

Mild Traumatic Brain Injury/Concussion:

YOUR GUIDE TO RECOVERY



What is in this handbook?

This guide is for you and your family to use during your recovery from your concussion.

We would like to help you understand what happens when you have a concussion and why you feel the way you do. We would also like you to know what to expect during your recovery process and give you some useful tips to help you feel better and get back to your normal activities. Learning about concussion and what to expect will help you improve your overall health and recovery.

The information in this handbook is divided into 3 parts. You can look through each section of the online handbook using the navigation tabs. Take your time reading the parts that are most important for you right now.

This booklet is for people age 18 and older.

The information in this handbook is for educational purposes. It does not replace medical advice. If you have questions about your symptoms and recovery please see your doctor or health care provider.

Handbook Development and Sources

The information in this handbook is based on the knowledge and clinical experience of team members of the Traumatic Brain Injury Clinic and Trauma and Emergency Team at Sunnybrook Health Sciences Centre and up to-date evidence and research about mild traumatic brain injury and concussion.

PART 1: Concussions and Getting Better

It is important to take care of yourself after you have had a concussion. This section will tell you the most important things you need to know about concussion and what to expect during your recovery. In these pages, you will also find tips to help you feel better and get back to your usual activities.

PART 2: Concussion: A Toolkit for Recovery

In this section, you will learn more about traumatic brain injury and the symptoms of concussion. In these pages, you will find some useful tips and tools to help you cope with your symptoms and get back to your normal activities. You will also find telephone numbers and websites for resources and services that may be helpful to you and your family.

PART 3: My Personal Recovery Plan

In this section there are places where you can write down information about your personal recovery and your health goals. You will find tools to help you keep track of your activities and symptoms. There is also a place to keep track of your medications and write down questions you may want to ask your doctor or health care team.

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Part 1 Concussions and Getting Better

This is the first part of the handbook. This section will help you understand:

- 5 What is a concussion?
- 5 What are the common symptoms of concussion?
- 6 What can I do to feel better?
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- Instructions from your health care team.

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What is a concussion?

A concussion is a type of traumatic brain injury. You don't have to lose consciousness or "get knocked out" to have a concussion, but many times people will feel dazed or confused for a short amount of time.

A concussion can affect how the brain works. After a concussion, you might think, act, move or feel differently.

Common causes of a concussion are:

- Car, motorcycle or bicycle accidents
- Falls
- Sports
- Fights/assault

What are the common symptoms?

Physical

You may have symptoms after you have a concussion. These symptoms can start right away or days after the injury. Some people may have only a few symptoms and others may have more.

Thinking Emotional Forgetfulness, Feeling "in a fog" Feeling more Feeling irritable, poor memory or "dazed" emotional, sad, angry or Difficulty Taking longer to nervous, worried frustrated think concentrating, or "stressed out" Feeling overall Difficulty finding short attention "not yourself" words span Headache Ringing in the You Dizziness or light ears headedness **Problems hearing** Sleeping more than usual Blurred or double Fatigue, low **Drowsiness** vision energy, tiring Problems falling asleep Balance more easily Problems staying asleep problems Feeling slowed Sensitivity to down Sleep bright light or noise



It is important for you to know what to expect over the next little while and what you can do to feel better. Here are some tips that will help.

✓ Rest your Brain

Get plenty of sleep at night and rest during the day. Resting your body (physical rest) and brain (mental rest) helps your brain heal.

In the first few days after your injury, stay away from doing physical activities like exercising, walking long distances or heavy household chores. Stay away from activities that make the brain work hard like reading, texting, spending time on the computer, using a cell phone, playing video games.

Going back too soon to do the things that you normally do can cause your symptoms to come back or worsen.

√ Take it Slow

As you start to feel better, it is important to go back to doing your normal activities. Start by taking it slow and doing just a little. Try not to do everything all at once. If you feel okay, then you can try to do a bit more. Take rests and give yourself extra time to do things.

After a concussion, your brain has less energy to spare than it normally does. It is important to save physical and mental energy so that your brain can fully recover. This will also help you start to do more without getting too tired, or making your symptoms worse. If you want to learn more about **Energy**Conservation Techniques click here or go to page 14.

Go back to exercise and sports gradually. Talk to your doctor or physiotherapist before returning to hard exercise or contact sports. If you want to learn more about **Returning back to physical activities** <u>click</u> <u>here or go to page 34.</u>

If your symptoms come back or you get new symptoms as you become more active, this is a sign that you are pushing yourself too hard.

✓ Ask your doctor when it is safe to drive, ride a bike, or work with machinery or ladders

Do not drive for at least 24 hours after the concussion.

A concussion can affect your vision and your ability to concentrate and react. These are important skills for driving, riding a bike, working with machinery or climbing ladders. Talk to your doctor or health care provider before starting these activities again.

If you want to learn more about returning to driving look at **Return to Driving** click here or go to page 33.

√ Go back to work or school gradually

Being at work or school makes the brain work hard. Many people need to take a few days off work or school to rest the brain and until they can concentrate better. How much time you need to take off will depend on the type of job you do and how you are feeling.

When you first go back to work or school you may not be able to go back full time or do all of your tasks. Talk to your doctor or health care provider and your employer/school about going back to work or school gradually.

See your doctor and tell your employer or teachers if you are having problems. You may need to take things easier for a while or work less hours to allow your brain to fully recover/get better.

If you want to learn more about going back to work or school look at **Returning Back to Activities** <u>click</u> <u>here or go to page 30</u>.

√ Stay away from alcohol and drugs

Alcohol and recreational drugs may slow your recovery and put you at risk for more injury. Talk to your doctor about healthy ways to cut back or stop your use of alcohol and/or drugs.

√ Take care of your basic needs

Your brain and body need a balanced diet to get better and give you the energy to go about your day. Eating well can improve your mood, sleep and mental focus.

Try to eat regular meals and snacks.

Stay away from stimulants such as coffee, caffeine, pop and energy drinks. Stimulants can put added stress on your brain.

Keep a regular sleep schedule. Talk to your doctor or health care provider if you have trouble getting a good night's sleep. If you want to learn more about tips to sleep better look at **Sleep Hygiene** <u>click here or go to page 17</u>.

