep during the daytime.
 - Post-traumatic Hypersomnia: Need for excessive amounts of sleep.
 - Circadian Rhythm Sleep Disorders: Preferring sleeping in the daytime and staying awake at night.
- Other factors that can affect your quality of sleep after a concussion include; medical conditions (like diabetes or thyroid disorder), certain medications you are taking, mental health problems (such as anxiety or depression), your sleep and wake habits (also known as “sleep hygiene”) and your exercise and activity routines.

What you can do about it

- **Stimulation control:** If you are having trouble falling asleep you may try things like:
 - Reducing stimulation by not watching TV in bedroom or spending a long time on the computer.
 - Avoiding a large meal before bed.
 - Avoiding caffeine.
 - Using relaxation techniques (controlled breathing, progressive muscle relaxation).

- Getting up for about 30 minutes if you are unable to sleep for long periods.
- **Improve sleep efficiency:** Restrict the time you spend in bed to the actual time you spend sleeping. Spending too much time in bed may actually contribute to your sleep problem. Here is how to ensure sleep efficiency:
 - Monitor your sleep with a sleep diary for 1 or 2 weeks. Calculate the time spent actually sleeping (Time spent in bed minus time to fall asleep and awakenings).
 - Under the supervision of your health-care provider, set up a sleep window with a duration corresponding to the actual sleep time of the past 1-2 weeks, and with fixed bedtime and rising time. The sleep window should not be of less than 5.5 hours.
 - Maintain the sleep window for at least one week.
 - Set a consistent wake time (even on weekends), and regardless of amount of sleep obtained.
 - On a weekly basis, gradually adjust the sleep window based on your sleep quantity and quality:
 - If you sleep more than 85% of time you spend in bed and/or you constantly feel sleepy during the day, increase the sleep window by 15-20 minutes.
 - If you sleep less than 85% of the time you spend in bed, decrease the sleep window by 15-20 minutes.
 - Continue this procedure until you achieve an acceptable sleep quality and duration AND you do not feel sleepy during the day.
- **Stick to a routine:** Get up at the same time every morning, regardless of the amount of sleep you obtained. Maintaining fixed bedtime and rising time helps with maximizing sleep drive at the optimal time.
- **Relax before sleep:** Allow at least 1 hour before bedtime to unwind. This is intended to facilitate the transition from wakefulness to sleepiness, and to sleep onset. In this time, you should plan quiet, relaxing, and pleasant activities.
- **Go to bed only when sleepy:** Going to bed when feeling wide awake only leads to prolonged wakefulness and further associates the bed and bedroom with insomnia rather than sleep. Wait until you feel the signs of sleepiness (yawning, eyelids drooping) before trying to sleep.
- **If you can't sleep:** If you are unable to fall asleep or fall back asleep within 15-20 min, get out of bed and find something else to do in another room. Again, the rationale is to strengthen the association between your bed and bedroom, and sleep. When applying this strategy, it is

important to choose a quiet and relaxing activity, avoid stimulating ones (e.g., computer or TV), and avoid bright light. Go back to bed only when you feel sleepy again. Repeat this procedure as often as necessary.

- **The bed is for sleep!:** Reserve your bed and bedroom for sleep only. The bedroom environment should be associated with sleep only, sexual activities being the only exception. All other activities, such as reading, worrying about your personal or health problems, or watching TV, should be done elsewhere.
- **Limit daytime napping:** It is best to avoid daytime napping. Naps can affect the quantity and quality of sleep the following night. Naps longer than 30 min can be followed by an unpleasant period of sleepiness and difficulty concentrating than can last up to 1 hour upon awakening. If daytime sleepiness is too overwhelming, take a short nap (not exceeding 1 hour and taken before 3:00 PM).
- **Create a good sleep environment: The ideal Environment for falling and staying asleep has these features:**
 - The sleeping area should be dark, cool and comfortable.
 - Ideally, there should be no source of light in the bedroom while sleeping.
 - The room should be clean, tidy and quiet (e.g., neutral or natural sounds can be helpful to block out distracting sounds).
 - Having a digital clock in the bedroom with numbers that light up is not recommended. If there is one, it should be turned away from the bed. If you wake up the night, it is recommended not to look at the clock.
- **Make nutrition, exercise and lifestyle changes:**
 - Avoid consumption of caffeine within 4-6 hours of bedtime.
 - Avoid consumption of alcohol too close to bedtime. When metabolized, alcohol can produce awakenings or lighter sleep.
 - Avoid heavy meals late in the evening.
 - Consider adding a bedtime snack containing protein. Avoid sugar 4 hours before bedtime.
 - Adequate vitamin and mineral intake is important to help the body produce melatonin, which promotes sleep. Make sure there is enough magnesium, iron and B vitamins in

your diet.

- When your doctor says it is safe to do so and you feel up to it, try to include 30-60 minutes of exercise per day, as regular exercise promotes sleep. Avoid exercising within two hours of sleep.
- Expose yourself to natural light during the day.

Additional Resources

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
ABI 101: Steps to Success Series – Week 2 Organization, Sleep and Goal Setting (2015)	Becky Moran, Occupational therapist (Parkwood Institute)	27:02	https://www.youtube.com/watch?v=FnDZj2_AkQY	<ul style="list-style-type: none"> - This video is a recording of a presentation from an occupational therapist talking about goal setting, organization and strategies for improving sleep - At around 16:30, the video discusses techniques for proper sleep hygiene and how these techniques can help reduce sleep disturbances that often occur after a head injury
CCC Webinar Series Week 15 – Traumatic Brain Injury and Sleep (2022)	Dr. Neal Parekh BSc, MD, FRCPC, CMLE(ON), C- CAT(PM) (CCC)	1:06:25	https://www.youtube.com/watch?v=Znpm8utoZQM&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - Topics covered include how and why we sleep, common sleep issues and types of treatments (lifestyle changes vs. medications)

Written Resources				
Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Regional Acquired Brain Injury Outpatient program, Sleep	St. Joseph’s Health Care London (Parkwood Institute)	~2 pages	https://www.sjhc.london.on.ca/regional-acquired-brain-injury-outpatient-program/patients/sleep	<ul style="list-style-type: none"> - This webpage generally talks about sleep issues that may be experienced after a concussion - Topics covered in this resource include sleep medications, good sleep habits and daytime tiredness (fatigue) - This webpage is only about 2 pages, however, includes quite a long list of sleep habit suggestions for you to try
Helpful Hints for Better Sleep (2022)	Lori Bernstein PhD, C. Psych (Hull-Ellis)	7 pages	https://www.uhn.ca/PatientsFamilies/Health_Information/Health_Topics/Documents/Helpful_Hints_for_Better_Sleep.pdf	<ul style="list-style-type: none"> - This resource contains a short quiz to help you learn if you may have a sleep problem - If you already know sleep is an issue, the rest of the resource contains a wide variety of suggestions for improving sleep - Also includes some questions that you can ask your doctor that might help you understand more about what may be causing these issues
Tips for getting a good night’s sleep (2005)	Hamilton Health Sciences	3 pages	https://www.hamiltonhealthsciences.ca/wp-content/uploads/2019/08/TipsGoodNightSleepPORTRAIT-trh.pdf	<ul style="list-style-type: none"> - This brief resource has a list of 8 helpful tips that you may find useful for getting better quality sleep after a head injury

Written Resources

Concussion Recovery Tips: Sleep Issues (2019)	Sunnybrook Health Sciences Centre	~3 pages	https://sunnybrook.ca/content/?page=bsp-concussion-sleep-tips	<ul style="list-style-type: none"> - This resource talks about common sleep issues and provides a few tips on good sleep hygiene which may help your sleep improve - Areas covered include sleep routine, food, activity, lifestyle and sleep environment
Sleep Education	American Academy of Sleep Medicine (The Ottawa Hospital Rehabilitation Centre)	---	sleepeducation.org	<ul style="list-style-type: none"> - This resource provides information on a wide variety of sleep disorders and discusses healthy sleep habits in men and women - Also includes a printable sleep diary and bedtime calculator for you to use
Sleep Diary	Sleepwell (The Ottawa Hospital Rehabilitation Centre)	2 pages	https://mysleepwell.ca/cbti/sleep-diary/	<ul style="list-style-type: none"> - This resource provides a free printable sleep diary for you to use - Also includes instructions on how to properly use the diary and how to calculate “sleep numbers” - The website also includes additional information about cognitive behavioral therapy for insomnia and how this compares with sleep medication
Treatments for Insomnia	Sleep Foundation (The Ottawa Hospital Rehabilitation Centre)	5 pages	https://www.sleepfoundation.org/insomnia/treatment	<ul style="list-style-type: none"> - This resource includes an online article discussing insomnia (difficulty with sleep) - Has recorded audio if you would prefer to listen to the article - Topics include what is insomnia, diagnosing insomnia and insomnia treatments (Cognitive Behavioral Therapy and medication treatments)

Fatigue

Why you may be experiencing this symptom

- After a concussion, your brain has less energy to spare than it normally does, and everyday tasks take up more energy than before.
- Fatigue can be worsened by stress and low mood.
- You do not need to be very active or busy to feel fatigued.
- Certain medications can cause fatigue.
- 28% of patients with concussion experience fatigue 3 months after their injury event.
- Fatigue can affect your body, mind, emotions, and motivation.
- Fatigue may increase stress and depression by making it more difficult to cope with everyday situations.

What you can do about it

- **Exercise:** Physical activity can help decrease fatigue, and improve energy levels: you do not need to go to a gym or have a long, intense workout. Start small, and with what you feel comfortable with: going on a walk can make a big difference, as can yoga, swimming, cycling, and even dancing.
- **Mindfulness:** Try practicing mindfulness to reduce fatigue-related stress. There are apps available such as Headspace and CALM which you can try (these apps have free trial periods for you to test them out, but will require a paid subscription afterwards)
- **Plan and organize tasks:** Make a personal to-do list for yourself, and separate it into categories:
 - Daily tasks: Such as taking medication, preparing meals, making your bed, getting dressed and doing the dishes.
 - Weekly tasks: Such as grocery shopping, vacuuming, taking out the garbage and gardening.
 - Monthly tasks: Such as paying bills and home repairs.

- **Prioritize tasks:** Plan out which tasks must be completed on a priority basis: what is important on your list? What can wait?
- **Take notes:** Use a notebook to plan out your goals, record the tasks you were able to complete, and take notes on your own patterns of fatigue.
- **Pace yourself:** Do not overtire yourself, or do more than you can handle! Take it one step or task at a time, and allow yourself to rest.
- **Make yourself a bedtime routine:** Try to go to bed at the same time everyday, avoid alcohol and caffeine such as coffee and tea too soon before bed, and make sure your room is dark, cool, and quiet.

