Guidelines for Concussion / Mild Traumatic Brain Injury & Persistent Symptoms

Second Edition

For adults (18+ years of age)







Module 6: Post-Traumatic Headache

Ontario Neurotrauma Foundation
Fondation ontarienne de neurotraumatologie

MODULE 6: POST-TRAUMATIC HEADACHE

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Please note, the project team independently managed the development and production of the guideline and, thus, editorial independence is retained.

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The recommendations and resources found within the *Guidelines for Concussion/Mild Traumatic Brain Injury & Persistent Symptoms* are intended to inform and instruct care providers and other stakeholders who deliver services to adults who have sustained or are suspected of having sustained a concussion/mTBI. These guidelines are not intended for use with patients or clients under the age of 18 years. These guidelines are not intended for use by people who have sustained or are suspected of having sustained a concussion/mTBI for any self-diagnosis or treatment. Patients may wish to bring their healthcare and other providers' attention to these guidelines.

The recommendations provided in these guidelines are informed by best available evidence at the time of publication, and relevant evidence published after these guidelines could influence the recommendations made within. Clinicians should also consider their own clinical judgement, patient preferences and contextual factors such as resource availability in clinical decision-making processes.

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Unique Features & Symbols in the Current Guideline

Hyperlinks

To improve ease of use, the current guideline has embedded hyperlinks to improve navigation between sections, appendices, and so on. For example, by clicking any heading in the table of contents above, you will be taken directly to that particular section in the current PDF document. Also, anytime there is mention of a particular table, figure, appendix or section, you can simply click on it to go directly to that item.

Symbols

The following symbol has been placed to the left of each guideline recommendation that should be prioritized for implementation. This was determined by expert consensus members during the endorsement/prioritization process, where experts were allowed to provide 20 prioritization votes (see Methodology in the Complete Version). Guideline recommendations with a summed prioritization score greater than 20 are key clinical practice guidelines recommendations for implementation.

The following symbol has been placed to the left of one key guideline recommendation in each of the sections that did not include a recommendation with a prioritization score greater than 20 (determined by expert consensus members during the endorsement/prioritization process).

At the bottom of each page in the current document, there is a hyperlinked footer that can be used to return to the table of contents as desired. Also, clicking “Return to Last Page” will take you back to the previously viewed page. (Note: When scrolling through the pages, the “Return to Last Page” button will only return to the last page that was scrolled through).

6 Post-Traumatic Headache

Special contributor: Jonathan Gladstone

Headache is the most common symptom following mTBI.[1] Studies to date have documented that anywhere from 30-90% of individuals who sustain a mTBI develop post-traumatic headache.[2,3] Interestingly, several researchers have reported that post-traumatic headache is more common after mild TBI than after severe TBI.[2,4-11] Notably, post-traumatic headache is associated with a high degree of disability.[1] The vast majority of people with post-traumatic headache improve within days or weeks; however, for some individuals, headaches may persist beyond this time frame up to months or years. The International Classification of Headache Disorders (ICHD-II)[12] includes diagnostic criteria for both acute (Appendix 6.1) and chronic (Appendix 6.2) post-traumatic headache following mTBI.

Unfortunately, the management of persistent post-traumatic headache is often difficult, and there is a paucity of research in the area and no evidence-based treatment guidelines available to guide management. Accordingly, the management of post-traumatic headache is based upon clinical experience and expert opinion.[12] The overall approach to the management of post-traumatic headache is: (i) to recommend implementation of basic lifestyle and non-pharmacologic strategies to try to mitigate headache occurrence and (ii) to determine the primary (or secondary) headache disorder that most closely resembles the patient's symptoms and then implement treatment strategies aimed at treating that headache subtype.[13]

In line with this, classification criteria for the common phenotypes of post-traumatic headache are provided in Appendix 6.3, and individual treatment pathways for these classes of primary headache can be found in Algorithm 6.1. Clinical studies to date have been conflicting regarding the type of headache that most commonly occurs in post-traumatic headache. Some studies have suggested that the headaches most commonly resemble migraine headaches, whereas other studies have suggested that headaches more commonly resemble tension-type headache.[6,13-19]