✓ Follow your doctor's exact instructions on how and when to take your medications

Talk to your doctor before you take sleeping pills and any over the counter medication such as Tylenol, Advil or Aspirin. Taking too much of these medications can make your symptoms worse.

√ Manage Stress

Stress, emotional upset and worry can make symptoms feel worse and get in the way of doing things that will help you get better. Try to do things that help you relax and feel calm.

Talk about your worries with someone you trust—like your doctor or health care provider or a family member or friend - this can help you feel better. Let others know how they can help you.

For more ideas and tips that can help you deal with stress and emotions, <u>click here or go to page 27</u> to read about **Mood Changes**.

✓ Do not do any activities that could lead to another hit to your head

It can be dangerous for the brain to be hurt again if it has not recovered from the first injury. Talk to your doctor or health care provider about the steps you need to take to return to sports.

Be careful and prevent falls. Talk to your doctor or health care provider about how to prevent falls, especially if you have problems with balance, trouble seeing, feel dizzy or have a history of falling.

To learn more about **Protecting Your Brain**, click here or go to page 35.

✓ Use strategies to help you cope with your symptoms

In part 2 of this handbook we give you tips for dealing with **Headaches**, **Fatigue**, **Dizziness and Changes** in **Balance**, **Noise Sensitivity and Tinnitus/Ringing in the Ears**, **Vision Problems**, **Changes in Thinking**, **Memory and Concentration** and **Mood Changes**.

See your family doctor for help. Keep talking to your doctor or health care provider about how you are feeling. If you do not think you are getting better or if you feel down and depressed, anxious or "stressed out", you may need more support.



How long does it take to feel better?

Concussion recovery is different for each person. Most people with a concussion make a full recovery and the symptoms usually only last a few days. For some people it can take several days, weeks, or even longer to feel better.

How quickly people get better depends on the injury itself, but also depends on how they take care of themselves after the injury. It can take longer to get better after a concussion if you do too much too soon.

In general, recovery may be slower in older people and in people who have other health problems like pain, anxiety, depression or learning disabilities. People who have had other concussions in the past may find that it takes longer to recover from their current injury.

Getting better takes time and patience

It is normal to have some symptoms after you have a concussion. Most symptoms go away over time and without any treatment.

Allow yourself time to get better and to slowly go back to doing the things you normally do. Recovery can have its ups and downs and can take time. Everyone is different.

Keep in mind that there will be "good days" and "bad days". This is normal. Do not overdo it on "the good days". This can make symptoms worse and may slow your recovery.



When to get urgent medical care

Go to your nearest hospital or call 911 right away if you have any of these symptoms:

- A constant severe headache that gets worse
- Sudden severe vomiting or nausea
- Fainting or blacking out or if people can't wake you up
- Confusion or drowsiness

- Seizures (any jerking of the body)
- Sudden weakness or numbness
- Trouble talking, or not making sense
- Fluid or bleeding from the ear or nose
- Unusual or strange behaviour



Some things you should know before you leave the hospital

Make sure that you and your family member read and understand ALL instructions before you leave the hospital. If you have questions, please ask your doctor, nurse or therapist.

	Further instructions from your health care team
Date inst	ructions were given:

Follow-up Appointments

To help with your recovery, you may have been given an appointment in the Traumatic Brain Injury (TBI) Clinic at Sunnybrook Health Sciences Centre. Be sure to keep this appointment and any other follow-up appointments that have been scheduled for you.

What if I don't feel better in a few weeks?

If your symptoms do not get better after 3 or 4 weeks, talk to your doctor or health care provider. You can also call the Traumatic Brain Injury Clinic if you, your family or health care provider have any questions about your recovery. We can give you more information, or connect you with services that can help you. In some cases, it may be helpful to arrange an appointment in the Traumatic Brain Injury Clinic if you don't already have one.

Questions?

Call the Traumatic Brain Injury Clinic at Sunnybrook Health Sciences Centre at 416-480-4095.

Part 2: Concussion: A Toolkit for Recovery

This is the second part of the handbook. Click or go to the parts that are most important to you right now.

This section will help you understand:

- What does the human brain look like?
- What happens to the brain when it is injured?
- What can I do to cope with my concussion symptoms and feel better?
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- 35 How do I protect myself from having another concussion?
- 36 Where can I find more information about concussion?

Keep in mind that you might not find a tool that meets all your needs. Talk to your doctor or health care provider about your symptoms. Your doctor and health care team can help you decide what tools will work best for you.

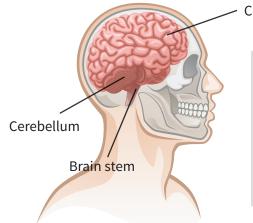
You can access:

PART 1 here
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Understanding Concussion

What does the human brain look like?

There are 3 main parts of the brain: the cerebrum, the cerebellum and the brain stem. Each part is in charge of different things. Parts of the brain work closely together and send messages to each other and to other parts of the body to control everything we do, feel and think.



Cerebrum

The brain has a texture like firm jelly. In most cases, a minor hit to the head does not cause any lasting problems. This is because the brain is well protected by shock-absorbing liquid called cerebro spinal fluid, layers of tissue called meninges and the hard part of the head, called the skull.

The brain is also made up of chemicals and nerve cells that send messages to different parts of the brain and body. The brain uses these messages to do important things such as:

- Control the way our body moves
- How we think, make decisions, learn and remember
- How we speak
- · Our personality and behaviour
- Our vision, hearing, taste, smell, and touch
- Things we don't think about, such as breathing, heart rate, body temperature and blood pressure



The human brain has gray matter and white matter. White matter bundles or cables connect different gray matter areas of the brain and allow them to talk to each other and work and coordinate with each other.

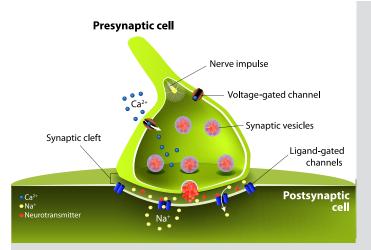
What happens to the brain when it is injured?

A mild traumatic brain injury/concussion is caused by a blow or jolt to the head. Concussions can also happen from a blow or jolt to the body that causes the head to move quickly back and forth. This can cause the brain to bounce around inside the skull.

