

# Practice Current: "How do you diagnose and treat post-concussive headache?"

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*While recognizing each case is different, please choose the answer that best reflects your common practice and limit free text to strategies that are not included.*

**Estimated Time: 2 Minutes**

## **CASE 1**

A 25-year-old man presents to clinic with daily headaches 1 month after he slipped on the ice and hit his head on the sidewalk. He did not lose consciousness, but felt dazed following the fall. He did not seek medical attention at time of the fall. About a week after the injury, he developed a holocephalic headache which varies in intensity from mild to severe. The headache is described as a feeling of pressure with occasional throbbing. When the headache is debilitating, it is associated with light and sound sensitivity as well as nausea. The headaches are neither positional nor worse with cough, sneezing, or Valsalva maneuver. The headaches improve following sleep and/or naproxen use. The neurologic exam, including fundoscopic examination, is normal.

**Logic: Show/hide trigger exists.**

**1) Would you order imaging for this patient?\***

- Yes
- No

**Logic: Hidden unless: #1 Question "Would you order imaging for this patient?" is one of the following answers ("Yes")**

**2) What kind of imaging would you order? (Select one. Assume CT imaging can be obtained same day and MRI imaging can be completed in 2 weeks.)\***

- CT head with contrast
- CT head without contrast
- MRI brain with contrast

MRI brain without contrast

Other - Write In: \_\_\_\_\_

**Logic: Hidden unless: #1 Question "Would you order imaging for this patient?" is one of the following answers ("Yes")**

**3) Would you wait for imaging results before starting treatment? (Assume CT imaging can be obtained same day and MRI imaging can be completed in 2 weeks.)\***

Yes

No

**Logic: Show/hide trigger exists.**

**4) Which of the following initial treatment(s) would you recommend? (Check all that apply.)\***

Reassurance and continue as needed naproxen use

Prescribe an anti-emetic for nausea and headache

Prescribe a triptan for severe headache

Counsel the patient regarding sleep, exercise, diet and hydration

Start a daily headache preventative

Recommend non-pharmacological treatments such as cognitive behavior therapy (CBT), acupuncture, relaxation techniques, biofeedback or physical therapy

Other - Write In: \_\_\_\_\_

**Logic: Hidden unless: #4 Question "Which of the following initial treatment(s) would you recommend? (Check all that apply.)" is one of the following answers ("Start a daily headache preventative")**

**5) What daily headache preventative would you start? (Select one.)\***

Topiramate

Propranolol

- Amitriptyline
- Nortriptyline
- Valproate
- Melatonin
- Gabapentin
- Cyproheptadine
- Calcitonin gene-related peptide (CGRP) monoclonal antibodies
- Other - Write In: \_\_\_\_\_

**6) If the patient in Case 1 were a 14-year-old presenting after a football- or soccer-related concussion without loss of consciousness, would you order imaging?\***

- Yes
- No

**Logic: Show/hide trigger exists.**

**7) If the patient in Case 1 were a 14-year-old presenting after a football- or soccer-related concussion without loss of consciousness, what initial treatment would you recommend?\***  
*(Check all that apply.)\**

- Reassurance and continue as needed naproxen use
- Prescribe an anti-emetic for nausea and headache
- Prescribe a triptan for severe headache
- Counsel the patient regarding sleep, exercise, diet and hydration
- Start a daily headache preventative
- Recommend non-pharmacological treatments such as cognitive behavior therapy (CBT), acupuncture, relaxation techniques, biofeedback or physical therapy
- Other - Write In: \_\_\_\_\_

**Logic: Hidden unless: #7 Question "If the patient in Case 1 were a 14-year-old presenting after a football- or soccer-related concussion without loss of consciousness, what initial**

treatment would you recommend?\* (Check all that apply.)" is one of the following answers ("Start a daily headache preventative")

**8) What daily headache preventative would you start? (Select one.)\***

- Topiramate
- Propranolol
- Amitriptyline
- Nortriptyline
- Valproate
- Melatonin
- Gabapentin
- Cyproheptadine
- Calcitonin gene-related peptide (CGRP) monoclonal antibodies
- Other - Write In: \_\_\_\_\_