Unfortunately, too frequent use of analgesics is a significant problem in many individuals suffering from persistent post-traumatic headaches.[6,13] It is well known that too frequent use of analgesics/acute headache medications can, in some, perpetuate and lead to chronification of headaches via the phenomenon of medication overuse ("rebound") headache. Accordingly, it is important to provide clear instructions on the maximal allowable daily dosing and the maximum allowable monthly frequency of medication consumption–combination analgesics, narcotic analgesics, ergotamines, and triptans can be utilized no more than 10 days per month to avoid medication overuse (rebound) headache. It is also important to accurately ascertain the frequency and quantity of the patient's acute headache medication use. Ideally, a blank monthly calendar should be utilized to maintain an accurate headache and medication calendar (diary). For example, advise patients to put the calendar in their bedroom or beside their toothbrush and fill out nightly, or utilize a notebook to record the information and then transfer to their monthly calendar.

It can be very challenging to determine whether an individual's persistent post-traumatic headaches are secondary to the severity of their post-traumatic headache disorder or whether they are secondary to medication overuse (rebound) headache. In order to try to determine whether the individual's headaches may, in fact, be perpetuated by medication overuse (rebound), it is important to withdraw the individual from the offending medication(s) for a washout period of at least 6-8 weeks.[1] The ICHD-II criteria for Medication Overuse in Headache are presented in Appendix 6.4. Prolonged passive treatment (i.e., many months) is generally not required.

Table 6.1. Important Components to Include in the Focused Headache History

1. Headache frequency
2. Headache duration
3. Headache location
4. Headache intensity
5. Quality of the pain (pressure, throbbing, stabbing)
6. Associated symptoms (e.g., nausea/vomiting)
7. Precipitating/provoking factors
8. Alleviating factors
9. Previous treatment experiences and responses to date (including benefits and side-effects)

RECOMMENDATIONS FOR ASSESSMENT OF POST-TRAUMATIC HEADACHE		
		GRADE
6.1	Take a focused headache history (Table 6.1) in order to identify the headache subtype(s) that most closely resembles the patient's symptoms. To aid in determining the specific phenotype of headache disorder present, refer to the ICHD-II classification criteria in Appendix 6.3. Unfortunately, some post-traumatic headaches are unclassifiable.	C
6.2	Establish the degree of headache-related disability (i.e., missed work/school, decreased productivity, missed social/recreational activities, bedridden) to assist in stratifying a treatment approach (see Appendix 6.5).	C
6.3	Perform a neurologic exam and musculoskeletal exam including cervical spine examination (refer to Appendix 6.6).	C
RECOMMENDATIONS FOR NON-PHARMACOLOGICAL TREATMENT OF POST-TRAUMATIC HEADACHE		
		GRADE
6.4	Education should be provided on lifestyle strategies and simple, self-regulated intervention strategies that may minimize headache occurrence. For more details on lifestyle management, see Appendix 6.7.	C
6.5	Consideration should be given to non-pharmacological therapies targeted to the presumed source of the headache, including relaxation therapy, biofeedback, massage therapy, manual therapy of the spine, acupuncture, vision therapy, and cognitive behavioral therapy.	C
RECOMMENDATIONS FOR PHARMACOLOGICAL TREATMENT OF POST-TRAUMATIC HEADACHE		
		GRADE
6.6	All patients with frequent headaches should be required to maintain an accurate headache and medication calendar in order to accurately gauge symptoms and guide management.	C
6.7	Based upon the patient's headache characteristics, consideration may be given to using acute headache medications, limited to <15 days per month, including: 1. Over-the-counter or prescription NSAIDs (e.g., Tylenol); 2. Acetylsalicylic acid; 3. Acetaminophen; and 4. Combination analgesics (with codeine or caffeine).	C
6.8	For patients with post-traumatic headaches that are migrainous in nature, the use of migraine-specific abortant triptan class medications (i.e., almotriptan, eletriptan, sumatriptan, rizatriptan, zolmitriptan, etc.) may be effective but should be limited to <10 days per month.	B
6.9	Narcotic analgesics should be avoided or restricted to "rescue therapy" for acute attacks when other first- and second-line therapies fail or are contraindicated.	C
6.10	Prophylactic therapy should be considered if headaches are occurring too frequently or are too disabling, or if acute headache medications are contraindicated, poorly tolerated, or being used too frequently (see Appendix 6.8).	C
6.11	Post-traumatic headaches may be unresponsive to conventional treatments. If headaches remain inadequately controlled, referral to a neurologist, pain management specialist, or traumatic brain injury clinic is recommended.	C