This sudden movement can twist and stretch the cells and nerves in the brain or change how chemicals in the brain work for a short time. When this happens it can change the way the brain is able to send messages to the brain and body. This is why after a concussion, you might think, act, move or feel differently for a while.

If the brain moves hard enough inside the skull it can sometimes hurt the tissue that covers and protects the brain. The brain can then bang against the ridges that are on the inside of the skull. Depending where the brain hits will determine what parts of the brain are affected. Sometimes there is bleeding that can cause the brain to bruise. Just like a bruise on your leg or arm, this will heal.

Sometimes a doctor will order brain imaging tests like a computed tomography (CT scan) or magnetic resonance imaging (MRI) to show pictures of the brain more clearly. In many concussions, brain imaging is normal and does not show changes in the brain.



The brain has billions of tiny connections called synapses and wire-like structures called axons. Axons branch out and send messages to cells they connect to. Messages are mainly sent by releasing chemicals (neurotransmitters) into the synapse. The type and amount of chemical in the synapse tells the next cell what to do. Concussion can stretch or twist the connections between nerve cells (synapse-axon connections). Concussion can also

twist or stretch long white matter cables or bundles. In more severe cases of concussions, there can be damage to white or single brain gray matter structures. Changes in connections between nerve cells, chemicals (neurotransmitters), white matter cables or single brain structures can change the way the brain is able to send messages to other parts of the brain and to the body.

Every brain injury is different. Talk to your doctor or health care provider if you have questions about your diagnosis or injury.

Resting and Conserving Energy After a Concussion

It is very common to feel tired after a concussion.

After a concussion, your brain has less energy to spare than it normally does. Everything now takes up a little more energy than before. This can make you feel tired and lose energy. This is called fatigue. Fatigue can happen at any time. You can feel tired after physical and mental activity or even if you are not doing much at all. Fatigue can make you feel sleepy during the day. It can also cause more headaches and make you feel more forgetful, upset or irritable.

It is important to save physical and mental energy so that you can feel better and have enough energy during the day to do things. This is called energy conservation. Energy conservation helps the brain and body rest and is a way to manage feeling physically and mentally tired.

How can I conserve energy after a concussion?

You can conserve energy by using the "Four P's" principle-Prioritize, Plan, Pace, and Position.

✓ Prioritize

Prioritize your time and energy. Decide on the important things that you need to do and focus on those first. One way to break down activities is by asking yourself the following questions:

- Is this urgent? Does it have to be done today?
- · How important is it? Can it wait for a few days?
- Can it be done later? Can it wait for a few weeks, or longer?
- Is help needed? Can I ask someone to help me or do it for me?
- Does it have to be done at all? Can it wait until I feel better?

✓ Pace

- Plan to take breaks. Remember to change your task or rest before you start to feel tired.
- Try to break tasks down into smaller steps or stages so that you can step away and take a break if you need to.
- Do things in a different way so you can still do parts of the task. For example, go on an outing with family but go for only part of the day.

√ Plan

- Plan and organize your day to make sure you're doing work or chores during times you feel rested and have the most energy. If you have more energy in the morning, then do the hardest task at this time.
- Spread heavier or harder tasks out over the week. Try to alternate between physical tasks like folding laundry to tasks that get you thinking like using the computer.
- Remember to give yourself extra time to do things and to take breaks.
- Try to make time in your day to things that bring you happiness and give you energy (for example socializing with friends or getting back into a hobby). Setting small goals can help you build up to what you really want to do.
- It is important to listen to your body and take things slowly. Try to figure out what tasks take up a lot of energy or make symptoms worse. Notice the time when pain or fatigue is not so bad or when pacing or resting may have helped. This will help you figure out the best way for you to do tasks so that you still have energy left at the end of the day. Using an activity log can help. For more information about using an **activity log**, click here or go to page 42.
- Have a back-up plan. Fatigue can sometimes happen at the most inconvenient times. It is important to have a back-up plan for when you feel really tired and can't do much about it. For example, make dinners ahead or have someone else shop for you. Have a back-up child-care plan for times when you are not feeling well or need to rest. Talk to your family or close friends to help you to make a plan.

✓ Position

- Think about the things around you and how your posture can affect your energy level. Doing things
 like standing for too long or sitting in a hunched position while working on the computer can make
 you more tired.
- Noisy and distracting places can make it hard to concentrate and will use up more energy. Use tools
 like sunglasses to block out light, earplugs to block out sounds, or a shopping list to help you stayed
 focused.

Here are some other things you can do to help your energy levels:

Keep active

Although doing too much can increase fatigue, doing too little can make you feel weak and tired. Gradually start to increase your activities, like walking or doing some light housework. This will help you get used to doing more. Talk to your doctor or health care provider about what is right for you.

Remember:

Go slowly, take breaks and don't overdo it. Going back to physical and mental activity too quickly and/or not paying attention to symptoms can make symptoms worse. For more information about **Returning to Back to Activities**, <u>click here or go to page 30</u>.

Get a good night's sleep

If you have a poor sleep you will feel tired during the day and have more trouble concentrating and remembering things. For more information about improving your **Sleep**, <u>click here or go to page 17</u>.

Pay attention to your mood and level of stress

Stress, anxiety or low mood can make you feel tired and worn out. To learn more about **Mood Changes** and the steps you can take to help you feel better <u>click here or go to page 27</u>.

Sleep Issues

A concussion can change how well you sleep.

You might find that it is hard to get a good night's sleep. You might have trouble falling asleep or staying asleep. Sleeping for too long during the day might be a problem.

Other factors such as pain, worrying, medications, mood or other medical conditions can also affect sleep.

It is important to try and get a good night's sleep after a concussion. Sleep helps the brain recover and helps you feel well when you wake up. A good routine for sleep, or what is called Sleep Hygiene, can be very helpful.

Tips for good sleep hygiene:

√ Regular Sleep Routine

- Keep the same bedtime schedule, even on the weekends. Make sure you go to sleep and wake up at the same time each day. Set an alarm if you need to.
- If you don't fall asleep in 30 minutes, get out of bed and do something relaxing. Go back to bed when you feel sleepy. Lying in bed and worrying about not sleeping will usually only make you feel more anxious, and make it harder to fall asleep.
- In the first few days after a concussion, physical rest is important. After the first few days after your concussion, try not to nap during the day. Napping will make it harder to sleep at night. If you are tired, try to stay up, and go to bed earlier if you need to.
- If you need to nap then take only one nap a day. Try to keep naps short (about 20-30 minutes). Make sure you take a nap before 3:00 pm otherwise you may have trouble falling asleep at night.
- Do something relaxing before you go to bed. Sometimes a warm bath or reading a book can help you go to sleep. You can also listen to soothing music or try deep breathing exercises to relax your body.