Additional Resources

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Written Resources				
Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Using Your Energy Wisely (2020)	Occupational Therapy, Toronto Rehab Institute (Hull-Ellis)	5 pages	https://www.uhn.ca/PatientsFamilies/Health_Information/Health_Topics/Documents/Using_Your_Energy_Wisely.pdf	<ul style="list-style-type: none"> - This very brief resource contains 4 strategies to help use your energy wisely - Strategies such as pacing yourself, planning activities, setting priorities and ways to make life easier are discussed - The resource also includes free space for you to brainstorm ways to use these ideas in your own home
Concussion Recovery Tips: Conserving Energy After a Concussion (2019)	Sunnybrook Health Sciences Centre	~3 pages	https://sunnybrook.ca/content/?page=bsp-concussion-conserving-energy	<ul style="list-style-type: none"> - This resource talks about fatigue or tiredness after concussion - The resource discusses the “Four P’s” principle for saving your energy (Prioritize, Plan, Pace & Position) as well as some additional strategies

Feeling Irritable, depressed, restless or anxious

Why you may be experiencing this symptom

- Some people who have had a mild brain injury find that they get annoyed easily by things that usually would not upset them. This does not last very long, but it can be difficult for you and for your family. It happens because the brain controls your emotional system as well as the rest of your body.

What you can do about it

- **Recognize these emotions can be common:** Feeling anxious, worried, frightened, angry and low in mood are common emotions after sustaining a mild brain injury. These feelings often pass in the weeks following the injury, as a person gradually resumes their usual activities. Recognise that emotional upset and worry is a typical part of recovery, even though you may have suffered an injury in the past and not felt like this before. Explain any difficulties that you are experiencing to your family and friends, so that they can understand the effect the injury has had on you and support you in managing your difficulties. Recognise if your worry about symptoms intensifies and a vicious circle develops. If that happens, remind yourself of the point above. If symptoms nevertheless do not improve, or if you have suffered from anxiety or depression before the injury and the brain injury has intensified those feelings, visit your doctor.
- **Irritability:** After a mild brain injury your emotions may not be as well controlled as they usually are. There are several ways to deal with this. Some people find that going out of a room, or away from a situation as soon as it begins to get annoying is enough. Others use relaxation techniques (controlled breathing, progressive muscle relaxation) to help them get back on an even keel. You may find that you can stop the irritability from developing by doing an activity that uses up some physical energy like riding an exercise bicycle, if tiredness permits. Irritability will be worse when you are tired, so rest will also help.
- **Take a break:** If you feel restless and/or that your mind is racing, try the following activities for a change of pace.
 - Meditate
 - Practice guided imagery
 - Progressive muscle relaxation – Search for this on your web browser and you can find online videos to guide you through it
 - Go for a walk
 - Take slow, deep breaths

Additional Resources

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Caring for Yourself After a Concussion: Emotional Changes (2020)	Jill Robinson, Social Worker (Parkwood Institute)	16:12	https://www.youtube.com/watch?v=la9KdzztVDY&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This resource talks about common emotional changes experienced after concussion and various self-management tools to help with these changes - This video offers guidance and strategies from a social worker as well as patients discussing their experience with emotional change - Lastly, the video includes an explanation of a mindfulness practice known as grounding and shows an example in a group of patients with head injuries
ABI 101: Steps to Success Series- Week 4 Coping, Anger & Mood Changes (2015)	Bob Lomax MSW, RSW, Social Worker (Parkwood Institute)	32:58	https://www.youtube.com/watch?v=czwsiocTLWo&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video is a recording of a presentation from a social worker talking about emotional changes that people often experience after a concussion - Topics like frustration, anger, irritability, depression and anxiety are covered - The presentation also discusses the effects of alcohol/drugs on these symptoms as well as strategies to help your recovery
CCC Webinar Series Week 11 – Anxiety/PTSD and Depression in Concussion (2021)	Dr. Abe Snaiderman, MD, FRCPC, Neuropsychiatrist (CCC)	1:01:21	https://www.youtube.com/watch?v=hkdrHeP77ms&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - Discusses current research in the areas of depression and anxiety after head injury - Topics covered include what depression and anxiety look like after concussion and the different ways they can be treated
CCC Webinar Series Week 14 – Strategies for Improving Mental Health (2021)	Dr. Lesley Ruttan, PhD, CPsych, Neuropsychologist (CCC)	50:41	https://www.youtube.com/watch?v=G2gO5EPj6_I&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - The webinar provides a background into mental health changes in concussion and talks about why mental health is important - Some strategies for managing mental health such as self-care, cognitive behavioral therapy (CBT) and mindfulness meditation are also discussed

Written Resources

Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Regional Acquired Brain injury Outpatient Program, Mental Health	St. Joseph's Health Care London (Parkwood Institute)	~5 pages	https://www.sjhc.london.on.ca/regional-acquired-brain-injury-outpatient-program/patients/mental-health	<ul style="list-style-type: none"> - This webpage generally talks about emotional changes that may be experienced after a concussion - Discusses changes you may notice in your personality or behavior such as emotional difficulties, social difficulties or lower self-esteem - A large portion of the webpage is about taking care of your mental health and specifically how to use mindfulness meditation - Within the webpage is also a list of added videos and cell phone apps that can be helpful for learning and practicing mindfulness techniques
Relaxation Techniques to Relieve Stress (2008)	Stephanie Phan (Hull-Ellis)	9 pages	https://www.uhn.ca/PatientsFamilies/Health_Information/Health_Topics/Documents/Relaxation_Techniques_to_Relieve_Stress.pdf	<ul style="list-style-type: none"> - This resource talks about how relaxation can be very helpful and provides 4 different techniques for relaxing - Deep breathing, relaxing your muscles, repeating words that make you feel relaxed and imagining relaxing images are discussed in detail - Each section contains helpful tips for practice and at the end are some added community resources
Concussion Recovery Tips: Mood Changes After Concussion (2019)	Sunnybrook Health Sciences Centre	~4 pages	https://sunnybrook.ca/content/?page=bsp-concussion-mood-changes	<ul style="list-style-type: none"> - This resource talks about the ways concussion can change your mood and how this can affect other symptoms - The resource discusses things you can do to manage stress and also discusses when and how to get help if needed
BounceBack Ontario	Canadian Mental Health Association (The Ottawa Hospital Rehabilitation Centre)	---	https://bouncebackontario.ca/	<ul style="list-style-type: none"> - This resource includes a skill building program based on cognitive behavioral therapy to help manage worry, anxiety, unhelpful thinking and become more active and assertive - Delivered over the phone with a coach and via online videos and written resources - Available in multiple languages - Requires you to fill out an online referral form or have a primary care provider do this for you
AbilitiCBT	Morneau Shappell (The Ottawa Hospital Rehabilitation Centre)	---	https://myicbt.com/home	<ul style="list-style-type: none"> - This resource is an internet based cognitive behavioral therapy program which includes activities, videos and assignments - Topics include general anxiety, depression, pain management, insomnia and anxiety related to the pandemic - Free for residents of Ontario - Helps to connect you to a therapist to help you through the program
Kelty's Key	Vancouver Coastal Health (The Ottawa Hospital Rehabilitation Centre)	Varies	https://www.keltyskey.com/self-help/	<ul style="list-style-type: none"> - This resource provides self-help courses in various mental health categories including anxiety, depression, chronic pain, insomnia, panic, grief, substance use and family support - Each course contains written material as well as useful tools and worksheets for you to download
Positive Coping with Health Conditions: A self-care workbook	Dr. Dan Bilsker, Dr. Joti Samra, Dr. Elliot Goldner (The Ottawa Hospital Rehabilitation Centre)	110 pages	http://www.sfu.ca/carmha/publications/positive-coping-with-health-conditions.html	<ul style="list-style-type: none"> - This resource includes a free online workbook, available for download as a PDF - The workbook is an evidence based self-care resource which teaches positive coping skills and how to apply them

Written Resources

Online Chronic Disease Self-Management Program	Ontario Self-Management (The Ottawa Hospital Rehabilitation Centre)	--	https://www.selfmanagementontario.ca/	<ul style="list-style-type: none"> - This resource is free for individuals across Ontario - The resource provides chronic disease self-management coaching - Online group-based workshops, one on one coaching sessions and pre-recorded webinar videos are available
Managing anger after brain injury	Helen O'Neill and Tamsin Keyes, Headway – the brain injury association (The Ottawa Hospital Rehabilitation Centre)	22 pages	https://www.headway.org.uk/media/3994/managing-anger-e-booklet.pdf	<ul style="list-style-type: none"> - This resource includes an online booklet intended for patients having trouble managing their anger - Topics discussed include; anger after brain injury in early and late stages, causes and triggers, changing your approach towards anger and what to do during an anger episode
How to do Progressive Muscle Relaxation	Anxiety Canada (The Ottawa Hospital Rehabilitation Centre)	~6 pages	https://www.anxietycanada.com/articles/how-to-do-progressive-muscle-relaxation/	<ul style="list-style-type: none"> - This resource teaches Progressive Muscle Relaxation – which is a strategy that can be helpful for reducing anxiety - The resource discusses different techniques for muscle relaxation and provides some helpful hints to help you get started
Anxiety Canada Educational Website	Anxiety Canada (The Ottawa Hospital Rehabilitation Centre)	---	https://www.anxietycanada.com	<ul style="list-style-type: none"> - This resource provides information to help understand anxiety and tools to help you manage it - Includes “My Anxiety Plan” (a free 10 hour course) and MindShift (a free app to help manage anxiety)
Depressionhurts.ca	Mood Disorders Society of Canada (The Ottawa Hospital Rehabilitation Centre)	---	http://depressionhurts.ca/en/default.aspx	<ul style="list-style-type: none"> - This resource provides information about depression, what it looks like and how to manage it - Topics include causes and symptoms of depression, accepting help, leading a healthy lifestyle, maintaining your social life, developing a management plan, identifying barriers to recovery and talking to your doctor/specialist
Anchor Your Day	Counselwise (The Ottawa Hospital Rehabilitation Centre)	~15 pages	https://counselwise.ca/blog/	<ul style="list-style-type: none"> - This resource contains a daily blog for you to browse - The blog includes short discussions on various mental health topics - If you would like, by adding your email, you can receive daily blog posts in your inbox
Crisis Line (Only available for residents of Ottawa & surrounding area)	The Ottawa Hospital Rehabilitation Centre	---	http://www.crisisline.ca/	<ul style="list-style-type: none"> - 24/7 mental health crisis hotline - Only available to people living in the City of Ottawa, Renfrew County, the United Counties of Prescott & Russell, the United Counties of Stormont, Dundas and Glengarry, and Akwesasne
Distress Centre of Ottawa and Region (Only available for residents of Ottawa & surrounding area)	The Ottawa Hospital Rehabilitation Centre	---	https://www.dcottawa.on.ca/	<ul style="list-style-type: none"> - 24/7 mental health crisis hotline - Only available for residents of Ottawa and the surrounding area
AccessMHA (Only available for residents of Ottawa & surrounding area)	Regional Coordinated Access (The Ottawa Hospital Rehabilitation Centre)	---	https://www.accessmha.ca/	<ul style="list-style-type: none"> - This resource provides evidence-based cognitive behavioural therapy to help manage depression, anxiety and anxiety-related conditions - Sign up for appointment and get connected with the recommended services - The services is only available to residents of Ottawa and the surrounding area

Feeling frustrated or impatient

Why you may be experiencing this symptom

- Frustration is a common symptom experienced after a brain injury; up to one third of patients experience symptoms ranging from irritability to anger outbursts.
- Mental health problems like frustration, impatience and mood swings occurring after concussion can be related to the injury itself or to some of the issues and negative outcomes caused by the injury.
- Irritability and mood changes may occur in response to problems arising due to other symptoms and outcomes of concussion such as poor sleep quality, lasting headaches, chronic pain or medications.