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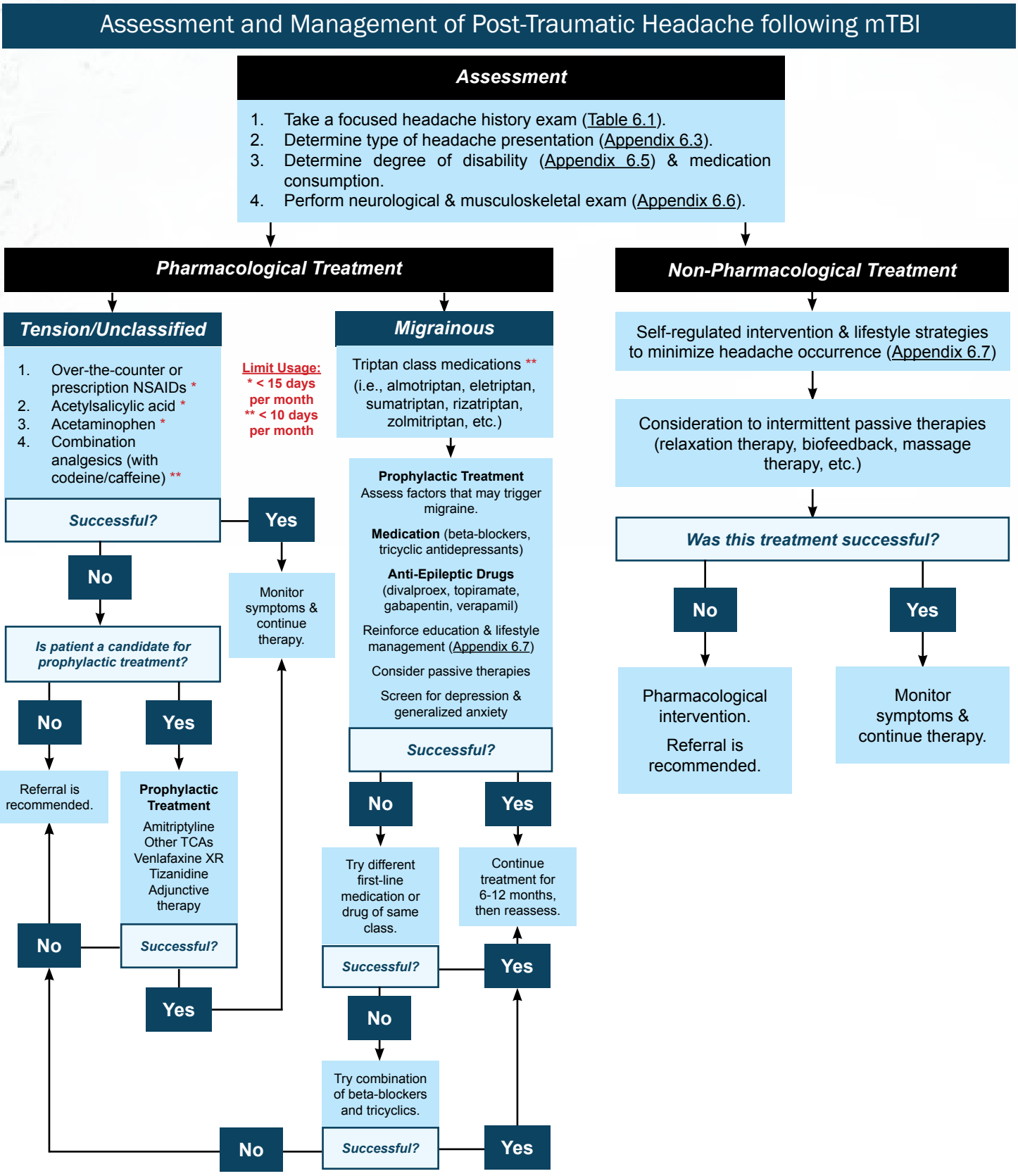
Algorithm 6.1



For a narrative description and guideline recommendations related to this algorithm, please refer to **Section 6**.