√ Food, Activities, and Lifestyle

- Do not drink caffeine or alcohol or eat heavy meals 4-6 hours before bedtime. It can make it hard to fall asleep or wake you up in the middle of the night. Eating a small bedtime snack with protein before you go to bed can help.
- Make sure you have enough vitamins and minerals (magnesium, iron, and B vitamins) in your diet.
- Get enough natural light during the day.
- Try to exercise 30-60 minutes a day if you feel well enough. Do not exercise right before bedtime. Talk to your doctor or health care provider before starting to exercise.

√ Sleep Environment

- Keep the bedroom dark, quiet, cool, and comfortable.
- If sounds keep you awake, try wearing ear plugs. A white noise machine or fan can also help. Neutral or natural sounds can be helpful to block out distracting sounds.
- Make sure you keep electronics out of the bedroom. Watching TV and using a cell phone or lap top computer can make it hard to fall asleep, because the lights make the brain work harder. Also you don't want to be woken up by calls, texts or other notifications when you are trying to sleep.



Talk to your doctor or health care provider if your sleep problems or feelings of tiredness do not get better.

Do not drive or use machinery if you feel sleepy during the day

Headaches

Headaches are common, but they often will go away after days or a few weeks.

If you have a headache, try using these tips to help:

- Go to a quiet place or go outside and get some fresh air. Lying down and turning off the lights may also help.
- Put a cold or hot pack to the neck or head.
- Practice deep breathing and relaxation exercises. To find out more about **Relaxation Strategies**, click here or go to page 29.

What else can I do?

✓ Sleep well

• Not enough sleep, too much sleep or changes in sleep patterns can trigger headaches. See **sleep hygiene** section on page 17 or click here for more details on sleeping well.

√ Eat regular meals

- Your brain needs fuel to recover. Eat breakfast, lunch and dinner at around the same time each day. It is known that skipping or delaying meals can cause headaches in some people.
- Certain foods can trigger headaches. Some common foods that can trigger headaches are aged cheeses, chocolate, citrus, processed food, wine, caffeine and food with additives like MSG (monosodium glutamate) and nitrates.

✓ Drink enough liquids throughout the day

• Drink non-caffeinated drinks (e.g. water, milk). Diet soft drinks should be avoided as some of the artificial sweeteners can cause headaches.

√ Manage stress and anxiety

Stress and anxiety can cause headaches or make them worse. It is important to take time to relax and
do things to prevent and manage stress. For more information on managing stress <u>click here or go to
page 28</u>.

✓ Exercise

- In the first few days after a concussion, physical rest is important. But as the days go by, some exercise and physical activity can help with headaches. Start with light workouts such as walking, riding a stationary bicycle or swimming and then slowly increase the efforts of your exercise.
- For some people, physical activity and exercise can make headaches worse. It is important to start slowly and to pay attention to how you are feeling. For more information on **getting back to physical activity and exercise**, <u>click here or go to page 34</u>.

√ Keep a headache diary

• Keep track of when your headaches happen, what you were doing just before the headache, the level and type of headache pain and what you did to make yourself feel better. This can help you learn what makes your headache better or worse and how to avoid triggers. For more information about using a **Headache Diary**, click here or go to page 43.

✓ Medication

- If headaches are still hard to manage, you can use some over-the-counter medication. Antiinflammatory drugs (Advil or Ibuprofen) or Acetaminophen (Tylenol) can be used to break the cycle of headaches. Talk to your doctor about which medication is right for you. Ask your doctor before starting any vitamins or supplements.
- Taking too much Advil or Tylenol can cause medication overuse (rebound) headache and make headaches worse. Make sure you limit the amount of headache medications you take to less than 10 days a month. Use a calendar to keep track of how much medication you are taking.



If your headaches don't get better or your pain gets worse, see your doctor or health care provider.

Dizziness and Changes in Balance

Feeling dizzy, light headed or like the room is spinning can happen after a concussion.

These feelings can be caused by the brain injury or other things like changes in blood pressure, emotional upset or problems with vision or the inner ear. Certain medications can also make you feel dizzy.

After a concussion, sudden movements like getting up too quickly or turning too fast may make feel you feel dizzy. When you are dizzy, you may find it hard to keep your balance. Some people might feel motion sick or nauseous in busy places with bright lights, noise or movement like a shopping mall or movie theatre.

What Can I Do?

√ Slow down

It is important to take your time and slow down when doing things like getting out of bed, bending or turning your head. If you feel dizzy, get up slowly and sit on the side of the bed and move your legs up and down for a little while before standing or walking.

√ Stay active

It is important to keep moving even though you may want to stay away from doing things that make you feel dizzy or off balance. Avoiding physical activity because you are afraid that you will lose your balance can make a fall more likely. It can also lead to inactivity, depression and anxiety which get in the way of getting back to your usual everyday activities.

Exercises that involve walking, muscle strengthening and balancing (i.e. standing on one foot) can help. Go at your own pace and make sure there is something for you to hold onto if you need extra support.

✓ Prevent falls

Having a falls prevention plan in place will mean that you'll be less likely to fall and hurt yourself. These simple tips can help you do things safely and prevent falls:

- Make sure your living area is uncluttered. Keep a clear path to the places you need to go. Make sure
 there aren't things in the way that you might trip over such as loose rugs, cords, uneven steps or wet
 floors.
- Be aware of things around you that you could hit your head on such as low ceilings or open cupboards.
- If you have rugs or other furniture that might be a tripping hazard, remove them if you can. Otherwise make sure that furniture is sturdy. Tape down loose mats or cords.
- Use non-slip mats or a shower chair in the bathroom. You might feel that the heat from the shower can increase your dizziness.
- Place sturdy furniture close by so that if you feel a change in your balance you have something to grab on to or somewhere to sit. Just make sure they don't become tripping hazards themselves.
- Keep items that you use regularly within reach so that you don't have to climb or bend. Do not climb ladders or work from heights if you feel unsteady or dizzy.
- Use railings to go up or down the stairs. Hold on to countertops when walking around in your kitchen. Use your cane, walker or wheelchair if you need one.
- Wear good shoes that fit well and don't slip.
- Make sure you have enough light to see in each room, and on stairs. Use night lights in the bathroom and hallway.
- Do not read or text when walking.



