



Headaches after brain injury

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Introduction

Headaches are one of the most common effects of brain injury, especially following traumatic brain injury (TBI). Headaches that develop after sustaining a TBI are referred to as post-traumatic headache.

Headache pain can often occur at the site of impact, but can also occur around the temples, the forehead, the back of the head, around the eyes and the vertex (top of the head). Neck pain is also very common after TBI and can be experienced as a precursor for some types of headaches.

Most headaches settle gradually with the passage of time after the injury, although for some people headaches can continue for years.

The information in this factsheet aims to offer general guidance on different types of headaches as well as ways to manage these. It does not replace clinical guidance.

What causes headaches?

Headaches are caused by a number of physical changes in the brain following injury. There can be primary (direct) injury or secondary injury to the tissues or nerves following a traumatic incident.

There may also be damage to the parts of the brain that process pain.

Injury along certain pathways and areas of the brain can also cause pain receptors, called nociceptors, to become hypersensitive.

Types of headaches

There are different types of headaches that can occur. These have differing features such as the type of pain, the onset and other associated features of the pain. Knowing the type of headache you experience can help to learn about ways in which manage the pain most effectively.



The most common types of headache are:

- Tension-type headache
- Migraine headache (including vestibular migraine)
- Cervicogenic headache
- Cluster headache

Tension-type headache

These tend to be experienced as a mild to moderate pressing or squeezing sensation and can occur on both sides of the head. Stress or physical activity can trigger these or cause the symptoms to worsen. Tension-type headaches can come and go in episodes or be continuous.

Migraine headache

These can occur anywhere although they tend to occur on one side of the head and cause moderate to severe pain. The pain is described as pounding or throbbing. Sensitivity to light or noise, vomiting and auras (sensations such as seeing lights just before a migraine is about to start) can occur during a migraine headache.

Vestibular migraine is a type of migraine associated with vertigo. People who have migraine (or a family history) prior to sustaining a TBI are more likely to develop post-traumatic migraine.

Cervicogenic headache

Pain can sometimes start in the neck following injury to the neck or back of the head. These headaches usually occur in the back of the head. Neck movements and pressure/stress can trigger this type of headache.

Cluster headache

Cluster headaches tend to occur on one side of the head. The pain can be very severe and is described as a boring or drilling feeling. It tends to start around the eyes and spreads. These types of headaches are more common in men.

Taking too much pain medication for headaches can, paradoxically, also cause headaches – these are known as analgesic overuse headaches.

When the effects of medication such as paracetamol start to wear off, the pain from an analgesic overuse headache can be even worse than the original headache pain. This is why it is very important to follow the correct dosage of medication for headaches and avoid the long-term use of these medications.

It is possible to have overlapping symptoms of different types of headaches, however many people will experience a single type of headache.



When to seek help

If you experience a sudden, excruciatingly painful headache at the back of the head, worst at the point of onset, with or without a history of brain injury, this is known as a 'thunderclap headache'.

This requires urgent medical attention as it could be a sign of something serious.

Headaches are a common effect of minor head injuries that should resolve themselves over the next few days and weeks. However, if the headache is severe or accompanied by any of the following symptoms, you should visit A&E immediately as it could be a sign of something more serious.

- Loss of consciousness
- New deafness in one or both ears
- Loss of balance or problems walking
- Any weakness in one or both arms or legs
- Any vomiting
- Clear fluid coming out of your ears or nose
- Drowsiness
- Increasing disorientation
- Problems understanding or speaking
- Blurred or double vision
- Inability to be woken
- Bleeding from one or both ears
- Any fits (collapsing or passing out suddenly)
- Severe headache not relieved by painkillers

Persistent headaches or sensations of pressure in the head with no previous history of brain injury should also be investigated by a neurologist in case it is a sign of something more serious.

For other types of headache, you should seek help whenever you feel that they are causing you problems in your day-to-day living. Some of the things you can try are medication, changing your lifestyle, complementary therapies, or seeking more specialised support. More information on these is provided below.

Treating headaches

Medication

You should seek advice from your GP, pharmacist, or neurologist before taking any medication for your headache, as some may be more suitable than others depending on the type of brain injury you have had and other medications that you may be taking.



Many people begin by trying to manage headaches with over-the-counter medication such as Paracetamol or Ibuprofen. These should not be taken on a regular basis. If you are starting to need these on a regular basis, it may be necessary to speak to your GP.

It is very important to always adhere to medication dosage instructions, as taking too much can cause analgesic overuse headaches (see section 'Types of headaches').

Lifestyle modification

Headaches may be triggered by things that you have some degree of control over, such as noise, caffeine, stress, or tiredness. If you can identify certain triggers to your headaches, this may help you to manage them.

As a general rule, make sure your diet is healthy and you eat meals at regular times, get enough good quality sleep, regularly exercise, drink plenty of water, and try to avoid caffeine and alcohol.