Appendix 6.1

International Classification of Headache Disorders (ICHD-II): Acute Post-Traumatic Headache Attributed to Mild Head Injury

IHS	Diagnosis	ICD-10
5.1.2.	Acute post-traumatic headache attributed to mild head injury [S09.9].	G44.880

Diagnostic Criteria:

A. Headache, no typical characteristics known, fulfilling criteria C and D

B. Head trauma with all of the following
   1. Either no loss of consciousness, or loss consciousness of < 30 minutes' duration
   2. Glasgow Coma Scale (GCS) ≥ 13
   3. Symptoms and/or signs diagnostic of concussion

C. Headache develops within 7 days after head trauma

D. One or other of the following:
   1. Headache resolves within 3 months after head trauma
   2. Headache persists but 3 months have not yet passed since head trauma

Comment:
Mild head injury may give rise to a symptom complex of cognitive, behavioural and consciousness abnormalities and a GCS of ≥13. It can occur with or without abnormalities in the neurological examination, neuroimaging (CT scan, MRI), EEG, evoked potentials, CSF examination, vestibular function tests and neuropsychological testing. There is no evidence that an abnormality in any of these changes the prognosis or contributes to treatment. These studies should not be considered routine for patients with ongoing post-traumatic headache. They may be considered on a case-by-case basis, or for research purposes.

Appendix 6.2

International Classification of Headache Disorders (ICHD-II): Chronic Post-Traumatic Headache Attributed to Mild Head Injury

IHS	Diagnosis	ICD-10
5.2.2.	Chronic post-traumatic headache attributed to mild head injury [S09.9].	G44.31

Diagnostic Criteria:

A. Headache, no typical characteristics known, fulfilling criteria C and D

B. Head trauma with all of the following
   1. Either no loss of consciousness, or loss consciousness of < 30 minutes' duration
   2. Glasgow Coma Scale (GCS) ≥ 13
   3. Symptoms and/or signs diagnostic of concussion

C. Headache develops within 7 days after head trauma

D. Headache persists for > 3 months after head trauma

Comment:
Mild head injury may give rise to a symptom complex of cognitive, behavioural and consciousness abnormalities and a GCS of ≥13. It can occur with or without abnormalities in the neurological examination, neuroimaging (CT scan, MRI), EEG, evoked potentials, CSF examination, vestibular function tests and neuropsychological testing. There is no evidence that an abnormality in any of these changes the prognosis or contributes to treatment. These studies should not be considered routine for patients with ongoing post-traumatic headache. They may be considered on a case-by-case basis, or for research purposes.

Appendix 6.3

Diagnostic Criteria for Selected Primary Headache Types from the International Classification of Headache Disorders (ICHD-II)

1.1 Migraine without aura

Diagnostic criteria:

A. At least 5 attacks fulfilling criteria B-D
B. Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)
C. Headache has at least two of the following characteristics:
    1. Unilateral location
    2. Pulsating quality
    3. Moderate or severe pain intensity
    4. Aggravation by or causing avoidance of routine physical activity (e.g., walking or climbing stairs)
D. During headache, at least one of the following:
    1. Nausea and/or vomiting
    2. Photophobia and phonophobia
E. Not attributed to another disorder

2.2 Frequent episodic tension-type headache

Diagnostic criteria:

A. At least 10 episodes occurring on ≥ 1 but < 15 days per month for at least 3 months (≥ 12 and < 180 days per year) and fulfilling criteria B-D
B. Headache lasting from 30 minutes to 7 days
C. Headache has at least two of the following characteristics:
    1. Bilateral location
    2. Pressing/tightening (non-pulsating) quality
    3. Mild or moderate intensity
    4. Not aggravated by routine physical activity such as walking or climbing stairs
D. Both of the following:
    1. No nausea or vomiting (anorexia may occur)
    2. No more than one of photophobia or phonophobia
E. Not attributed to another disorder

4.1 Primary stabbing headache

Diagnostic criteria:

A. Head pain occurring as a single stab or a series of stabs and fulfilling criteria B-D
B. Exclusively or predominantly felt in the distribution of the first division of the trigeminal nerve (orbit, temple and parietal area)
C. Stabs last for up to a few seconds and recur with irregular frequency ranging from one to many per day
D. No accompanying symptoms
E. Not attributed to another disorder

13.8 Occipital neuralgia

Diagnostic criteria:

A. Paroxysmal stabbing pain, with out without persistent aching between paroxysms, in the distribution(s) of the greater, lesser and/or third occipital nerves
B. Tenderness over the affected nerve
C. Pain is eased temporarily by local anaesthetic block of the nerve