If dizziness and balance problems last longer than a week or two or get worse, see your doctor or health care provider. A referral to an ear doctor or physiotherapist may help.

Noise Sensitivity and Tinnitus

Being more sensitive to sound is normal after concussion.

Some people may find that they have problems going to noisy places such as the grocery store and restaurants.

Tinnitus is a ringing, buzzing or hissing noise in your ears. It can happen due to damage to the inner ear or to the hearing nerves and the part of the brain that controls hearing. Tinnitus can be there all the time or it may come and go. These changes usually get better after a while.

What Can I Do?

- At first, avoiding noisy places can help, however you should gradually start going back to them. Choose times when the places are less crowded or noisy.
- Try wearing ear plugs in noisy places as it will help block sounds that you are more sensitive to.
- If you have tinnitus when you are trying to sleep, try using a white noise machine or fan.
- Some medications can cause tinnitus or make it worse. Talk to your doctor about your medications.
- Anxiety, depression, stress and lack of sleep can make tinnitus worse. It is important to take care of
 your mood and sleep. For more information about Sleep <u>click here or go to page 17</u>. To learn more
 about Mood Changes <u>click here or go to page 27</u>.



If the ringing in your ears gets worse and starts to get in the way of concentrating or sleeping, see your doctor or health care provider. A referral to an ear doctor may help.

Vision Problems

Some people who have had a concussion may notice that their eyes don't seem to work in the same way or that they cannot see as well as they used to.

After a concussion, you may have problems like:

- Blurry vision, double vision, eye strain and sensitivity to bright lights
- Trouble judging distances for things like walking on stairs and parking a car
- Trouble watching television, reading or spending time on the computer. These tasks may take longer than usual, make you feel more tired or cause headache.

These changes should get better after a while.

What can I do?

- Wear polarized sunglasses when going outside.
- Change the brightness and make the font/print size larger on your computer.
- Keep glare from your computer screen. Make sure there is no reflection on your computer screen from a lamp or outside light. Try using an anti-glare filter on top of your computer screen.
- Use larger print fonts when reading. Try putting a blank piece of paper or ruler under the line you are reading to help your eyes to move smoothly from one line to the next.
- Try placing a see-through transparent colour tinted sheet over white paper when reading. This helps reduce visual stress and glare and can help you see the page more clearly. You can get coloured plastic index dividers at your local dollar store. Try different colours to see which one works best for you.
- Try to limit your time on the computer and reading. Staring in one place puts strains on your eyes. Look away from the computer every now and then to rest your eyes.

Remember that mental fatigue can make symptoms worse. Take breaks and rest your brain.



See an eye doctor (an optometrist or ophthalmologist) if your vision does not improve.

Changes in Thinking, Memory and Concentration

Some people who have had a concussion may have changes in their thinking (cognitive) skills.

Thinking skills can also be affected by other symptoms like poor sleep, pain, headaches, tiredness, and stress. Certain medications can also affect thinking. After a concussion, people may think slower than before. Some people may also have more trouble:

- Paying attention
- Learning and remembering things
- · Finding words
- Understanding or following what others are saying or what they are reading
- Problems multi-tasking (doing more than one thing at a time)
- · Making decisions
- Planning and organizing their day

Sometimes these changes can make everyday tasks more difficult. It is important to know that these changes should get better after a little while.

What can I do?

Try to figure out if there are other things that are making it harder to think. One way to do this is by asking yourself questions like:

- Did I do too much without taking a break?
- Did I have a bad sleep?
- Do I have a headache or pain?
- Did something stressful happen today?

Click on the sections about **Sleep** (page 17), **Headaches** (page 19), and **Mood** (page 27), and see if these strategies help with your thinking. You will think better if you feel good and well rested.

Keep in mind that it is normal not to remember things from time to time. Getting upset or stressed about it will make it even harder to remember. Take a few minutes to relax and calm down — your memory will sometimes come to you.

If you feel that your thinking is affecting your job or school, you might need to take some time off or do less to help your brain recover. For tips on **getting back to work and school** click here or go to page 31.

If the changes in your thinking still haven't gotten better, here are some things to try:

√ Keep organized

- Use a calendar or notebook to write important things down. Recording things onto a mobile phone can also help. If you use a smart phone, there are many apps available to help you remember appointments, names and things you need to do.
- Make a list of things that need to be done. Set due dates and reminders on your mobile phone.
- Keep things like keys, glasses and phones in the same place so you don't forget where you put them.

√ Use strategies to help you concentrate and remember

- Use reminder alarms on your phone or watch to help you remember important things like appointments and taking medication. Use sticky notes to remind you to do important things like turning off the stove, or locking the door.
- Don't be afraid to ask others to slow down or repeat things if you can't follow what they are saying or if they are speaking too fast.
- Reading out loud can help you to concentrate and help information sink in.
- If you are having trouble remembering words, try using other words that describe the word.
- Try to work in a quiet area when you need to do work, study or read. Noisy and distracting environments can make it hard to concentrate on a task and make you feel more tired.

√ Try to reduce stress and brain overload as much as possible

- Take breaks and rest before you feel tired or overloaded. Resting will give you more energy to re-focus and concentrate.
- Break large tasks or lots of information down into smaller chunks or pieces.
- Don't do too many things at once, like talking on the telephone and making a meal at the same time. You will be able to concentrate better if you are doing one thing at a time.
- Take your time when making important decisions. Make a list of things you need to do or think about. Talk it over with someone you trust before deciding.
- Use **energy conservation strategies** (page 14 or click here) to help you rest and not overload your brain.

If you feel that your thinking doesn't go back to normal after a few weeks, see your doctor or health care provider.

Mood Changes

A concussion can affect mood and change the way people feel. You may feel down, moody, irritable or fed up after a concussion. Some people may feel nervous, tense, worried and overwhelmed and have trouble coping with their concussion and other stressful things such work, school, relationships and money problems.