Further tips for changing your lifestyle to help with headaches are available in the following section *Tips to try at home*.

Complementary therapies

A complementary therapy is something that you can use alongside medication or other professional forms of treatment.

Some examples include mindfulness, aromatherapy, massage, meditation, and acupuncture. These therapies can help to relax you, which can help with alleviating some forms of headache.

You can try things like meditation and mindfulness yourself at home. There are plenty of guides online and books to help you learn how to practice these techniques such as on the NHS website at www.nhs.uk/mental-health/self-help/tips-and-support/mindfulness. You can also watch Headway's video on mindfulness training by visiting Headway's Youtube channel at www.youtube.com/user/headwayuk. There are also very helpful apps for your phone.

Complementary therapies are not typically offered through the NHS, so may be costly to access. Consider discussing complementary therapies with your GP or researching a therapy type before booking a session.

Seeking specialised support

If your headaches do not improve over time or with the methods already described, it may be necessary to seek specialised support. You should start by discussing your headaches with your GP or neurologist, showing them your headache diary (see tips below) if you have kept one.



You may be prescribed stronger medication; remember to follow the dosage instructions carefully.

If your headaches do not settle, you may then require a referral to a specialist headache clinic. These clinics offer a range of therapies to help with managing pain. The therapies can either directly target the pain for instance through medication or interventions, or can help you with improving your quality of life through exercise, talking therapy or through a pain management programme.

Botulinum toxin (Botox) is commonly associated with cosmetic surgery, but it can also be used to alleviate some types of pain. In some instances, Botox injections can help with improving headaches. This is only licensed when multiple conventional medications have been tried and been unsuccessful. Please remember that Botox must be administered by a headache clinic specialist.

If stress is causing you to experience headaches, consider seeking a referral for talking therapy through your GP, for instance with a counsellor or psychotherapist. You may also wish to consider talking therapy services if your headaches are causing you to feel anxious or depressed.

Tips to try at home

Lifestyle changes

- Try to get enough sleep. If you struggle with sleeping at night time, try to take naps during the day, although avoid doing this later in the afternoon as it may disrupt your natural night time sleeping cycle.
- Try to stick to a regular sleep routine, where you go to bed at the same time every night and try to wake up at the same time every morning.
- Try to do some gentle exercise every day as part of a healthy lifestyle.
- Introduce relaxation techniques to your routine such as mindfulness.
- Avoid overstraining your eyes, for instance spending long periods of time at a computer/mobile phone screen or reading. Remember to get your eyes tested by an optician annually.

Identify triggers

- Common triggers include stress, lights, noise, smells, alcohol, weather changes, and fatigue. Where possible, try to minimise or avoid your triggers, although try not to be too anxious about completely avoiding things either if something is out of your control.



- Avoid caffeine, over-the-counter stimulants, other illegal substances (such as marijuana) and alcohol as these can interfere with the recovery process after brain injury and worsen headaches. If you really want to drink coffee or tea, do this in moderation and monitor how you feel afterwards in case they trigger headaches.
- In some instances, hormones may be responsible for triggering headaches. Speak to your GP if you are concerned about your hormones. In some cases brain injury can affect hormones, more information on this is available in the Headway factsheet *Hormonal imbalances after brain injury*.

Consider your diet

- Be aware that some types of food may trigger migraine headaches (the research is mixed), such as chocolate, cheese, citrus fruit and tomatoes. There is no need to completely avoid these foods, but try monitoring how you feel after eating them, or avoid them for a short while to see if it makes any difference.
- Some research also suggests that high blood pressure can be related to headaches. A low sodium diet may therefore also be helpful with managing headaches.

Keep a headache diary

- It can be useful to keep a record of your headaches when you experience them as this might help with identifying triggers, learning to manage them, and diagnosing them.
- Make a note of the time when you experience the headache; gradually you may notice if there are certain times of the day when your headaches are at their worst, which may help with planning your days. For instance, if you become aware that you experience headaches in the afternoons, you can try to keep these free as much as possible.
- Keep a record of the pain intensity of each headache, using a rating system where 0 is no pain and 10 is excruciating pain. Make some notes each time you log a headache describing how the pain feels, as this may help with identifying what type of headache it is.

Conclusion

Headaches can be a difficult effect of brain injury to experience and can affect quality of life. There are several different types of headache and being able to identify which one you experience can help with learning how to manage it and treat it.

We hope that the information in this factsheet has been a useful guide to help you with



understanding headaches after brain injury and how to manage them.

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Useful organisations

Action on Pain! – for information and support for people affected by chronic pain

www.action-on-pain.co.uk

0345 6031 593

Ouch UK – for information and support on cluster headaches

www.ouchuk.org

0800 6696 824

Pain Concern – for information and support on managing pain

www.painconcern.org.uk

0300 123 0789

The Migraine Trust – for information and support on migraines

www.migrainetrust.org

0203 9510 150

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