Appendix 6.4

International Classification of Headache Disorders (ICHD-II): Medication-Overuse Headache

IHS	Diagnosis	ICD-10
8.2.	Medication-overuse headache [MOH]	G44.41 or G44.83

Diagnostic Criteria:

A. Headache[1] present on ≥ 15 days/month fulfilling criteria C and D
B. Regular overuse[2] for ≥ 3 months of one or more drugs that can be taken for acute and/or symptomatic treatment of headache[3]
C. Headache has developed or markedly worsened during medication overuse
D. Headache resolves or reverts to its previous pattern within 2 months after discontinuation of overused medication[4]

Notes:

1. The headache associated with medication overuse is variable and often has a peculiar pattern with characteristics shifting, even within the same day, from migraine-like to those of tension-type headache.
2. Overuse is defined in terms of duration and treatment days per week. What is crucial is that treatment occurs both frequently and regularly, i.e., on 2 or more days each week. Bunching of treatment days with long periods without medication intake, practiced by some patients, is much less likely to cause medication overuse headache and does not fulfill criterion B.
3. MOH can occur in headache-prone patients when acute headache medications are taken for other indications.
4. A period of 2 months after cessation of overuse is stipulated in which improvement (resolution of headache, or reversion to its previous pattern) must occur if the diagnosis is to be definite. Prior to cessation, or pending improvement within 2 months after cessation, the diagnosis 8.2.8 Probable medication-overuse headache should be applied. If such improvement does not then occur within 2 months, this diagnosis must be discarded.

Comments:
Medication-overuse headache is an interaction between a therapeutic agent used excessively and a susceptible patient. The best example is overuse of symptomatic headache drugs causing headache in the headache-prone patient. By far the most common cause of migraine-like headache occurring on -15 days per month and of a mixed picture of migraine-like and tension-type-like headaches on -15 days per month is overuse of symptomatic migraine drugs and/or analgesics. Chronic tension-type headache is less often associated with medication overuse but, especially amongst patients seen in headache centres, episodic tension-type headache has commonly become a chronic headache through overuse of analgesics.

Patients with a pre-existing primary headache who develop a new type of headache or whose migraine or tension-type headache is made markedly worse during medication overuse should be given both the diagnosis of the pre-existing headache and the diagnosis of 8.2 Medication-overuse headache.

The diagnosis of medication-overuse headache is clinically extremely important because patients rarely respond to preventative medications whilst overusing acute medications.

Appendix 6.5

Headache Impact Test 6 (HIT-6)

HIT-6™ HEADACHE IMPACT TEST

This questionnaire was designed to help you describe and communicate the way you feel and what you cannot do because of headaches.

To complete, please check one box for each question.

1. When you have headaches, how often is the pain severe?

☐ Never ☐ Rarely ☐ Sometimes ☐ Very Often ☐ Always

2. How often do headaches limit your ability to do usual daily activities including household work, work, school, or social activities?

☐ Never ☐ Rarely ☐ Sometimes ☐ Very Often ☐ Always

3. When you have a headache, how often do you wish you could lie down?

☐ Never ☐ Rarely ☐ Sometimes ☐ Very Often ☐ Always

4. In the past 4 weeks, how often have you felt too tired to do work or daily activities because of your headaches?

☐ Never ☐ Rarely ☐ Sometimes ☐ Very Often ☐ Always

5. In the past 4 weeks, how often have you felt fed up or irritated because of your headaches?

☐ Never ☐ Rarely ☐ Sometimes ☐ Very Often ☐ Always

6. In the past 4 weeks, how often did headaches limit your ability to concentrate on work or daily activities?

☐ Never ☐ Rarely ☐ Sometimes ☐ Very Often ☐ Always

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Appendix 6.6

Important Components to Include in the Neurologic and Musculoskeletal Exam

Perform a neurologic exam and musculoskeletal exam including cervical spine examination:

- Examine the site of injury.
- Examine the cervical spine exam for range of motion and focal areas of tenderness, spasm, hypertonicity.
- Examine the temporomandibular joint (TMJ) for range of opening, tenderness, dislocation.
- Brief cognitive and language screen.
- Examine cranial nerve 2 (i.e. assess pupil symmetry and reactivity, visual fields to confrontation, and ensure that there is no optic edema).
- Examine cranial nerves 3, 4, 6 (screen for abnormalities in eye movements, diplopia, nystagmus).
- Conduct a motor screen to check for pronator drift, asymmetrical weakness and symmetry of reflexes.
- Conduct a sensory exam to check that there is no extinction to bilateral tactile stimuli.
- Assess coordination by evaluation finger-to-nose movements, gait and tandem gait.

If any focal abnormalities are observed, refer for appropriate imaging and to an appropriate specialist.

See Appendix B for links to video demonstrations of neck and neurological examinations.

Appendix 6.7

Self-Regulated Intervention and Lifestyle Strategies to Minimize Headache Occurrence

Simple Self-regulated Intervention Strategies*

- Apply a cold or hot back to the neck or head
- Tie something tight around the head
- Stretching and self-massaging the head and/or neck and shoulders
- Perform breathing exercises
- Visualization or other mindfulness-based exercises
- Go to a quiet place
- Lie down
- Go outside to get fresh air

* Note. When relevant, there are a variety of allied-health professionals who can guide individuals to perform appropriate home-based neck and shoulder stretching.

Lifestyle Strategies to Minimize Headache Occurrence

a) Sleep: It is well-known that sleep deprivation or inconsistent sleep-wake cycles can precipitate headaches or preclude improvement. Accordingly, it is important to educate individuals with post-traumatic headache (PTH) on the importance of going to bed at the same time each night and waking up at the same time each night and, if possible, avoiding day-time naps. If insomnia continues to be a significant problem, please refer to section 7 for an approach to the management of insomnia

b) Regular Meals: It is well-known that skipping or delaying meals can trigger headaches in some people. As such, it is important to ensure that patients with PTH consume breakfast (ideally a high-protein breakfast), lunch and dinner and avoiding delaying or skipping meals.

c) Hydration: It is thought that dehydration can be a trigger for headaches in some susceptible individuals. As such, it is important to maintain good hydration – this means consuming 4-6 drinks per day of water, juice, milk or other non-caffeinated beverages. Regular daily caffeine-consumption (i.e. coffee, soft-drinks) should be avoided as caffeine consumption and withdrawal can precipitate headaches (when an individual does not consume caffeinated beverages regularly, a caffeinated beverage may be helpful to minimize intermittent bad headaches). Diet soft-drinks should be further avoided as, in some, aspartame may trigger headaches.

d) Stress: It is well-known that in many individuals stress, worry, anxiety or anger can be a significant trigger for headaches. These symptoms are particularly common in individuals who have sustained a traumatic brain injury and, as such, can have a major impact on the frequency and severity of PTH. As such, using relaxation strategies, doing activities such as meditation, yoga, and exercise can assist with coping with stress and avoiding stress-induced worsening of headaches. The assistance of an occupational therapist, psychologist, GP-psychotherapist or psychiatrist may be necessary.

e) Exercise: In the initial period after a traumatic brain injury, physical rest is often endorsed. However, as the weeks go by, inactivity is frequently counter-productive and a sedentary lifestyle without any cardiovascular exercise may, in some, perpetuate the headaches. Accordingly, a brisk walk (particularly a morning walk outside), riding a stationary bicycle, walking or jogging on a treadmill or elliptical machine or swimming can be very helpful in headache management. An exercise program should be undertaken as tolerated with gradually increasing duration and intensity. For some, exercise triggers a headache and in these individuals the intensity and/or duration of the exercise should be reduced or an alternative exercise should be trialed.

Appendix 6.8

Prophylactic Therapy

Note that all therapies utilized for the prophylaxis of post-traumatic headaches are off-label. Prophylactic therapies should be utilized using a "start-low and go slow" approach. Patients should advised that prophylactic therapies are not a cure and they may not perceive any benefit for weeks and maximal benefit may take up to 12 weeks to be realized. A therapeutic trial of a prophylactic therapy should last 12 weeks unless there are intolerable medication side-effects. The only useful way to evaluate the effectiveness of a prophylactic therapy is review of the patient's headache and medication calendar. If the prophylactic therapy is efficacious, it should be continued for a minimum of 3-6+ months and then consideration could be given to gradually weaning off, if possible

Patients must be advised of realistic goals with regards to prophylactic therapy – the goal is not to "cure" the individual's headaches; rather, the goal is to try to decrease the individual's headache frequency and/or headache intensity and/or headache duration and/or acute medication requirements. Patients should also be advised that there are no "designer" drugs for headache prophylaxis – all medications utilized were created for other reasons and were subsequently found to be effective in headache prophylaxis in some, but not all, patients. This will pre-empt unnecessary patient confusion and non-compliance.