What you can do about it

- Try to set up a daily routine that you can follow, using a to-do list can help with this. Don't try to do too much at once, being overworked and tired can lead to irritability or frustration.
- Try to do at least one thing that you enjoy or that makes you feel happy each day
- Think about what causes you stress and try to see if there is a different way of doing things. An example of this would be planning a different route if you find rush hour traffic too stressful
- If possible, break down larger tasks into multiple pieces to help avoid becoming upset or overwhelmed
- Trying mindfulness meditation practices can help you to relax, deal with stressful thoughts and sleep better. Resources about mindfulness can be found in this booklet under "Other Supportive Strategies for Symptoms"

Additional Resources

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Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
ABI 101: Steps to Success Series- Week 4 Coping, Anger & Mood Changes (2015)	Bob Lomax MSW, RSW, Social Worker (Parkwood Institute)	32:58	https://www.youtube.com/watch?v=czwsiocTLWo&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video is a recording of a presentation from a social worker talking about emotional changes that people often experience after a concussion - Topics like frustration, anger, irritability, depression and anxiety are covered - Lastly, the presentation also discusses the effects of alcohol/drugs on these symptoms as well as strategies to help your recovery

Written Resources				
Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Caring for your brain – Anger (Patient handout)	St. Joseph’s Health Care London (Parkwood Institute)	1 Page	https://www.sjhc.london.on.ca/media/8491/download	<ul style="list-style-type: none"> - This handout can be used to assist with recognizing and managing anger after a concussion - The handout includes a tool for you to use known as the “anger ruler”, which can be helpful for recognizing different levels of anger - Recognizing what your increasing levels of anger look like can make it easier to realize what level you’re at and help you to be aware of what is happening. - The handout is in the form of a PDF and has a blank template for you to create your own anger ruler
Concussion Recovery Tips: Mood Changes After Concussion (2019)	Sunnybrook Health Sciences Centre	~4 pages	https://sunnybrook.ca/content/?page=bsp-concussion-mood-changes	<ul style="list-style-type: none"> - This resource talks about the ways concussion can change your mood and how this can affect other symptoms - The resource discusses things you can do to manage stress and also discusses when and how to get help if needed

Forgetfulness/Poor memory

Why you may be experiencing this symptom

- The injury itself might affect your memory, especially early in recovery.
- Pain (e.g. headaches, back or neck pain) can negatively impact memory abilities.
- Forgetfulness can be exacerbated by anxiety or depression (pre-existing or since your injury).
- You might be more likely to forget to do something (e.g. fill a prescription, pass on a phone message). This is called *prospective memory* – remembering to do something in the future.
- It may be harder to learn and remember new information (e.g. material from a lecture, the characters from a novel, information from a doctor’s appointment).
- After a concussion you may worry that every memory error is injury-related, but forgetfulness is common (between 15 and 50% of people consider themselves forgetful!). Try not to worry too much about whether your concussion caused a particular error.
- You may be tempted to “test” your memory (e.g. go to the grocery store without a list). However, using compensatory strategies isn’t cheating and it won’t interfere with recovery. Knowing you have back-up in place decreases your stress level and actually increase the likelihood that you have the mental energy to remember or learn something.

What you can do about it

- **Review the strategies for attention:** To remember something, you first need focus on it.
- **Have a back-up:** If you find yourself saying “I must remember to...”, put back-up strategies in place to prevent prospective memory problems.
- **Useful cellphone apps:** If you have a smartphone, laptop or tablet take advantage of apps that help with prospective memory: timers, calendars, alerts, task managers, grocery- and to-do lists, notes, voice recorder.
- **Use more than one strategy for important tasks or events:** Ask for a reminder call, put a neon post-it note on the door, write a word on your hand or send yourself an email.
- **Give yourself reminders:** If you need to pause during a task write a “stop note” to yourself with a reminder of what you have finished and what to do next or put something out of

place in your environment as reminder that you were in the middle of a task e.g. mug upside down, chair backwards, your pen on the keyboard.

- **Whatever strategy you use, make it a habit:** Habits reduce how much we have to pay attention to and remember.
- **If you need to learn and remember new information, try to process it more than one way:** Listen, read, repeat, summarize, write it down, draw a picture, make a graph or map or chart.
- **When learning large amounts of information (e.g. new policies at work; a textbook chapter):** Try using a study strategy like SQ3R or PQRSST to make sure you are reading with intent and attention.
 - SQ3R: <https://www.utoronto.ca/aacc/reading>
 - PQRSST: https://www.concordia.ca/content/dam/concordia/offices/cdev/docs/reading/PQRSST_reading%20_strategy.pdf

Additional Resources

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Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Caring for Yourself After a Concussion: Attention and Memory (2020)	Penny Welch-West, Speech-Language Pathologist (Parkwood Institute)	15:04	https://www.youtube.com/watch?v=wj0lqgoaCmw&list=PLvD7HhN5mi-ML63F7N0F6oj1yilrUJmw&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video discusses strategies to manage attention and memory problems following a concussion - The video follows a speech language pathologist who is discussing attention and memory problems and the use of helpful coping strategies with a former head injury patient - The patient also discusses their experience with recovering from a concussion and the strategies that helped them overcome attention and memory issues

Video Resources

<p>ABI 101: Steps to Success Series – Week 3 Attention/Memory and Word Finding (2015)</p>	<p>Julie Hughes, Speech Language Pathologist (Parkwood Institute)</p> <p>Penny Welch-West, Speech Language Pathologist (Parkwood Institute)</p>	<p>50:05</p>	<p>https://www.youtube.com/watch?v=19xvJ4gk2h4</p>	<ul style="list-style-type: none"> - This video is a recording of a presentation from a speech language pathologist and talks about common memory and attention problems after a concussion - The presentation discusses the different types of memory/attention and also includes some strategies and suggestions for improving in these area - The video also uses examples that are worked through together as a group
<p>CCC Webinar Series Week 10 – Persisting Problems with Attention, Speed of Processing, Memory and Executive Functions (2021)</p>	<p>Dr. Robin Green, PhD, CPsych, Neuropsychologist (CCC)</p>	<p>59:00</p>	<p>https://www.youtube.com/watch?v=2uzyUW2ADP0&ab_channel=C.E.T.SConferences</p>	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - The video discusses attention, memory and speed of processing - Some of the topics discussed include what causes these issues, what do they look like in everyday life, how they are affected by sleep or anxiety and ways to manage them

Written Resources

Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
<p>Regional Acquired Brain Injury Outpatient program, Memory and Attention</p>	<p>St. Joseph's Health Care London (Parkwood Institute)</p>	<p>~4 pages</p>	<p>https://www.sjhc.london.on.ca/regional-acquired-brain-injury-outpatient-program/patients/memory-and-attention</p>	<ul style="list-style-type: none"> - This webpage talks about memory and attention issues that may be experienced after a concussion - The resource includes ways you can aid your memory after a concussion and how you can organize your life to help improve your memory - Also included are memory tips for specific cases such as remembering items, remembering events, using the telephone, remembering directions, remembering conversations and remembering what you have read - The resource also provides instructions for an activity called Remembering 20 objects, which can be used to help improve your memory
<p>Concussion Recovery Tips: Changes in Thinking, Memory and Concentration Following Concussion (2019)</p>	<p>Sunnybrook Health Sciences Centre</p>	<p>~3 pages</p>	<p>https://sunnybrook.ca/content/?page=bsp-concussion-memory</p>	<ul style="list-style-type: none"> - This resource talks about common thinking problems after concussion and what could be causing them - The resource also gives some suggestions for dealing with memory and attention difficulties
<p>CogSmart</p>	<p>Elizabeth W. Twamley, Ph.D. (The Ottawa Hospital Rehabilitation Centre)</p>	<p>12x 1 hour sessions</p>	<p>http://www.cogsmart.com/</p>	<ul style="list-style-type: none"> - This resource includes a web-based app - The resource provides cognitive training to help improve prospective memory (remembering to do something), attention, learning/memory and executive functioning (planning, organizing and problem-solving) - The app teaches strategies and also has you practice these strategies in the real world

Attention Problems/Poor concentration

Why you may be experiencing this symptom

- Attention is a limited resource with many competing demands even without a concussion.
- After a concussion you may find that your capacity to pay attention is reduced, affecting everything from reading to task completion.
- The injury itself may affect capacity, slowing the speed of information processing for a time.
- Fatigue tends to reduce attentional resources.
- Internal distractors (worry, pain) can compete for attention.
- External factors (noise, chaos, lighting, interruptions) take up “mental energy” or attention that could otherwise be used to focus on a task.

What you can do about it

- **Do what you can to maximize your “mental energy” by addressing internal factors:**
 - Work with your health practitioners to manage pain, mental health, sleep.
 - Treat your brain well – healthy food, water, exercise as recommended by your doctor.
 - Follow a routine for your day and for specific tasks to reduce the need to plan and think.
 - Find strategies to help manage worries or distracting thoughts (meditation, self-talk).
 - Take frequent breaks to rest your eyes and brain. Set a timer for breaks if necessary.
 - Try self-talk (“Back to work” “Focus”); take a break or change tasks.
- **Eliminate or modify external distractions:**
 - Work, read, listen or talk in a quiet place with comfortable lighting that is free of clutter.
 - Choose silence or familiar music rather than talk radio or an audiobook when driving.

- Put distracting objects out of sight (phone in a drawer; social media apps off home page).
- Change display settings on laptop, phone (e.g. blue light filter, large font, dark mode).
- **Manage tasks and schedules:**
 - Schedule difficult or consequential tasks for when you are at your best (e.g. morning).
 - Work for short periods of time at first. Allow more time than you would usually need.
 - Set an alarm for the next activity or deadline so you don't worry about missing it.
 - Prevent interruptions e.g. Set aside time to deal with emails or texts rather than responding to each alert while cooking, paying bills, helping with homework.
 - Distinguish between tasks that are high importance, high consequence and have to be done by you, and those that can be delegated, delayed, or eliminated.
 - Break complex tasks into steps and complete one step at a time.
- **Use strategies to compensate:**
 - Encourage others to slow down by asking questions and having them repeat what they have said.
 - Allow yourself extra time to complete tasks and avoid situations where you are under pressure to do things quickly.
 - Ask for modifications to your workspace if needed e.g. Request access to a separate room; ask to have a harsh light fixture turned off above your desk.
 - The Head Injury Clinic may be able to help you connect with your school to request academic accommodations like help with note-taking or more time for exams.
- **Do what you can:** No one can concentrate well when they are tired, so it is not surprising that many people have trouble concentrating for a while after they have had a mild brain injury. Maybe you cannot even concentrate well enough to read the newspaper. If you really need to, just read for a short time, and then come back to it when you have had a break. The same thing applies to other areas where concentration is needed. Leave things that need your complete

concentration until you are feeling better. If you need to concentrate on something important, do it when you are feeling fresh.

Additional Resources

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Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Caring for Yourself After a Concussion: Attention and Memory (2020)	Penny Welch-West, Speech-Language Pathologist (Parkwood Institute)	15:04	https://www.youtube.com/watch?v=wj0lqgoaCmw&list=PLvD7HhN5mi-ML63F7N0F6oj1yilirUjmw&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video discusses strategies to manage attention and memory problems following a concussion - The video follows a speech language pathologist who is discussing the use of helpful coping strategies with a former head injury patient - The patient discusses their experience with recovering from a concussion and the strategies that helped them overcome attention and memory issues - Also covered is an example of a useful feature on electronic devices to assist with attention while browsing the web
ABI 101: Steps to Success Series – Week 3 Attention/Memory and Word Finding (2015)	Julie Hughes, Speech Language Pathologist (Parkwood Institute) Penny Welch-West, Speech Language Pathologist (Parkwood Institute)	50:05	https://www.youtube.com/watch?v=19xvJ4gk2h4	<ul style="list-style-type: none"> - This video is a recording of a presentation from a speech language pathologist and talks about common memory and attention problems after a concussion - The presentation discusses the different types of memory/attention and also includes some strategies and suggestions for improving in these areas - The video also uses examples that are worked through together as a group
CCC Webinar Series Week 10 – Persisting Problems with Attention, Speed of Processing, Memory and Executive Functions (2021)	Dr. Robin Green, PhD, CPsych, Neuropsychologist (CCC)	59:00	https://www.youtube.com/watch?v=2uzyUW2ADP0&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - The video discusses attention, memory and speed of processing - Some of the topics discussed include what causes these issues, what do they look like in everyday life, how they are affected by sleep or anxiety and ways to manage them

Written Resources

Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Regional Acquired Brain Injury Outpatient program, Memory and Attention	St. Joseph's Health Care London (Parkwood Institute)	~2 pages	https://www.sihc.london.on.ca/regional-acquired-brain-injury-outpatient-program/patients/memory-and-attention	<ul style="list-style-type: none"> - This webpage from St. Joseph's Health Care London generally addresses memory and attention issues that may be experienced after a concussion. - This resource provides a quick explanation of the different forms of attention - It also includes a list of strategies to help you improve your ability to pay attention and provides a couple links (Cambridgebrainsciences.com & happy-neuron.com) to activities which can be used on a computer to help train your attention
Concussion Recovery Tips: Changes in Thinking, Memory and Concentration Following Concussion (2019)	Sunnybrook Health Sciences Centre	~3 pages	https://sunnybrook.ca/content/?page=bsp-concussion-memory	<ul style="list-style-type: none"> - This resource talks about common thinking problems after concussion and what could be causing them - The resource also gives some suggestions for dealing with memory and attention difficulties

Taking longer to think

Why you may be experiencing this symptom

- As with other cognitive and communication symptoms, thinking more slowly is common, especially in the early stages of recovery.
- Fatigue, pain and emotional symptoms are often key factors.
- You may find it takes you longer to go through the steps of making decisions, both large and small (What school should I go to? Which cereal is a better deal?).
- It can be harder to think of multiple possible solutions (brainstorm).
- People often notice that they put off tasks, even if they aren't usually a procrastinator.
- A small crisis, barrier or "bump in the road" might seem insurmountable and overwhelming.

What you can do about it

- **Plan for later:** Save big problems and decisions for when you feel your best.
- **Find a quiet area:** Work in a quiet environment if you can.
- **Break up tasks:** Break tasks and problems into steps that you move through one at a time.
- **Tackle problems methodically:** Make a chart of pros and cons, write out the steps that need to be completed.
- **Use previous methods:** Return to routines or processes that you used when you first started your career or school program and needed more structure e.g. for getting ready for to travel, for preparing a presentation, for writing an essay.
- **Take frequent breaks:** Allow time to return to the work later to see if you missed anything.
- **Ask for help:** Ask a trusted friend, family member or colleague for input.
- **Don't allow others to rush you:** Let people know that you need time to think.

- **Try other strategies:** Instead of starting from scratch you may be able to find a planner or problem-solving strategy online e.g. for choosing an overnight camp, comparing products, financial planning, organizing a trip, choosing paint colours.

Additional Resources

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Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
CCC Webinar Series Week 10 – Persisting Problems with Attention, Speed of Processing, Memory and Executive Functions (2021)	Dr. Robin Green, PhD, CPsych, Neuropsychologist (CCC)	59:00	https://www.youtube.com/watch?v=2uzyUW2ADP0 &ab_channel=C.E.T.SConferences	- This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - The video discusses attention, memory and speed of processing - Some of the topics discussed include what causes these issues, what do they look like in everyday life, how they are affected by sleep or anxiety and ways to manage them

Blurred/Double vision

Why you may be experiencing this symptom

- These symptoms are very common after a concussion, as it can affect the area in your brain responsible for vision.
- It is common for vision problems to heal naturally with time (usually a period of weeks), but there are ways you can help this symptom if it lasts longer.
- Ocular dysfunction (vision problems) are found in up to 69% of patients with concussion.

What you can do about it

- **Seeing a specialist:** If you continue having vision problems, you may be referred to a vision specialist (ophthalmologist or optometrist) with specialized rehabilitation training, who will help you use special strategies and instruments to improve your symptoms. You may be prescribed special reading glasses, prism glasses (this may help with double vision), tinted glasses (this may help with light sensitivity), and/or glasses with a blue light filter (also known as Computer Gaming Glasses - these may help with screen sensitivity).
- **Switching screens may help:** Studies show that replacing LCD (Liquid Crystal Display) screens with non-LCD screens may reduce screen sensitivity and allow you to look at screens for longer (non-LCD screens refresh much slower, and may strain the eyes less).
- **Vision problems are common after a concussion, and can severely affect your day-to-day activities:** Remember to take your time, and to take breaks doing activities such as reading and spending time in front of a screen. Although it can be frustrating, remember that this is a common symptom and it can get better with time.

Additional Resources

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Dealing with vision changes: Bi-Nasal Occlusion (2015)	Shannon McGuire, Physiotherapist (Parkwood Institute)	3:05	https://www.youtube.com/watch?v=JSFikCWCwMc	<ul style="list-style-type: none">- This video talks about Bi-Nasal Occlusion which is a strategy that involves the taping of glasses to partially block your vision- This method can be helpful for reducing symptoms during reading, watching TV or using the computer- The video discusses how to set up this activity, when to use it and how to determine if it is right for you

Video Resources

Strategies for Reading: Blinder (2015)	Penny Welch-West, Speech Language Pathologist (Parkwood Institute)	1:20	https://www.youtube.com/watch?v=kx4Mz87P_io&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This short video talks about using a blinder, which is a strategy that can be helpful when reading - The resource discusses the purpose of using a blinder and provides a demonstration of how to use one
Strategies for Reading: Color Overlays (2015)	Penny Welch-West, Speech Language Pathologist (Parkwood Institute)	2:05	https://www.youtube.com/watch?v=4B-Vbqlxoeo&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This short talks about using color overlays, which are tools that can be useful when reading - The video discusses the purpose of using a color overlay, where to get them and how they can be a helpful tool for you
ABI 101: Steps to Success Series – Week 5 Return to exercise, balance, vision changes (2015)	Laura J Graham, PT PhD Physiotherapist (Parkwood Institute)	27:57	https://www.youtube.com/watch?v=IZXl7OpUJok&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video is a recording of a presentation from a physiotherapist and talks about exercise, balance training and vision changes - At around 19:30 the video begins to discuss vision changes after concussion and provides some eye exercises to help retrain your vision
CCC Webinar Series Week 12 – Visual Symptoms Treatment (2021)	Dr. Paul Ranalli, MD, FRCPC (CCC)	1:00:51	https://www.youtube.com/watch?v=WlJkVup3eFM&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - The video talks about topics such as common visual symptoms after concussion, how to manage visual issues and treatments that are currently used by vision specialists

Written Resources

Name	Author/CONNECT Clinic	Length	Resource Link	About This Resource
Regional Acquired Brain Injury Outpatient Program, Vision	St. Joseph's Health Care London (Parkwood Institute)	~6 pages	https://www.sjhc.london.on.ca/regional-acquired-brain-injury-outpatient-program/patients/vision	<ul style="list-style-type: none"> - This webpage generally discusses vision issues you may experience after a concussion - The resource includes many different exercises to train your eyes and strategies to help with visual symptoms - For each of the exercises listed, the webpage includes detailed instructions as well as the purpose, materials needed, set up and ways to make the exercise more difficult. - The resource also includes some strategies to help with reading difficulty after a head injury including colored overlays and blinders
Sport Concussion: Binasal Occlusion (2015)	Fowler-Kennedy Sport Concussion	1 page	http://fowlerkennedy.com/wp-content/uploads/2015/11/SPORT-CONCUSSION-Binasal-Occlusion-November-2015.pdf	<ul style="list-style-type: none"> - This resource discusses a strategy known as Binasal Occlusion aka glasses taping - This material talks about the purpose of glasses taping, what it can help with, the materials needed and how it is done
Concussion Recovery Tips: Vision Problems After Concussion (2019)	Sunnybrook Health Sciences Centre	~2 pages	https://sunnybrook.ca/content/?page=bsp-concussion-vision	<ul style="list-style-type: none"> - This resource talks about common vision problems after a concussion and provides a few simple suggestions for dealing with these problems

Light sensitivity

Why you may be experiencing this symptom

- Light sensitivity (also known as “Photophobia”) is the second most common symptom experienced after a concussion (next to headache)
- After a head injury, inflammation causes pain-signaling molecules to trigger the trigeminal nerve system (the trigeminal nerve is one of 12 pairs of nerves attached to your brain).
- The trigeminal nerve has three branches that are responsible for different parts of your face and head:
 - Ophthalmic branch: This includes the top portion of your head including the forehead
 - Maxillary branch: This includes the middle portion of your head including your cheeks and nostrils.
 - Mandibular branch: This includes the lower portion of your head including your lower lip and jaw.
- It is thought that inflammation to the Ophthalmic branch of the Trigeminal nerve could be a cause of the photosensitivity.
- People are often sensitive to artificial lights (indoor light fixtures), monitors/screens and glare. Computer screens and cellphones have a high refresh rate (the number of times per second that a screen can display a new image) which may contribute to why people are often very sensitive to them.

What you can do about it

- **Reduce light:** Try wearing a hat, using anti-glare screens for your electronic devices, or using light bulbs with warmer wavelengths of light in your home. However, please avoid wearing sunglasses indoors. Instead, please use tinted glasses indoors.

Additional Resources

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Caring for Yourself After a Concussion: Noise and Light Sensitivity (2020)	Shannon McGuire, Physiotherapist (Parkwood Institute)	17:34	https://www.youtube.com/watch?v=HYUxm8CL2PQ&list=PLvD7HhN5mi-ML63F7N0F6oj1yilrUJmw&index=3&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video deals with the topic of Noise and Light sensitivity following concussion and includes strategies on how to reduce and manage these symptoms - The video is split into two sections; the first 6 minutes talks about noise sensitivity management strategies and the rest of the video is about light sensitivity management

Written Resources				
Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Caring for your brain – Light sensitivity (Patient Handout)	St. Joseph's Health Care London (Parkwood Institute)	2 pages	https://www.sjhc.london.on.ca/media/8492/download	<ul style="list-style-type: none"> - This handout can be used to assist with light sensitivity after a concussion - Included in this handout is a description of light and visual motion sensitivity, strategies to reduce it and strategies to improve your ability to tolerate light and visual motion
Regional Acquired Brain Injury Outpatient Program, Vision	St. Joseph's Health Care London (Parkwood Institute)	~6 pages	https://www.sjhc.london.on.ca/regional-acquired-brain-injury-outpatient-program/patients/vision	<ul style="list-style-type: none"> - This webpage generally discusses vision issues you may experience after a concussion - The resource includes many different exercises to train your eyes and strategies to help with visual symptoms - For each of the exercises listed, the webpage includes detailed instructions as well as the purpose, materials needed, set up and ways to make the exercise more difficult - The resource also includes some strategies to help with reading difficulty after a head injury including colored overlays and blinders
Concussion Recovery Tips: Vision Problems After Concussion (2019)	Sunnybrook Health Sciences Centre	~2 pages	https://sunnybrook.ca/content/?page=bsp-concussion-vision	<ul style="list-style-type: none"> - This resource talks about common vision problems after a concussion and provides a few simple suggestions for dealing with these problems

Problems with word-finding and speaking

Why you may be experiencing this symptom

- Concussion can reduce the “mental energy” you have for communicating clearly and efficiently:
 - It might be harder to think of the exact word you want to use
 - It may take more effort to come up with things to say to keep a conversation going
 - You might find that you repeat yourself, or get off topic, or say too much or too little
- This is more likely to happen when you are dealing with the physical symptoms of concussion like headaches or fatigue.
- Other cognitive symptoms ([distractibility](#), [memory problems](#)) can also have an impact.
- Some people have more difficulty communicating when dealing with anxiety or depression.

What you can do about it

- **Schedule tasks and events:** Try to schedule high-demand communication tasks and events for when you are at your best; buffer these events with lots of down time.
- **When you're tired:** Let friends and family know when you are too tired or overwhelmed to have a conversation.
- **Quiet environment:** Communicate in a quiet environment, free of interruptions and distractions.
- **Give yourself time to think:** Slow down your speech rate, use an occasional thoughtful pause.
- **Try to keep talking:** If you can't think of a particular word it's usually better to just keep communication going than to have the listener wait for you to remember. Things you can try:
 - Use a synonym (clerk/cashier).
 - Talk “around” the word by describing, defining, giving an opposite or related word so your listener understands or supplies the word for you and you can move on.

- E.g. “We walked by – not U of T, the other downtown university” (Ryerson).
 - E.g. “I had to have a – oh what’s it called – like an x-ray but they run you through the big tube and you can’t have any metal on you” (MRI).
- **Repeat difficult words:** When there is a word you often forget, or you’re learning a new one, spend a little time with the word (repeat it aloud, write it down, think about the meaning). Come up with an association to act as a memory cue (e.g. Chaplin Ave – Charlie Chaplin; geranium – titanium).
 - **Everyone makes mistakes:** Recognize that not every “blip” is because of the concussion. We are all imperfect communicators at the best of times – we trip on words, forget what we were saying, go on tangents – and we forgive each other, it’s part of the deal! Try not to stress about every mistake.
 - **Other strategies:** More strategies aimed at common word-finding problems <https://wordfinding.ca/strategies>.

Additional Resources

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
ABI 101: Steps to Success Series – Week 3 Attention/Memory and Word Finding (2015)	Julie Hughes, Speech Language Pathologist (Parkwood Institute) Penny Welch- West, Speech Language Pathologist (Parkwood Institute)	50:05	https://www.youtube.com/watch?v=19xvJ4gk2h4&ab_channel=St.Joseph%27sHealthCareLondon	- This video is a recording of a presentation from a speech language pathologist and talks about memory, attention and word finding problems after concussion - At around 40 minutes in, the video begins to specifically talk about word finding - The presentation reviews different types of word finding issues, what you can do about them and recommends some online activities/games that you may find helpful

Written Resources

Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Communication after a brain injury (2007)	Hamilton Health Sciences	4 pages	https://www.hamiltonhealthsciences.ca/wp-content/uploads/2019/08/BrainInjuryCommunication-trh.pdf	<ul style="list-style-type: none"> - This resource discusses communication difficulties that you may notice in a loved one with a head injury - The resource talks about the reasons why they may be having trouble communicating and provides some tips on what you can do to help

Problems with listening and understanding

Why you may be experiencing this symptom

- As with other cognitive and communication problems, difficulty with information processing after a concussion is linked to having less “mental energy” and tends to be worse when you are tired, in pain, or dealing with anxiety, stress, or depression.
- You may notice that it is harder to follow a conversation, to understand information in a doctor’s appointment, meeting or lecture.
- A noisy environment or a group conversation might be particularly difficult.

What you can do about it

- **Manage your environment (if possible):** Get close to the speaker, take the conversation to a quiet room, turn off the TV, plan for coffee at home rather than dinner out or choose a quiet restaurant.
- **Suggest rules:** Advocate for communication-friendly rules in meetings – no cross-talk, keep to the agenda.
- **Meeting minutes/notes:** If possible, ask someone else to take minutes so you can give all your attention to listening.
- **Ask family or friends:** Bring a family member or friend to appointments to take notes.
- **Ask for clarification:** Ask for repetition or clarification sooner rather than later (instead of waiting and hoping you’ll understand if you listen a little longer).
- **Ask for a summary:** Request a written summary of important information from appointments or meetings (e.g. with a lawyer, physiotherapist or school administrator).
- **Recording conversations (with permission):** If no one is available to take notes ask permission to record – again, this will allow you to fully engage, knowing that you can listen again later. Recorded audio and digital media allow you to pause and rewind, or listen on half speed.

Other Supportive Strategies for Symptoms

Mindfulness

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Caring for Yourself After a Concussion: Mindfulness (2020)	Jill Robinson, Social Worker (Parkwood Institute)	10:38	https://www.youtube.com/watch?v=qnGDM2CE8Co&list=PLvD7HhN5mi-ML63F7N0F6oj1yilrUjmw	<ul style="list-style-type: none"> - This short video includes tips on how to include mindfulness in your recovery - The video will talk about what mindfulness is, how it can be a tool in recovery, what mindfulness exercise looks like and how it can be used in your daily activities - You will also hear other patients with concussion talk about their experience with mindfulness and watch a social worker guide a group through a common mindfulness exercise (4-7-8 Breath)
Mindfulness Exercises Podcast Series (2021)	St. Joseph's Health Care London (Parkwood Institute)	8 Episodes, 1-4 min	<p>Apple https://podcasts.apple.com/ca/podcast/mindfulness-exercises/id1548836278</p> <p>or</p> <p>Spotify https://open.spotify.com/show/264t0GL8uNp1fsx4io4g3h</p> <p>or</p> <p>Google https://podcasts.google.com/feed/aHR0cHM6Ly9hbWNoY3luZm0vcy80Nzk0Y2Y5MC9wb2RjYXN0L3Jzcm</p>	<ul style="list-style-type: none"> - This podcast series includes 8 different mindfulness exercises (1 exercise per video) and can be accessed through Apple, Spotify or Google - The videos may help to bring awareness to your breath and refocus your attention - The series includes videos of an instructor calmly guiding you through different mindfulness practices - Each video is quite short and can be used at any time
The Free Mindfulness Project	Peter Morgan, Clinical Psychologist and Mindfulness Teacher (The Ottawa Hospital Rehabilitation Centre)	Multiple videos	https://www.freemindfulness.org/download	<ul style="list-style-type: none"> - This resource includes a collection of free to download videos on different guided mindfulness exercises for you to try
MindBody Labs	The University of Texas at Austin, Counseling and Mental Health Center (The Ottawa Hospital Rehabilitation Centre)	9 videos	https://cmhc.utexas.edu/mindbodylab.html	<ul style="list-style-type: none"> - This resource includes a collection of online guided mindfulness exercises - Some of the exercises are available in multiple languages including Spanish and Mandarin