Psychological factors such as stress, anxiety and low mood can increase symptoms (headaches, dizziness, tiredness, problems sleeping, memory problems, trouble concentrating) and get in the way of doing things that will help you get better.

Learning to manage stress and taking time to relax is important.

What can I do?

✓ Set up a daily routine and try to stick to it

- Make a To Do List or use a calendar or journal to write down the things that you want to do each day. When the idea of remembering everything makes you more stressed, you can look back at your list.
- Check things off when you have finished them. Looking at your list will remind you about all the things you have accomplished and can help you feel better.
- Keep in mind that it may take you longer to do things after your injury. Remember to take breaks.
- Eat well, get enough sleep and exercise regularly.
- Don't set too many goals at once and don't overdo it. People get more emotional, irritable and frustrated when they are tired and overworked. Keeping track of your activity levels and mood symptoms can help. To learn more about using an **activity log**, <u>click here or go to page 42</u>.
- Using a mood tracker can also help you and your doctor understand your mood symptoms and things
 that may have affected how you were feeling that day. For more information about Mood Tracking,
 click here or go to page 44. Activity and mood tracking may seem like a lot of work at first. But doing
 this can help you see patterns and triggers and will help you to know what things make you feel the
 best.

√ Talk to your family or close friends about your feelings

- Family and friends are there to help and support you. They can sometimes help you feel better and might also help you see your problems in a new way.
- Join a support group through your Brain Injury Association chapter. For more information about **Brain Injury Resources**, <u>click here or go to page 36</u>.

✓ Do something that is fun and relaxing every day.

• Do things that you enjoy like going for a walk, calling a good friend, listening to music, watching a funny television show, playing with a pet, doing a hobby or anything that makes you feel happy.

√ Change things that stress you out

- Think about things that cause you stress and figure out different ways of doing things. For example, if rush hour traffic makes you nervous, then take a different route.
- Try to wait until you feel better before making major life decisions, such as changing jobs or moving.
- When stress gets too much, think about doing less. Ask yourself: What can wait? What are my priorities? Is there someone that I can ask to help me? Don't be afraid to ask for help.

✓ Break down big tasks or problems into smaller parts

- If you have a big project at work or school or have a messy house to clean, break it down and do one part at a time, instead of dealing with everything at once.
- Write out a list of steps and pick a place to start. Do one thing at a time.
- Be proud of the things that you have done. If you feel yourself getting upset or overwhelmed, stop and take a break.

√ Try to stay positive

- How you think can affect your mood and physical well-being. Negative thinking increases stress. Make a list of the positive things going on your life and the good things that happened each day.
- Be gentle with yourself and don't feel guilty about being temporarily able to do less than you used to. You are taking care of yourself and this is what you need to do to feel better.

✓ Learn to relax and calm the tension in your mind and body

- Try mindfulness meditation, deep breathing or visual imagery. This can help you cope with stressful thoughts and pain and help you relax and focus.
- Join a class to learn mindfulness and meditation skills or do gentle stretches, yoga or Tai Chi. Check with your doctor before starting any form of exercise.
- Learning to relax is not easy and takes practice. Remember that what works for someone else may not necessarily work for you.

How do I know if I need help?

Remember, everyone feels sad sometimes. But if you start to feel worse and spend most of your day worrying, or if you feel down or sad and have trouble sleeping and getting on with your day because of your feelings, then you need to get help. You may also need help if you regularly use addictive substances such as alcohol, cigarettes or drugs to cope with stress or your feelings.

How do I get help?

Talk to your family doctor or health care provider. Emotional problems such as depression and anxiety can be treated in a number of ways such as medication and counseling. Never be embarrassed to say that you need help.

Find out about the treatment and help available. If you want to find out about services and supports in your community, talk to your family doctor or health care provider.



If you have suicidal thoughts, feel unsafe or are in crisis:

Visit your local emergency department or call 911.

Contact a distress centre. The help line is open 24 hours a day, 7 days a week, 365 days a year. If you live in Toronto or GTA call Toronto Distress Centres (416) 408-4357 or 408-HELP.

These services are provided for **information only**. Sunnybrook Health Sciences Centre does not endorse and is not responsible for the content of external websites.

Returning Back to Activities

In the first few days to weeks after your concussion, it is important to rest and avoid any heavy exercise or activity. As you start to feel better, it is important to go back to your normal activities. This is a very important part of getting better.

Once your symptoms start to improve, you can begin to do more. It is very important to go back to your normal activities gradually. Trying to do all of the things that you would normally do at once can cause your symptoms to come back or worsen.

Try these tips to help you go back to your usual activities:

- Start by doing just a little. If you feel okay, then you can try to do a bit more. Just try not to do everything all at once.
- If your symptoms come back or you get new symptoms as you start to do more, this is a sign that you are pushing yourself too hard. This can slow down how quickly you get better. You will need to stop and take a break from what you are doing and slow down even more.
- Use **Energy Conservation Techniques**. Prioritize what's most important to you. Give yourself extra time to do things and take rests. Remember to stop and rest before you get tired. <u>Click here or go to page 14</u> to learn more.
- Listen to your body. Try to figure out what makes your symptoms worse. This can help you make changes to help you feel better. Using an activity monitoring log can help. To learn more about using an **activity log**, click here or go to page 42.

Getting Back to Work or School

Returning to work or school will depend on how you are feeling and the type of job that you do. For example, if you have to climb ladders at work and still have dizziness, then you are probably not ready to go back to work.

Your symptoms might get in the way of doing your job at work or learning things at school. It is important to get ready for work or school by taking good care of yourself and managing symptoms such as headaches, dizziness, tiredness and mood problems.

After concussion, take a day or two off work or school to rest and recover.

When you start to feel better, try to do some work or school activities at home like reading or computer work. You are ready to go back to work or school when you can concentrate and do things for longer periods of time without making your symptoms worse.

What can I do?

√ Take it slow

- Going to back to work and school must be done gradually. At first, cut back on work and school duties. Start with half-days. Go back on a part time basis for a few days.
- Slowly increase your workload and your hours as tolerated. If symptoms come back or get worse, reduce or stop activity.

Remember to conserve your energy and use the four P's. To learn more about **Energy Conservation** <u>click</u> <u>here or go to page 14</u>.

✓ Take extra breaks

- Pace yourself and take extra breaks. Break before you feel tired. Remember that tiredness can affect your concentration and make you feel stressed and more irritable.
- If you start to feel symptoms at work or school, take a break in a quiet area until symptoms improve. Go back to your work or class when your symptoms improve.
- Use an alarm to remind you to rest.

✓ Change your work or school activities

- It is possible that you may not be able to do things or think as quickly as you did before, or that you forget things. Take extra time to complete your work. Use strategies to help you concentrate and remember. For tips on **Changes in Thinking, Memory and Concentration** click here or go page 25.
- Poor posture, bright lights and computer screens can make symptoms worse. Make sure your computer and workstation is set up properly. Ask your employer about having an ergonomic assessment of your work station.
- Try to keep stress levels low as stress may worsen symptoms. For more information about **Mood Changes** <u>click here or go to page 27</u>.

✓ Ask for help

- Talk to your employer about going back to work. You, your doctor and your employer can work together to make sure that things go smoothly.
- Make sure you tell your employer and doctor if you are having problems at work. They will not be able to help you if you do not tell them how you are feeling.
- If you are a university or college student, find out about your school`s services for students with concussion. You might be able to get extra help and support at school until you feel better.
- Find out if you have an Employee Assistance (EAP) program at work. An EAP can provide counselling services and other resources to support you or your family with issues that may be affecting your health, work or life



If you are not feeling better and have been off work or school for a few weeks or months, talk to your doctor or health care provider about getting extra help.

Your doctor or health care provider can refer you to an occupational therapist, speech language pathologist, psychologist or vocational rehabilitation specialist to help you get back to work or school.

Driving & Air Travel

Driving

A brain injury can affect the skills needed to drive safely. It is unsafe to drive for at least 24 hours after your injury. You need to make sure your vision and concentration is good and your reactions are quick enough before you start driving again. Ask your doctor or health care provider about when you can start to drive again.

Some medications, including over-the-counter medications can also get in the way of driving skills. Talk to your doctor and pharmacist about all your medications.

Just like you would with any other activity, go back to driving slowly and gradually. Start by driving short distances and avoid rush hour or driving in bad weather if you can.

If you are unable to drive, talk to your doctor or health care provider about other transportation options in your community.

Your doctor will tell you if they are worried about your driving or if you have a medical condition that can make it unsafe to drive. They will also tell the Ministry of Transportation because it is the law. They will also tell you what you need to do to get your license back. In some cases, you might get referred to a special driving centre for an assessment of your driving ability.

Air Travel/Flying

Some people find that flying makes their symptoms worse. To prevent problems, make sure you are well rested before going on a plane and sleep during the flight if you can. Bring earplugs to keep the noise down. This will help you sleep and relax.



Driving: Do not drive if you have problems seeing or moving or if you feel dizzy, tired or sleepy or if you have lost confidence in your driving. This can be dangerous not only for you as a driver, but also for your passengers and others on the road.

Air Travel: Check with your doctor before flying, especially if you have seizures, problems with your ears or if you had bleeding in the brain or a skull fracture.

Returning to Sports and Physical Activity

Return to sport and physical activity (walking, running, exercising) is gradual and must follow a step-wise process.

Once symptoms settle, start with light exercises such as walking or stationary cycling. You can gradually increase the intensity (how hard you push yourself) and duration (the amount of time) you are doing the exercise if you do not have symptoms during exercise or the next day.

If symptoms come back, rest until symptoms go away. Wait at least one day until going back to the previous step. It is important to know that symptoms can come later that day or even the next day, not necessarily during the activity.

If you are returning to sports or heavy exercise, there are specific guidelines to returning to play.

Click here to download the **Return to Play Guidelines**

The guidelines can be found at: parachutecanada.org/concussion

Talk your doctor or health care provider about increasing your physical activity and the steps you need to take to safely return to sport specific activity.

- Remember to listen to your symptoms. If your symptoms are getting worse, it is your body`s way of telling you that you are doing too much and that you are not ready to move to the next step.
- Your doctor may refer you to see a sports medicine specialist or physiotherapist to help you through the return-to-play process.
- Check with your school, team or sports club about their return to play steps and policies. Most schools, teams and sports clubs have concussion policies that must be followed before a player can return to sport.

Protecting Your Brain From Having Another Injury

Most people get better after a concussion and go back to their normal activities. But even when you are better from your concussion, you should still take care of your brain and protect it from another injury. The following tips can help lower the risk of a brain injury:

- Always wear a seat belt when you are in a car
- Always wear a helmet when you are riding a bike, skateboard, or doing anything else where you might
 hit your head. Helmets do not prevent concussions but they can prevent more serious injuries to the
 brain.
- Stay safe and prevent falls. To learn more about **Fall prevention** click here or go to page 22.

Keep in mind that there is a small group of people who may have symptoms that do not go away over time. Having a second concussion before you have fully recovered from the first concussion can make your symptoms last longer.

In some rare cases, having another concussion before the brain has healed can lead to swelling in the brain. This is called "second impact syndrome". The risk of second impact syndrome is higher in contact sports such as football, hockey, soccer and boxing.



Do not go back to sports if you have any concussion symptoms or signs. Going back to sport or physical activity too soon can affect your recovery from concussion and put you at risk for another concussion.

Talk your doctor before going back to contact sports or activities where there is risk of hitting your head.

NEVER RETURN TO PLAY IF YOU HAVE SYMPTOMS!

IF IN DOUBT, SIT OUT

Helpful Resources

Below is a list of websites that can give you more information, practical help and support. The resources and links do not include all of the information that is available.