If the headaches are tension-type in nature or unclassifiable, first-line therapy is Amitriptyline or Nortriptyline (starting at 10 mg po qhs and increasing by 10 mg q1-2 weeks as necessary/tolerated to a maximum of 50- (and occasionally up to 100 mg po qhs). Amitriptyline is more sedating than Nortriptyline so should be utilized if there are concomitant sleep disturbances. Second-line therapy to consider is Gabapentin (starting at 100-300 mg po qhs and increasing by 100-300 mg q5 days as necessary/tolerated on a TID schedule to a maximum of approximately 600 mg po TID)

If the headaches are migrainous in nature:

a) First-line therapy would be a Tricyclic Antidepressant (i.e.Amitriptyline or Nortriptyline starting at 10 mg po qhs and increasing by 10 mg q1-2 weeks as necessary/tolerated to a maximum of 50-100 mg po qhs) or a beta-blocker (i.e. Nadolol starting at 20 mg po BID and increasing by 20 mg q5days as necessary/tolerated to 40-80 mg po BID or Propranolol 20 mg po TID and increasing by 20 mg q5days as necessary/tolerated to a maximum of 80 mg po TID).
b) Second-line therapy includes Topiramate (starting at 12.5 mg po qhs and increasing by 12.5 mg po qhs qweekly as necessary/tolerated to a maximum of 100 mg po qhs) or, failing this, Gabapentin (starting at 100-300 mg po qhs and increasing by 100-300 mg q5 days as necessary/tolerated on a TID schedule to a maximum of approximately 600 mg po TID).
c) Third-line therapies would include Verapamil (stating at 40 mg po TID and titrating to 80 mg po TID as necessary/tolerated), Pizotifen (starting at 0.5 mg po qhs and increasing by 0.5 mg qweekly as necessary/tolerated to 3.0 mg po qhs) and Flunarizine (starting at 5 mg po qhs and increasing to 10 mg po qhs after 10-14 days).
d) Notably, should trials of a couple oral prophylactic agents prove ineffective, or should oral prophylactic medications be contraindicated by concomitant medical issues or by significant polypharmacy, consideration could certainly be given to interventional therapy. Botulinum Toxin Type A (onabotulinum toxin) up to 200 units q3months using a fixed-dose, follow-the-pain treatment paradigm has proven beneficial in recent phase 3 RCT trials for the prophylaxis of chronic migraine and is an approved treatment for chronic migraine.
e) Nerve blocks (i.e. occipital nerve blocks) should be restricted to intractable daily post-traumatic headache and should be discontinued if the repetitive nerve blocks are ineffective after weekly treatment for 4-6 weeks.

The choice of prophylactic therapy depends on comorbid symptoms (i.e., consider Amitriptyline if concomitant insomnia, a Beta-blocker if concomitant hypertension, Topiramate if concomitant obesity) and contraindications (avoid Beta-blocker/Calcium-channel blocker if hypotensive, Tricyclic if excessive fatigue, Topiramate if excessive cognitive symptoms, Flunarizine if depression etc).

Appendix A

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* The recommendations in this document are those of the Ontario Neurotrauma Foundation, identified by the guideline development team and expert consensus group members, and do not necessarily represent agreement of or endorsement by the Centers for Disease Control and Prevention.

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Appendix B

Other Links/References for Resources to Consider

Section 6: Post-Traumatic Headache

Migraine Disability Assessment Questionnaire (MIDAS)
A 5-item self-report questionnaire which captures information on lost time from work for pay, housework, and leisure activities due to migraines in order to determine how severely migraines affect a patient's life.

Stewart WF, Lipton RB, Dowson AJ, Sawyer J. Development and testing of the Migraine Disability Assessment (MIDAS) Questionnaire to assess headache-related disability. *Neurology*. 2001;56:S20-S28.

Links for Neck & Neurological Exam Video Demonstrations
http://www.youtube.com/watch?v=iuegN6P2SAA (Neck Exam)
http://www.youtube.com/watch?v=QirMbworS10 (Neck Exam)
http://www.youtube.com/watch?v=fgwN1P5PDaA (Neurological Exam)