Written Resources

Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Caring for your brain – Mindfulness (Patient Handout)	St. Joseph's Health Care London (Parkwood Institute)	2 pages	https://www.sjhc.london.on.ca/media/8493/download	<ul style="list-style-type: none"> - This handout can be helpful to learn more about mindfulness - On top of teaching what mindfulness is, this handout also discusses common mindfulness myths, mindfulness benefits and tips for using mindfulness in your daily life - Also included is a step-by-step guide for a simple breathing exercise known as 4-7-8 Breath
Relaxation Techniques to Relieve Stress (2008)	Stephanie Phan (Hull-Ellis)	9 pages	https://www.uhn.ca/PatientsFamilies/Health_Information/Health_Topics/Documents/Relaxation_Techniques_to_Relieve_Stress.pdf	<ul style="list-style-type: none"> - This resource talks about how relaxation can be very helpful and provides 4 different ways to relax - Deep breathing, relaxing your muscles, repeating words that make you feel relaxed and imagining relaxing images are discussed in detail - Each section contains helpful tips for practice and at the end are some added community resources
Online Mindfulness-Based Stress Reduction	Dave Potter (The Ottawa Hospital Rehabilitation Centre)	8 week program	https://palousemindfulness.com/	<ul style="list-style-type: none"> - This resource provides an evidence-based program that provides mindfulness training to assist people with stress, anxiety, depression and pain - The program has 8 weeks of information with each week including videos, readings and practice sheets for you to download

Pacing and Planning

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Caring for Yourself After a Concussion: Pacing and Planning (2020)	Becky Moran, Occupational Therapist (Parkwood Institute)	12:06	https://www.youtube.com/watch?v=XXQmrvnXeA&list=PLvD7HhN5mi-ML63F7N0F6oj1yiilrUJmw	<ul style="list-style-type: none"> - This video includes tips on pacing and planning - The resource covers how to pace your activities, how to plan your week and how these simple tasks can assist your recovery - Also included are clips of head injury patients describing their experience with pacing and how it impacted their recovery - The video not only describes pacing but shows an example of an occupational therapist setting up an activity planner with their patient
MyBrainPacer App Tutorial (2021)	St. Joseph's Health Care London (Parkwood Institute)	8:15	https://www.youtube.com/watch?v=h8mfxBl0BpY	<ul style="list-style-type: none"> - This video provides a guide on registering for and using the MyBrainPacer app - This tutorial covers the various features of the app and shows an example of how to add an activity to the daily schedule as well as how to record your symptoms
ABI 101: Steps to Success Series – Week 1 Planning and pacing activity (2016)	Becky Moran, Occupational therapist (OT) (Parkwood Institute) Lisa McCorquodale, OT (Parkwood Institute) Kelly Williston Wardell, OT (Parkwood Institute)	45:50	https://www.youtube.com/watch?v=6B4H5kcrqbw&t=7s	<ul style="list-style-type: none"> - This video is a recording of a presentation from an occupational therapist talking about the benefits of planning and pacing activities - The resource discusses how pacing can help to avoid symptoms like fatigue and headaches which can be brought on by too much activity - Strategies to pace and plan activities are discussed in this video such as using a timer or an agenda - Also discussed is a method known as an “Activity Diet” which is an easy way to pace activities by assigning points to various tasks and attempting to stay under a limit for each day (video includes example point values for common activities)
ABI 101: Steps to Success Series – Week 2 Organization, Sleep and Goal Setting (2015)	Becky Moran, Occupational therapist (Parkwood Institute)	27:02	https://www.youtube.com/watch?v=FnDZj2_AkQY&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video is a recording of a presentation from an occupational therapist talking about goal setting, organization and strategies for improving sleep - In terms of organization, this resource mostly talks about meal planning, meal prep ideas and strategies for grocery shopping - The video also discusses productive ways to set goals and shows different ways that technology can help with this

Written Resources

Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
MyBrainPacer App	St. Joseph's Health Care London (Parkwood Institute)	N/A	https://www.mybrainpacer.ca/app/login	<ul style="list-style-type: none"> - The MyBrainPacer app is a cell phone application that can be a helpful tool to plan and pace activities during concussion recovery - The app allows patients to assign a value to different activities like driving, shopping, exercising and more - The app estimates a total number of points per day that will keep your symptoms in a "safe range" and this number can grow over the course of your recovery - With this app, patients can see their progress on a calendar, record notes and access tips and tricks for symptom management
MyBrainPacer - Adding the App to Your Home Screen	St. Joseph's Health Care London (Parkwood Institute)	3 pages	https://www.sjhc.london.on.ca/media/8498/download	<ul style="list-style-type: none"> - This resource includes a step-by-step guide (with pictures) to show how to add the MyBrainPacer app to the home screen on your cell phone - The guide includes steps for both Android and Apple phones
Sport Concussion: Planning & Pacing (2015)	Fowler-Kennedy Sport Concussion	2 pages	http://fowlerkennedy.com/wp-content/uploads/2015/11/SPORT-CONCUSSION-PLANNING-AND-PACING-November-2015.pdf	<ul style="list-style-type: none"> - This resource discusses pacing and shows how it can be used to avoid provoking symptoms as well as promote recovery - The document uses "pacing graphs" to represent how the patterns of your activity can affect the intensity of symptoms you experience - Along with pacing graphs, the resource also includes strategies to help you plan your activities and to eventually enable you to participate in activities for longer periods of time without symptoms

Exercise

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
ABI 101: Steps to Success Series – Week 5 Return to exercise, balance, vision changes (2015)	Laura J Graham, PT PhD Physiotherapist (Parkwood Institute)	27:57	https://www.youtube.com/watch?v=IZXI70pUJok&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video is a recording of a presentation from a physiotherapist talking about exercise and balance training after a head injury - Some of the topics in the video include the benefits of exercise, types of exercises and tips for getting back into exercising after injury - The resource also covers activities that can help to retrain your balance and how to incorporate these activities into your everyday routine
CCC Webinar Series Week 4: Exercise Therapy (2021)	Dr. Mark Bayley, MD, FRCPC (CCC)	59:18	https://www.youtube.com/watch?v=i5Yli4FN0sk&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - The video talks about why exercise can be beneficial after concussion, what amount of exercise is ok and how to gradually return to activity after concussion
Love Your Brain Yoga Videos	Love Your Brain Foundation (The Ottawa Hospital Rehabilitation Centre)	Multiple Videos	https://www.loveyourbrain.com/yoga/videos	<ul style="list-style-type: none"> - This resource provides traumatic brain injury friendly yoga classes to support healing and resilience - The classes address fatigue, headaches, dizziness and other concussion symptoms

Written Resources				
Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Regional Acquired Brain Injury Outpatient Program, Activity and Exercise	St. Joseph's Health Care London (Parkwood Institute)	~5 pages	https://www.sjhc.london.on.ca/regional-acquired-brain-injury-outpatient-program/patients/activity-and-exercise	<ul style="list-style-type: none"> - This webpage generally talks about returning to activity and exercise after concussion - The resource discusses activity planning, meal planning/making and strategies for reducing symptoms during activities such as grocery shopping - The webpage also includes strategies for returning to exercise and specifically provides a walking program as well as steps for returning to running

Returning to Work/School/Sport

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Concussion management & return to learn (2014)	Dr. Mike Evans (Fowler Kennedy)	10:02	https://www.youtube.com/watch?v=55YmbIG9YM&ab_channel=DocMikeEvans	<ul style="list-style-type: none"> - This video provides a short overview of concussion and also discusses the process for returning to learning and or physical activity - The resource also discusses the “4 P’s” strategy for conserving energy after a concussion which can help to keep symptoms from getting worse
Sharing Experiences With A Concussion/TBI - Return To Learn (2021)	Penny Welch-West, Speech-Language Pathologist (Parkwood Institute)	1:25:43	https://www.youtube.com/watch?v=zEK9uuMbzgg	<ul style="list-style-type: none"> - This video is of a podcast style conversation between a speech language pathologist and current students/graduates - The students discuss their experience with returning to learning after a concussion - Topics include the challenges, accommodations and strategies involved in getting back into school
Returning to play: What brain imaging can teach us about concussion- Brainstorm Concussion Video Series (2020)	Ravi Menon, PhD (Fowler-Kennedy)	8:34	https://www.youtube.com/watch?v=lj-dbADpcZY	<ul style="list-style-type: none"> - This video discusses some of the current brain imaging techniques that are used to study concussion - The video talks about research in sport concussion and some of the results that were seen using imaging scans
CCC Webinar Series Week 17 – Return to Work Following Concussion (2022)	Leslie Birkett, Occupational Therapist (CCC)	59:06	https://www.youtube.com/watch?v=1138lbvmnhc&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - Topics discussed include the typical difficulties that are commonly faced when returning to work and the potential ways to reduce or accommodate these difficulties
CCC Webinar Series Week 18 – Return to Athletics (2022)	Dr. Michael Hutchison, PhD RKin (CCC)	1:08:18	https://www.youtube.com/watch?v=PQ8jOKf3plg&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - The video discusses what is unique about athletes and returning to sports - Topics include general information about concussion management, the process of returning to athletics and what specialists are important in your return
CCC Webinar Series Week 19 – Returning to Learn After Concussion (2022)	Dr. Nick Reed, PhD, OT Reg. (Ont.) (CCC)	58:40	https://www.youtube.com/watch?v=GWOBLCzuzm4&ab_channel=C.E.T.SConferences	<ul style="list-style-type: none"> - This webinar video includes a 30-minute presentation and 30-minute question period (since this is a recording, you will not be able to interact with the presenter) - The video discusses the current laws and guidelines in place for schools to follow in assisting a student’s return to learning - Topics include the current research on returning to the classroom, different step-by-step return to school programs and accommodations that may be helpful

Written Resources

Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Concussion Care Resources – Return to Learn (2015)	Fowler-Kennedy Sport Concussion	2 pages	http://fowlerkennedy.com/wp-content/uploads/2015/11/SPORT-CONCUSSION-RETURN-TO-LEARN-November-2015.pdf	<ul style="list-style-type: none"> - This resource shows the recommended steps for returning to learning at school - The document also gives some example academic accommodations for symptoms including; headache, fatigue, light/noise sensitivity, anxiety, difficulty concentrating and difficulty remembering
Concussion Care Resources – Return to Play (2015)	Fowler-Kennedy Sport Concussion	1 page	http://fowlerkennedy.com/wp-content/uploads/2015/11/SPORT-CONCUSSION-RETURN-TO-PLAY-November-2015.pdf	<ul style="list-style-type: none"> - This resource contains the recommended protocol for athletes to return to playing sports.
Concussion Recovery Tips: Returning Back to Activities After Concussion (2019)	Sunnybrook Health Sciences Centre	~2 pages	https://sunnybrook.ca/content/?page=bsp-concussion-activities	<ul style="list-style-type: none"> - This resource talks about the process of returning back to your usual activities after concussion - The resource provides 5 tips that you may find helpful to get back into your usual routine
Concussion Recovery Tips: Getting Back to Work or School After Concussion (2019)	Sunnybrook Health Sciences Centre	~3 pages	https://sunnybrook.ca/content/?page=bsp-concussion-work-school	<ul style="list-style-type: none"> - This resource talks about returning to work and or school while recovering from a concussion - The resource provides some guidelines and a few tips to help make getting back into work or school more manageable
Concussion Recovery Tips: Driving and Air Travel After Concussion (2019)	Sunnybrook Health Sciences Centre	~2 pages	https://sunnybrook.ca/content/?page=bsp-concussion-driving-flying	<ul style="list-style-type: none"> - This resource provides some important information that you should consider before driving or using air travel after a head injury
Concussion Recovery Tips: Returning to Sports and Physical Activity After Concussion (2019)	Sunnybrook Health Sciences Centre	~2 pages	https://sunnybrook.ca/content/?page=bsp-concussion-sports	<ul style="list-style-type: none"> - This resource provides a few tips for returning to sport or physical activity - The resource also includes current guidelines (known as the “parachute guidelines”) which provide a step-by-step method for returning to play

General Material

Note: If you are having trouble opening the links or would like tips on printing out resources, please review the instructions in the appendix.

Video Resources				
Name	Author/ CONNECT Clinic	Video Length	Resource Link	About This Video
Canadian Concussion Centre Webinar Series (2021)	Canadian Concussion Centre	All around 1 hour	<p>Previous Webinars: https://www.uhn.ca/Krembil/Research/Projects/Canadian_Concussion_Centre/Pages/web_seminar_series.aspx</p> <p>Registration for future Webinars: https://events.myconferencesuite.com/Canadian_Concussion_Centre_Webinar_Series/reg/landing</p>	<ul style="list-style-type: none"> - This Webinar Series is a collection of videos delivered by experts and qualified professionals in 25 topics related to concussion - Each video is around an hour long, including a 30-minute question and answer period - The live webinars are delivered bi-weekly from 6pm-7pm ET - To access the live webinars, you must register on the Canadian Concussion Centre website - This resource also includes a list of previous webinars that have already occurred and are available on the website for viewing at any time
Prolonged Symptoms of Single and Multiple Concussions (2020)	Canadian Concussion Centre	2 videos, each 1 hour	<p>Part 1: https://www.youtube.com/watch?v=a-ZNznVFikE</p> <p>Part 2: https://www.youtube.com/watch?v=h6L3gC_m6e4</p>	<ul style="list-style-type: none"> - These videos include an education and support workshop discussing symptoms of prolonged concussion - The videos provide concussion education including causes, diagnosis, symptoms/management strategies, recovery course and some additional tools - Each video also includes a question answer period where several questions are answered by a expert in the field
Brain Injury 101 – Part 1 & 2 (2018)	St. Joseph's Health Care London (Parkwood Institute)	2 videos, each 1.5 hours	<p>Part 1: https://www.youtube.com/watch?v=Z5gj2O8ptlY&ab_channel=St.Joseph%27sHealthCareLondon</p> <p>Part 2: https://www.youtube.com/watch?v=7Yc-Yxys9IM&ab_channel=St.Joseph%27sHealthCareLondon</p>	<ul style="list-style-type: none"> - This 2-part video series broadly covers most areas of brain injury recovery - The videos talk about topics such as what is a brain injury, how it might impact your life, how it can affect your family and what you can expect in your recovery
Life Hacks for Managing Symptoms after Traumatic Brain Injury (2018)	Shannon McGuire, Physiotherapist (Parkwood Institute) Becky Moran, Occupational Therapist (Parkwood Institute)	1:41:36	https://www.youtube.com/watch?v=8ErBrd7bkBU&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video covers a wide variety of topics around concussion - Some of the areas that are talked about include what happens to the brain after injury, who is at risk for long lasting symptoms, common symptoms and how to manage them and strategies for returning to work - Most of the video (starting at the 40 minute mark) is spent discussing help full tips and tricks for dealing with many different common symptoms
Managing Money after Acquired Brain Injury (2018)	St. Joseph's Health Care London (Parkwood Institute)	1:19:07	https://www.youtube.com/watch?v=6nHMLxuuO8Y&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video is a recording of a presentation from Family Services Credit Counseling - The resource talks about money management strategies that may be useful after injury - This video covers the Disability Tax Credit (DTC), the Registered disability savings plan, provincial disability supports (ex. ODSP) and trust planning

Video Resources

Management of Symptoms of Mild Traumatic Brain Injury (2018)	Dr. Heather MacKenzie, MD, Physiatrist (Parkwood Institute)	56:39	https://www.youtube.com/watch?v=Pp3eFLP12t8	<ul style="list-style-type: none"> - This Video is a recording of a presentation from a physiatrist who is a specialist in caring for patients with brain injury - The talk covers very commonly asked questions such as; have I had a brain injury, are my symptoms normal, when will I get better and what can I do to get better faster - Also included is a talk about managing two very common symptoms; headache and sleep disturbance
Food and Your Brain: Nutrition after Acquired Brain Injury (2018)	Chris Fraser, Registered Dietitian (Parkwood Institute) Laura Graham, PT PhD (Parkwood Institute)	1:30:52	https://www.youtube.com/watch?v=seCrT8SeBDU&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video is of a recorded talk from a registered dietitian and discusses how nutrition can effect brain health - This resource covers diets, vitamin/mineral supplements, digestive system health and how each of these areas relate to brain health - The video also includes a talk from a physiotherapist (starting at the 50 minute mark) about physical activity after concussion as well as why sleep and exercise are important
Life After Brain Injury – Survivor Stories (2018)	St. Joseph’s Health Care London (Parkwood Institute)	58:35	https://www.youtube.com/watch?v=vidXmoAyEnk&ab_channel=St.Joseph%27sHealthCareLondon	<ul style="list-style-type: none"> - This video from the Survivor Stories video series includes a presentation from 2 concussion patients who discuss their experiences - The first patient is a 38 year old mother of 3 children and the second patient is a young student athlete who has suffered multiple concussions
You have a concussion - now what? Debunking concussion myths – Brainstorm Concussion Video Series (2019)	Dr. Lisa Fischer, BScPT, MD, CCFP (SEM) , FCFP, DipSportMed (Fowler-Kennedy)	6:41	https://www.youtube.com/watch?v=p-MFDBsmvp4&t=1s&ab_channel=WesternUniversity	<ul style="list-style-type: none"> - This short video covers 3 common myths about concussion. The myths covered in this video include: <ul style="list-style-type: none"> - To get a concussion you need a major hit and must have immediate symptoms - If you don’t recover quickly it must mean you have a major brain injury - Its not ok to exercise after a concussion
Can contact sports change your brain? How brain imaging teaches us about repetitive hits to the head – Brainstorm Concussion Video Series (2020)	Robert Bartha, PhD (Fowler-Kennedy)	5:53	https://www.youtube.com/watch?v=Y61ht3WCSzo	<ul style="list-style-type: none"> - This short video is for anyone interested in learning more about brain imaging - The video talks about how brain imaging methods are used in athletes that have had multiple hits to the head
When will I get better? Predicting time to recovery after concussion – Brainstorm Concussion Video Series (2020)	Dr. Heather MacKenzie, MD, Physiatrist (Fowler-Kennedy)	5:47	https://www.youtube.com/watch?v=fVrIlgMhe6Cc	<ul style="list-style-type: none"> - This video briefly talks about the current body of research in the area of predicting time to recover
What impact does concussion have on cognition? Investigating the long-term effect on brain function – Brainstorm Concussion Video Series (2021)	Adrian Owen, PhD (Fowler-Kennedy)	5:46	https://www.youtube.com/watch?v=S26qY1pG75o	<ul style="list-style-type: none"> - This video briefly talks about research into the possible long term effects of concussion on brain function
Life Hacks and Concussion Treatment Strategies on the Road to Recovery – Brainstorm Concussion Video Series (2021)	Shannon McGuire, Physiotherapist (Fowler-Kennedy)	7:28	https://www.youtube.com/watch?v=XeYzDGlggtA	<ul style="list-style-type: none"> - This video briefly talks about how planning and pacing are important tools for recovery - The video discusses simple tips or “life hacks” that can be useful for incorporating planning and pacing into your daily life

Video Resources

Concussion for non-athletes: Resources for the everyday person living with concussion – Brainstorm Concussion Video Series (2019)	Laura J Graham, PT PhD Physiotherapist (Fowler-Kennedy)	6:31	https://www.youtube.com/watch?v=GIKiRGzYP4k	<ul style="list-style-type: none">- This video briefly talks about some of the current research into concussion in non-sport related injuries- Also discussed are new resources that are available to help individuals with their recovery
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Written Resources

Name	Author/ CONNECT Clinic	Length	Resource Link	About This Resource
Recovery from a Concussion (2021)	Tharshini Chandra (Hull-Ellis)	5 pages	https://www.uhn.ca/PatientsFamilies/Health_Information/Health_Topics/Documents/Recovery_from_a_concussion.pdf	<ul style="list-style-type: none"> - This brochure talks about what to expect when you have a concussion, what symptoms to watch for and what to do in an emergency - Also included are a few tips that may help you to feel better after a concussion
Head injury in adults: what to watch for (2018)	Hamilton Health Sciences	1 page	https://www.hamiltonhealthsciences.ca/wp-content/uploads/2019/08/HeadInjuryAdultsWhatToWatchFor-ER-lw.pdf	<ul style="list-style-type: none"> - This very brief resource provides a list of symptoms that you should watch out for when you have a concussion - These symptoms indicate that you may need to seek emergency medical care
mTBI/Concussion: Your Guide to Recovery – Part 1: Concussions & Getting Better (2019)	Sunnybrook Health Sciences Centre	~8 pages	https://sunnybrook.ca/content/?page=bsp-about-concussions https://sunnybrook.ca/content/?page=bsp-concussion-getting-better	<ul style="list-style-type: none"> - This resource provides important information about what a concussion is and what its common symptoms are - The resource also discusses what to expect during recovery from a concussion and gives some tips to help you feel better
mTBI/Concussion: Your Guide to Recovery – Part 2: Understanding Concussion (2019)	Sunnybrook Health Sciences Centre	~3 pages	https://sunnybrook.ca/content/?page=bsp-understanding-concussion	<ul style="list-style-type: none"> - This resource provides some information about the human brain and talks about what happens to the brain when it is injured
Concussion Recovery Tips: Protecting Your Brain From Having Another Injury (2019)	Sunnybrook Health Sciences Centre	~1 page	https://sunnybrook.ca/content/?page=bsp-concussion-protect-brain	<ul style="list-style-type: none"> - This resource provides some tips that can help lower the risk of having another brain injury
mTBI/Concussion: Your Guide to Recovery – Part 3: My Personal Recovery Plan (2019)	Sunnybrook Health Sciences Centre	~8 pages	https://sunnybrook.ca/content/?page=bsp-concussion-recovery-plan	<ul style="list-style-type: none"> - This resource contains printable forms that you can use to write down information about your recovery process and goals - The resource also includes tools to help track your symptoms, your activity, your mood and your medications
Concussion Care: The First 48 hours after a concussion	St. Joseph's Health Care London (Parkwood Institute)	1 page	https://www.sjhc.london.on.ca/media/4546/download	<ul style="list-style-type: none"> - This short resource provides some information on what to do within 2 days of a concussion - The resource also discusses what symptoms may require immediate medical attention
Information for Families	St. Joseph's Health Care London (Parkwood Institute)	~3 pages	https://www.sjhc.london.on.ca/regional-acquired-brain-injury-outpatient-program/families	<ul style="list-style-type: none"> - This resource provides information that may be helpful for the family members or friends of someone with a concussion - The resource discusses communicating with someone with a brain injury as well as what you can do to help them with their recovery
Brainstreams Education and Tools	British Columbia Brain Injury Association (The Ottawa Hospital Rehabilitation Centre)	---	http://www.brainstreams.ca/learn/injured-brain/concussion	<ul style="list-style-type: none"> - This educational website includes written material, videos and online tools/apps - The resource discusses what a concussion is, what to do after a concussion, common symptoms and problems, coping with symptoms and recovery
Brain Injury Association of the Ottawa Valley (Located in Ottawa)	The Ottawa Hospital Rehabilitation Centre	----	http://biaov.org/	<ul style="list-style-type: none"> - This resource is provided by a non-profit organization that helps acquired brain injury survivors reconnect with their environment - The organization provides multiple support programs and includes online resources/newsletters

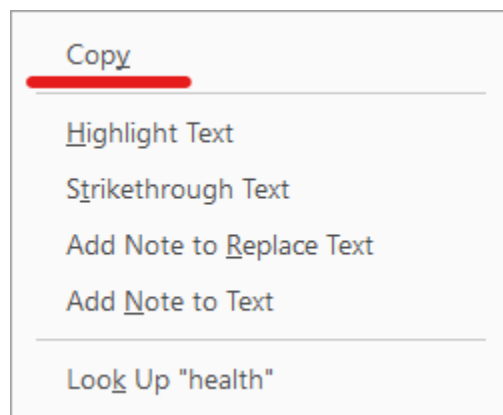
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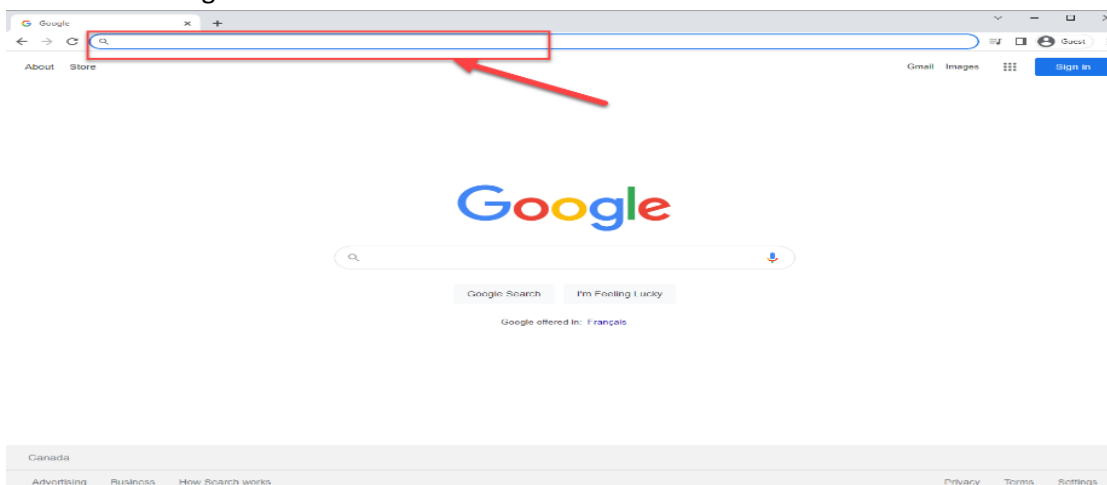
Appendix

Instructions for opening additional resources

- In each section of this booklet there are two tables containing extra resources, one for videos and one for written material.
- To access each resource, left click on the blue link inside the “resource link” box and it should bring you to the webpage or video that you chose.
- If this does not work, follow these steps:
 1. Highlight the entire link by holding right click on your mouse while dragging the cursor over it.
 2. Right click the highlighted link. A box with multiple options should open like the one below.



3. In this box left click on “Copy”.
4. Open a browser (Google Chrome, Mozilla Firefox, Safari, Internet Explorer).
5. Right click in the URL box.

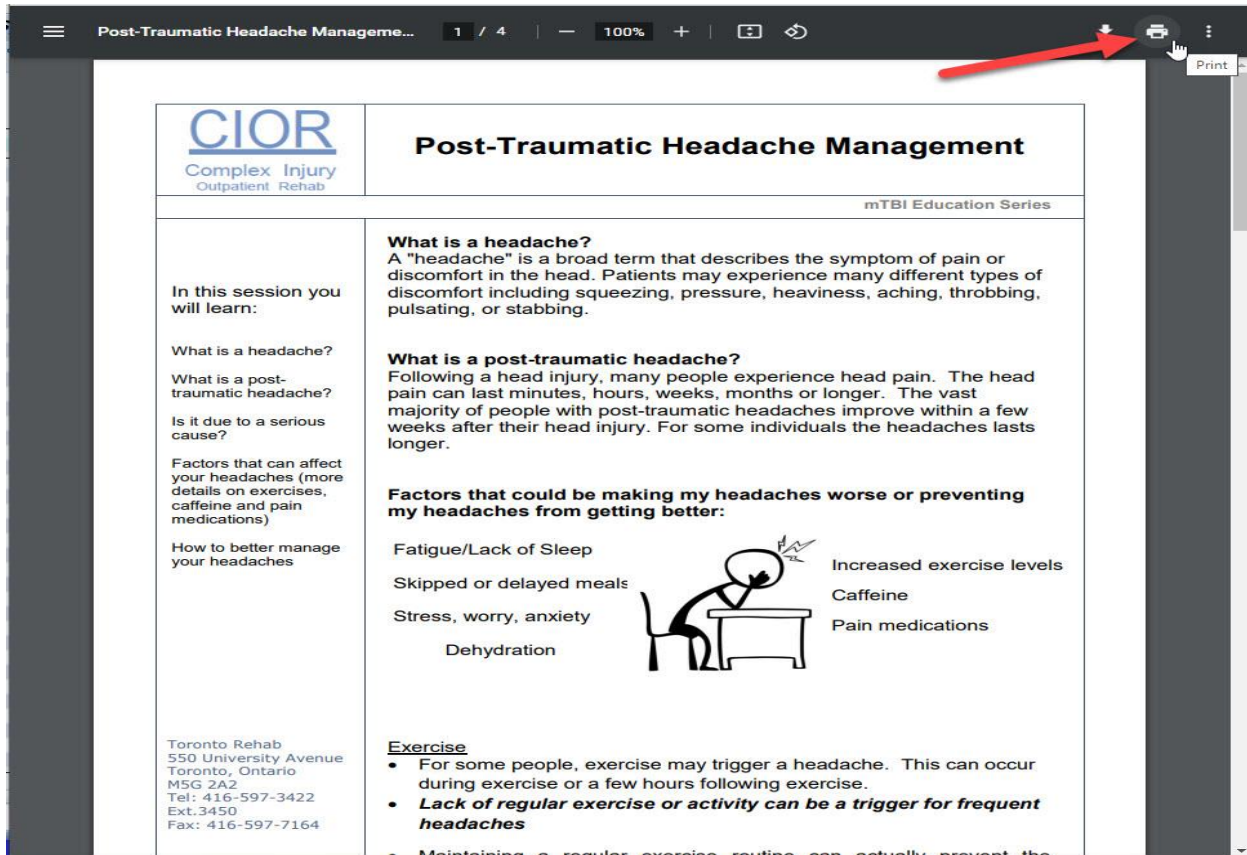


6. Click “paste” and hit the enter key.

- This should take you to the resource, however, some resources may not work with Internet Explorer. If the resource doesn’t work after following the steps, try using a different browser.

Tips for printing additional resources

- If you would prefer to print some of the written resources, the following steps may be helpful:
 1. Open the desired link from one of the “Written Resources” tables (using the steps listed above).
 2.
 - a) If the resource is in the form of a PDF
 - Left click the printer button at the top right of the screen (see the image below).



- A print preview screen should pop up (see the image below). Check the box labeled “destination” to make sure that your printer is selected.
- Left click the “print” button at the bottom right and the resource should begin to print.

The screenshot shows a print preview window. On the left is a preview of a document page. The document header includes the CIOR logo (Complex Injury Outpatient Rehab) and the title 'Post-Traumatic Headache Management'. The document content includes sections for 'What is a headache?', 'What is a post-traumatic headache?', 'Factors that can affect your headaches', and 'Exercise'. A central illustration shows a person sitting at a desk with a hand to their head, surrounded by text labels: 'Fatigue/Lack of Sleep', 'Skipped or delayed meal', 'Stress, worry, anxiety', 'Dehydration', 'Increased exercise levels', 'Caffeine', and 'Pain medications'. The bottom left of the document preview contains contact information for Toronto Rehab.

On the right side of the print preview window, there are several settings:

- Print:** 2 sheets of paper
- Destination:** HPFBFD5C (HP Office)
- Pages:** All
- Copies:** 1
- Color:** Color
- More settings:** (dropdown arrow)

At the bottom right, there are two buttons: a blue 'Print' button and a white 'Cancel' button. A red arrow points to the 'Print' button.

- b) If the resource is in the form of a webpage
- With the desired webpage open, press the “CTRL” key and the “P” key at the same time on your keyboard.
 - This should open a print preview screen similar to the one above.
 - Check the box labeled “destination” to make sure that your printer is selected.
 - Left click the “print” button at the bottom right and the resource should begin to print.