To learn more about concussion and how to return to daily activities visit:

Dr. Mike Evans' video on Concussion Management

evanshealthlab.com/concussion-management

Ontario Brain Injury Association (OBIA)

OBIA provides information, education, advocacy, community resources and support to brain injured persons and their families.

obia.ca or call 1-800-263-5404

Toronto ABI Network

The Toronto ABI Network provides information about acquired brain injury and community services and helps to connect with people to services.

abinetwork.ca

Parachute

Parachute provides information and resources to prevent, recognize and manage concussion, including return to play guidelines.

parachutecanada.org/concussion

Concussions Ontario

This organization aims to improve concussion care in Ontario. The site provides information about concussion diagnosis, management tools and resources.

concussionsontario.org

Holland Bloorview Kids Rehabilitation Hospital - Concussion Centre

Free concussion education sessions and information about concussion and safely returning children and youth to activities.

hollandbloorview.ca/concussion

Ontario Neurotrauma Foundation-Guidelines for Concussion/mild TBI & Persistent Symptoms: Second Edition (2013):

The guidelines were developed to help health professionals to diagnose and manage concussions in adults (over the age of 18) and treat symptoms that persist over time. They are not meant for use by people who have a concussion for any self-diagnosis or treatment. You may wish to show your doctors or other health care providers these guidelines.

onf.org/documents/guidelines-for-concussion-mtbi-persistent-symptoms-second-edition

This information is provided to you for informational purposes only and is not to be used for medical advice, diagnosis or treatment. Contact your health care practitioner if you have any questions concerning your care. Sunnybrook Health Sciences Centre does not endorse and is not responsible for the content of external websites.

Part 3: MY PERSONAL RECOVERY PLAN

This is the third part of the handbook. This section will give you a place to take notes, record information and set goals to recover.

What is in this section:

- 39 My Personal Recovery Tools
- 41 Questions for My Doctor
- 42 Activity Monitoring Log
- 43 Headache Diary
- Mood Tracker
- 45 Medical and Rehabilitation Provider Information
- 46 Medication List
- 47 My Personal Notes

Where can I get more information?

To learn more about concussion and how to cope with your symptoms, you can read Parts 1 and 2. These sections can help if you are having trouble getting back to doing your normal activities. In these sections, you will also find telephone numbers and websites for resources and services that may be helpful to you and your family.

You can access:

PART 1 here
PART 2 here



MY PERSONAL RECOVERY TOOLS

Think about some tools and strategies you can use to help you feel better.

Γhings I can do to	save energy			
Sleeping	Well			
		ul slaan		
		ıl sleep		
		ul sleep	 	
		ıl sleep		
		ıl sleep		
		ul sleep		
		ıl sleep		
		ul sleep		
Sleeping Things I can do to		ul sleep		

✓ **Stress Management**Things I can do to reduce stress

80
√ Thinking Skills
Things I can do to cope with cognitive difficulties
Things real do to cope with cognitive afficulties
✓ Returning Back to Activities
Things I can do to get hack to work or school
Things I can do to get back to work or school



o through your list with your doctor. Take notes about what your doctor is saying to you. If you don't nderstand what your doctor is telling you, say so.					

ACTIVITY MONITORING LOG

Use this activity monitoring log to monitor your symptoms to help you return to work, school and other activities. Planning and organizing your day can help you manage your energy and make sure that you are not doing too much. Remember to include rest and relaxation periods into your day.

For more information on **Energy Conservation** and **Activity Monitoring** click here or go to page 14.

Managing Your Return to Activities

Time	Activity (list specific task that you were doing)	Symptoms Yes/No If Yes, list symptoms	Symptoms changed? If yes, worse or better?	Symptom intensity 1=low intensity 10=highest intensity

HEADACHE DIARY

Keeping a headache diary for 1-2 months can help you see a pattern to your headaches. It may also help identify headache triggers such as physical activity, changes in weather, bright lights, noise, stress, certain foods (such as cheese, wine, chocolate, coffee) or tiredness and sleep problems.

For more information on **Headaches and Using a Headache diary** click here or go to page 19.



MOOD TRACKER

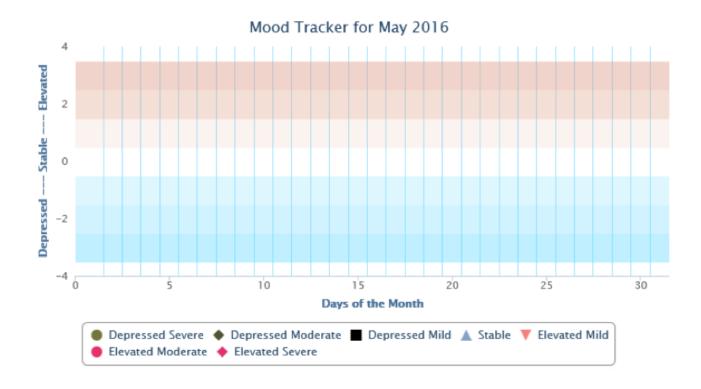
Keeping track of your day-to-day mood and stressors can help your recovery. You can sign up for MyChart[™] and use the Mood Tracker Feature that is listed under "Personal Records".

To learn more about MyChart visit mychart.ca or call 416-480-6794.

Mood tracker

The picture below is a sample of the mood chart as shown on MyChart™.

Record your day to day moods and feelings using this tool.



There are also many apps available on-line that can help you log, track and chart information about your mood.

For more information on managing **mood symptoms** click here or go to page 27.

MEDICAL AND REHABILITATION PROVIDER INFORMATION

Use this section to help you remember and stay organized. Make a copy of this list and bring it your appointments.

My Family Doctor:		Phone	
Address:			
Specialists:			
Name	Specialty	Phone	
Name	Specialty	Phone	
Name	Specialty	Phone	
Pharmacist:		Phone	
Address:			
My Community Rehabilitation Te			
	alli		
Case Manager:	Fm ail	Dhana	
Name	Email	Phone	
Occupational Therapist:			
Name:	Email	Phone	
Physiotherapist:			
Name:	Email	Phone	
Speech Language Therapist:			
	Email	Dhono	
Name:	Email	Phone	
Psychologist:			
Name:	Email	Phone	
Others (e.g. other team members	s, insurance company, WSIB, l	awyer):	
Name		Phone	
Name		Phone	
Name		Phone	

MEDICATIONS LIST

Use this list to keep track of your medication. Bring your list to your appointments. Having a list of your medications helps your doctor, pharmacist and other health care providers help you feel better.

MEDICATION NAME	DOSAGE (how many, how often)	REASON FOR USE	START DATE	STOP DATE (add date if medication was stopped)	COMMENTS/ NOTES

MY PERSONAL NOTES

Use this section to write down things that you want to remember.

Acknowledgements

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This handbook has been reviewed and approved by the Patient and Family Education Committee.