**Logic: Hidden unless: #7 Question "If the patient in Case 1 were a 14-year-old presenting after a football- or soccer-related concussion without loss of consciousness, what initial treatment would you recommend?\* (Check all that apply.)" is one of the following answers ("Reassurance and continue as needed naproxen use", "Prescribe an anti-emetic for nausea and headache", "Prescribe a triptan for severe headache", "Counsel the patient regarding sleep, exercise, diet and hydration", "Recommend non-pharmacological treatments such as cognitive behavior therapy (CBT), acupuncture, relaxation techniques, biofeedback or physical therapy", "Other - Write In")**

**9) The 14-year-old patient returns one month later with continued headaches despite following your counseling. The patient would like to take something everyday to treat their headache. What headache preventative would you start? (Select one.)\***

- Topiramate
- Propranolol
- Amitriptyline
- Nortriptyline
- Valproate
- Melatonin
- Gabapentin
- Cyproheptadine

Calcitonin gene-related peptide (CGRP) monoclonal antibodies

Other - Write In: \_\_\_\_\_

## CASE 2

A 37-year-old woman presents to clinic with headache following a motor vehicle collision which occurred 1 year ago. She was the restrained driver and was parked at a stoplight when another vehicle traveling at 20 mph hit her vehicle from behind. The collision jerked her forwards and backwards, and she hit her head on her seat headrest. She was evaluated in a local ER and was cleared after a CT of the head and cervical spine. The next day she developed bitemporal squeezing headaches not associated with nausea, vomiting, or light or sound sensitivity. The headache will worsen with tasks of concentration. The headache is not positional or worse with cough, sneezing, or Valsalva maneuver. Ibuprofen and sumatriptan lessen her pain but do not abort her headaches. Since the collision she has also had insomnia and endorses depressed mood. 120mg per day of propranolol for 3 months did not reduce her headache frequency. She has been taking topiramate at 50 mg twice a day for 5 months and currently has 20 headache days per month. MRI brain was performed 10 months ago and was normal. Her neurologic exam, including fundoscopic examination, is normal.

**Logic: Show/hide trigger exists.**

**10) Would you change the patient's current headache treatment?\***

Yes

No

**Logic: Hidden unless: #10 Question "Would you change the patient's current headache treatment?" is one of the following answers ("Yes")**

**11) How would you change the patient's current headache treatment? (Check all that apply.)\***

Increase topiramate dose

Add on a second daily headache preventative

Perform bilateral occipital nerve blocks

Perform botulinum toxin injections

Counsel the patient regarding sleep, exercise, diet and hydration

Prescribe repetitive transcranial magnetic stimulation device

Recommend non-pharmacological treatments such as cognitive behavior therapy (CBT), acupuncture, relaxation techniques, biofeedback or physical therapy

[ ] Other - Write In: \_\_\_\_\_

**12) Would you refer this patient to a mental health professional such as a psychiatrist, psychologist or other behavioral healthcare expert?\***

Yes

No

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### **Demographic Information**

**13) Are you a headache or TBI specialist or have you completed a headache fellowship?\***

Yes

No

**14) How many patients with headache after concussion have you treated over the past 12 months?\***

None

1 to 10

10 to 25

25 to 100

More than 100

**15) What patient population do you treat?\***

Adults (18 years and older)

Children (0 to 18 years)

Both (adults and children)

**16) How many years have you been in practice?\***

- In Training
- Less than 10 years
- 10 or more years

**17) What is your primary work setting?\***

- Hospital-based (including free-standing, academic, and government)
- Outpatient-based (including neurology clinic, multi-specialty clinic, and private practice)

**18) What is your current level of training?\***

- Resident/Fellow
  - Attending/Consultant/Faculty Board-certified Physician
  - Nurse Practitioner (NP)
  - Physician Assistant (PA)
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**Demographic Information**

**Logic: Show/hide trigger exists.**

**19) Do you currently practice in the United States?\***

- Yes
- No

**Logic: Hidden unless: #19 Question "Do you currently practice in the United States?" is one of the following answers ("No")**

**20) In what country is your practice located?\***

- Afghanistan
- Åland Islands
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia
- Bonaire, Sint Eustatius and Saba
- Bosnia and Herzegovina



- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- Brunei Darussalam
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Congo, the Democratic Republic of the
- Cook Islands
- Costa Rica
- Cote d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czech Republic
- Denmark
- Djibouti

- Dominica
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Entrea
- Estonia
- