RECOVERING FROM A MILD TRAUMATIC BRAIN INJURY

An Information Guide

BRAIN INJURY REHABILITATION SERVICE
CONCUSSION CLINIC
BURWOOD HOSPITAL

Canterbury
District Health Board
Te Poari Hauora ō Waitaha

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What Happens in a Traumatic Brain Injury (TBI)

A blow to the head can occur in a car accident, a fall, when the skull is struck by a blunt or heavy object, or in other ways. In most cases there are no lasting symptoms or ill effects. This is because the brain is surrounded by shock absorbing liquid and covered by the skull. Often these are enough to protect the brain from damage.

Sometimes the force of impact is more severe. This can cause the skull to break or fracture. When the skull fractures this absorbs some of the force of the blow and protects the brain.

When the head is hit the brain may be shaken around inside the skull. This can cause the brain to get bruised if it hits the inside of the skull hard enough. Like a black and blue mark on your arm or leg this will recover with time. If there are many bruises on the brain there will be some swelling so recovery may be slower.

The brain is made of many thousands of long, thin nerve fibres. Some of these nerves can get stretched or broken if a blow to the head is severe enough. Although these nerves cannot be seen without a microscope, we know that they can recover because many people recover completely in time.

Like any other part of the body, the brain has blood vessels in it. Some of these blood vessels can tear and bleed soon after injury. The bleeding usually stops on its own and the blood vessels will heal.

Bruises, swelling, torn nerves and broken blood vessels are the causes of symptoms after a TBI. Your doctor will have examined you for signs of brain injury and prescribed treatment as appropriate. Most people who suffer a mild TBI recover completely in time because the damage is minor and heals.

Measuring Traumatic Brain Injury

Loss of Consciousness

One way to tell if a TBI is serious is the amount of time the patient is unconscious afterwards. If you weren't knocked out at all or if you were unconscious for less than half an hour, then the injury was most likely mild. Although you may have some symptoms, there was probably little injury to the brain and complete recovery is expected. Most people who have a TBI fall into this category.

The longer you were unconscious, the longer recovery usually takes. If you were knocked out for more than half an hour but less than a day, your injuries were most likely moderate. Recovery will take more time than if your injury was mild.

People who are unconscious for more than a day have suffered severe injury. Although many people make a good recovery even after a severe head trauma, symptoms can often last for some time or may even be permanent.

Post Traumatic Amnesia

Another way of measuring the severity of injury is the length of post traumatic amnesia (PTA). This memory blank includes the period of time around and after the incident when a person may appear conscious but is confused and disoriented and day to day memory is unreliable. With a mild TBI this period is usually no longer than one day.

How Long Will The Symptoms Last?

With a mild TBI the most rapid recovery occurs in the first 3 months post-injury and most people are back to normal by 6 months.

If you still have some symptoms after 6 months, these will most likely disappear altogether or be greatly improved within a year after the injury.

Not everyone recovers at the same rate. People who are under 40 recover faster and have less symptoms during the time they are recovering. If you are over 40, you won't recover as quickly and you may have more symptoms at first. People who are older or who have been hospitalised for brain injuries before should expect full recovery to take 6 to 12 months even after a mild injury.

Most doctors who treat brain injuries agree that recovery is faster when the patient gets enough rest during the weeks after they leave the hospital. Work, exercise, social activities and family responsibilities should be started gradually, not all at once.

What Symptoms Can I Expect

The most common symptom picture after a brain injury is known as the post concussion syndrome. Eight out of 10 people with a mild TBI show some signs of the syndrome during the first 3 months after the accident. These symptoms are part of the normal recovery process and are not signs of brain damage or medical complications. Like the itch of healing stitches, these symptoms are expected as you get better. They are not a cause for concern or worry.

Post concussion syndrome is more common after mild TBI. If you have these symptoms, this is a sign that your injuries were probably mild. The majority of people with post concussion syndrome recover completely in 3 to 6 months.

Most people don't develop symptoms until days or even weeks after the accident, but the syndrome can begin sooner. Either way, symptoms often disappear without any special treatment.

A list of symptoms that you can expect is shown in Table 1, along with the percent of people with brain injuries who experience each symptom at some point in their recovery. Few people will experience all of the symptoms but even one or two can be unpleasant.

TABLE 1

Symptoms of Post Concussion Syndrome

Symptom	Percent of People
Reduced concentration	71%
Irritability	66%
Tiredness	64%
Low Mood	63%
Memory problems	59%
Headaches	59%
Anxiety	58%
Trouble thinking	57%
Dizziness	52%
Blurred or double vision	45%
Sensitivity to bright light	40%

Figure 1 shows how the combination of primary and secondary symptoms in Post Concussion Syndrome can result in persisting problems

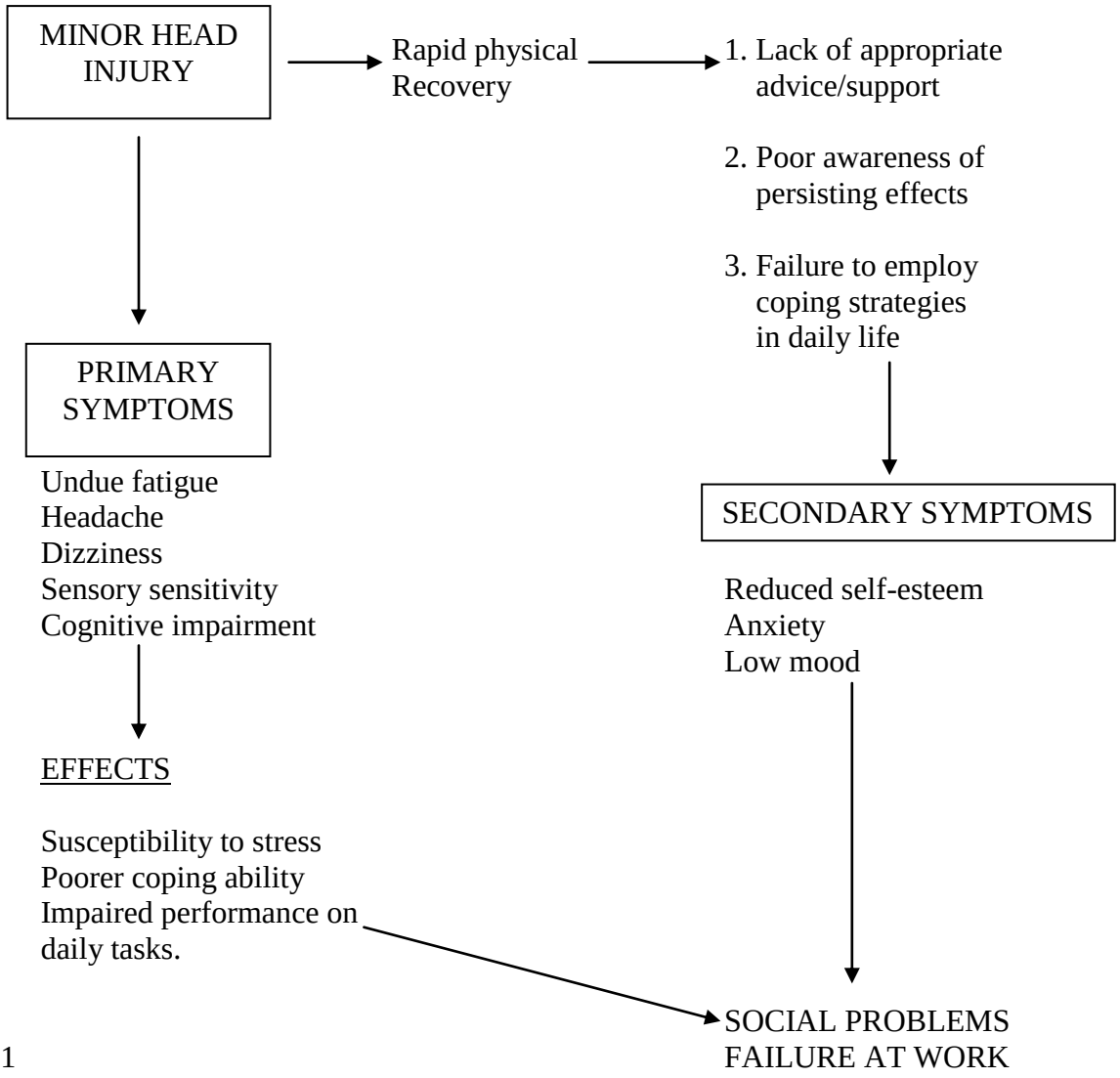

Figure 1

What Can I Do About The Symptoms

Some people find that at first post concussion syndrome makes it hard to work, get along at home, or relax. The best way to deal with this is to **resume activities and responsibilities gradually**, a little at a time. The time you spend at work, getting together socially, with your family, or exercising is determined by what you are comfortable with. **You should pace yourself, and be sure to get all the rest you need**. If your symptoms get worse, or if you notice new post concussion symptoms, this is a sign that you are pushing yourself too hard.

Ignoring your symptoms and trying to "tough it out" often make the symptoms worse. Symptoms are your body's way of giving you information. A broken bone or a torn muscle hurts so that you won't use it and it has time to heal. Post concussion syndrome is your brain's way of telling you that you need to rest it. Most doctors who treat brain injuries agree that recovery is faster when you get enough rest and resume responsibilities gradually.

Thinking and worrying about your symptoms can make them seem worse. This is partly because paying attention to a feeling seems to magnify or increase it. If you pay attention to your heartbeat or breathing for a minute or two, you will see that the sensations seem to become more noticeable. Concentrating on the symptoms of post concussion syndrome can also make them more noticeable.

It is important to remember that the symptoms are a normal part of recovery and will usually go away on their own. Of course, we all have some of these symptoms once in a while anyway. After a TBI it can be easy to forget that we were sometimes irritable, tired, had headaches, couldn't concentrate, or forgot things even before the accident. Try to deal with these things the same way you did before.

Some of the symptoms you notice may actually have nothing to do with your TBI. The symptoms of post concussion syndrome are similar to the symptoms of ordinary day to day stress. A list of everyday stress symptoms is shown in Table 2, along with the percentage of people who experience each symptom even though they didn't have a TBI.

TABLE 2

Symptoms of Everyday Stress

Symptom	Percent of People
Reduced concentration	14%
Irritability	16%
Tiredness	13%
Low Mood	20%
Memory problems	20%
Headaches	13%
Anxiety	24%
Trouble thinking	6%
Dizziness	7%
Blurred or double vision	8%
Sensitivity to bright light	14%

The reason that the symptoms of post concussion syndrome are so much like the normal signs of daily stress is that one main cause of these symptoms is exactly the same: everyday stress. Of course hitting your head also has a lot to do with it. But having a TBI adds more stress to your life, not just bumps and bruises to your head.

The accident itself, being in hospital, and going back to work or school are all things that add stress to most people's lives. Bills can pile up, time is lost, there may be injuries to other parts of your body. And just like a pulled muscle or a bruised leg, your brain takes some time to recover.

Another main cause of stress after a brain injury is worry about the symptoms you have. Scientific studies by neurosurgeons and neuropsychologists in New Zealand show that if you get an information booklet like this one you are likely to recover faster and feel better during recovery than if you did not know what to expect.

Of course, talking to a doctor about your symptoms is also important. Your doctor can prescribe medication that can help you if you need it. You can also talk to the person who gave you this booklet (see telephone number on back page).

More About The Specific Symptoms

Poor Concentration

The main cause of poor concentration is tiredness. When it becomes difficult to concentrate on what you are doing take a break and relax. Between 15 and 30 minutes should be enough. If you continue to have problems, your work day, class schedule, or daily routine should be temporarily shortened. Trying to "stick to it" won't help and usually makes things worse.

Reducing distractions can help. Turn down the radio or try to work where it's quiet. Don't try to do too many things at once. Writing while you talk on the phone or taking notes as you listen to someone talk are examples of doing two things at the same time. It may be difficult to concentrate on more than one thing at first. You will be able to concentrate better when you have had enough rest.

Irritability

One of the most frequent causes of irritability is tiredness. People lose their tempers more easily when they are tired or overworked. Adjust your schedule and get more rest if you notice yourself becoming irritable.

Everyone gets angry from time to time, often with good reason. Being irritable only becomes a problem when it interferes with your ability to get along with people from day to day. If you find yourself getting into arguments that cause trouble at home or at work, try to change the way you think about things. Thoughts often make us more angry than what actually happened.

There is usually a reason why irritating things happen. When something makes you angry, ask yourself what caused it. Family, friends, or co-workers can do things that bother us at times. Try to think of why they did whatever it was that irritated you. What would they say the reason was? Thinking about what caused a problem is the first step to solving it.

Problems can usually be solved better if you stay calm and explain your point of view. The steps you need to take to solve a problem will be the same when you are calm as they would be if you were irritated. Try to remind yourself of this when you find yourself becoming irritable.

You can usually come up with several ways to solve a problem. Try to think of at least 5 different ways, and then decide on which is best. Just realising that there are several things you can do to solve a problem will make it a lot less irritating.

Fatigue

It is normal to be more tired after a TBI. The only sensible treatment for being tired is rest. Avoid wearing yourself out. Gradually increase your activity level. Most people have more energy in the morning than later in the day. You may benefit from scheduled rest breaks or a daytime sleep. If your symptoms get worse this means that you are pushing yourself too hard.

Low Mood

People can begin to feel low when unpleasant things happen to them and a TBI is unpleasant. We feel good when good things happen to us. An effective way to manage these feelings is to make sure that good things happen. One way of doing this is to plan to do something enjoyable for yourself every day. Make

your plan specific, and then be sure to do it. That way you can look forward to it. Anticipating and doing enjoyable things each day can improve your mood.

Thoughts can make us feel low and sad. Thinking that things are bad or terrible will do it. Bad situations are often not as terrible as they may seem at first. Think back to an unpleasant moment in your own life and you may see that this is so.

Chances are that if you are feeling sad, you are telling yourself things that are negative and sad. Thinking that the situation is terrible, that there is no end to it in sight, that you aren't able to do anything about it, and that it is your fault, are all depressing things to tell yourself. Thinking this way can become a habit if you do it enough.

Usually, when people tell themselves unpleasant things all the time it is out of habit, not because those things are really true. If you find yourself thinking negative thoughts, stop. Simply stopping a negative thought can make you feel better. See if what you are telling yourself is really true.

Memory Problems

Memory difficulties have several causes. The part of our brain that stores memories is called the temporal lobe. This is the part of the brain that is most likely to be bruised in a TBI. Some memory difficulties can be caused by the bruises, which is why you may not remember the accident very well. Like a black and blue mark on your arm or leg, these bruises will recover with time. Your memory will most likely improve as this happens.

If you can remember the accident it is likely that your brain was not bruised. Most of the memory problems people notice after a mild TBI are not caused by bruising. They usually come from poor concentration and fatigue.

For you to remember something, you have to pay attention to it first. If you don't concentrate long enough, the information is never stored in your memory. Concentration problems are a normal part of recovering from a TBI and some memory trouble is a normal side effect.

You will probably be able to concentrate and remember better when you get enough rest. Memory problems can be a sign that you are pushing yourself too hard. Writing things down or using a pocket tape recorder are other excellent ways of coping with temporary memory difficulties. They will help recovery and not slow it down.

Of course, nobody's memory is perfect anyway. After a TBI it can be easy to forget that we sometimes had trouble remembering things even before the accident. Some of the symptoms you notice may actually have nothing to do with your TBI. A list of common memory "problems" is shown in Table 3, along with the percentage of people who experience each "symptom" even though they didn't have a TBI.

TABLE 3

Things We Normally Forget

"Symptom"	Percent of People
Forgets telephone numbers	58%
Forgets people's names	48%
Forgets where car was parked	32%
Loses car keys	31%
Forgets groceries	28%
Forgets why they entered a room	27%
Forgets directions	24%
Forgets appointment dates	20%
Forgets store locations in shopping centre	20%
Loses items around the house	17%
Loses wallet or pocketbook	17%
Forgets content of daily conversations	17%

Headaches

Headaches are part of the normal recovery process, but that doesn't make them any less bothersome. Headaches are another cause of irritability and concentration problems after a TBI. This guide cannot replace the medical advice that you should get if you are bothered by headaches. Headaches can have many causes, and your doctor will want to diagnose the problem and prescribe medication that can help if you need it.

One of the most common causes of headaches after a TBI is stress or tension. This is usually the cause when the headaches start for the first time several weeks after the injury. These headaches mean that you are trying to do too much. They will probably disappear if you take a break and relax. Your work day, or daily routine should be temporarily shortened if you continue to have headaches.

Stress or worry cause tension headaches by increasing muscle tension in your neck or forehead. These muscles become tense and can stay tight without you

realising it, out of habit. They can become even tighter once a headache starts, because muscles automatically tense in reaction to pain. This muscle tension makes the headache worse.

If you have tension headaches, relaxing your muscles can help. This is something you need to practise and the occupational therapist and physiotherapist can advise you with specific strategies.

Anxiety

Worry about symptoms and problems at work are the main causes of anxiety for most people. Anxiety should not be a problem for you if you understand that your symptoms are a normal part of recovery. Get enough rest and gradually increase your responsibilities at work.

If you are feeling anxious, you may be telling yourself things that are making you feel that way. Usually, when people worry all the time it is out of habit, not because the things that they are telling themselves are really true. The steps you need to take to solve a problem will be the same when you are calm as they would be if you were anxious. If you find yourself thinking anxious thoughts, stop. Simply stopping an anxious thought can make you feel better. See if what you are telling yourself is really true.

Trouble Thinking

This problem is usually a side effect of other symptoms. Concentration problems, being tired, headaches, and anxiety can all make it hard to think clearly. Like these other symptoms, trouble thinking is probably a sign that you are doing too much too soon.

Dizziness, Visual Difficulties, and Light Sensitivity

Dizziness and visual difficulties should be checked by your doctor. These symptoms usually go away by themselves in 3 to 6 months or less. If you find these symptoms troublesome, your doctor may want to prescribe medication for motion sickness or glasses. Some motion sickness medications are very effective for dizziness, but can make you drowsy or reduce your attention span as side effects.

You may notice some increased sensitivity to bright light or loud noise, particularly if you have headaches. Some increased sensitivity is normal after a TBI and paying attention to these symptoms seems to magnify them. The less

you think and worry about your symptoms, the faster they will usually go away. Wearing dark glasses or avoiding putting yourself in situations that are noisy can help in the early stages of your recovery.

Driving and Brain Injuries

Driving is an activity that requires the coordination of both cognitive and physical skills. Even if you are confident that your driving skills are intact after your brain injury, it is still important to take the necessary steps to ensure safe driving.

You can discuss your concerns with your Doctor who can advise you about what these steps should be. Driving will also be discussed with you at the time you are seen for your assessments at the Concussion Clinic. The Land Transport Safety Authority has information about driving after brain injuries and we can give you a fact sheet they have developed, as a guide.

Summary

The most common collection of symptoms after a TBI is known as the post concussion syndrome. These symptoms are part of the normal recovery process and are not signs of brain damage or medical complications.

Post concussion syndrome is more common after mild TBI. Few people will experience all of the symptoms. Symptoms may not develop until days or even weeks after the accident. Most people will be back to normal in 3-6 months without any special treatment.

Most doctors who treat TBI agree that recovery is faster when you get enough rest and resume responsibilities gradually. If your symptoms get worse, or if you notice new post concussion symptoms, this is probably a sign that you are under too much stress. Your work day, or daily routine should be determined by what you are comfortable with.

About This Guide

This guide was provided by the Concussion Clinic at Burwood Hospital.

The information presented here is based on published scientific research and clinical studies. If you have any questions, comments, or would like more information, contact _____on 03 383 3828.

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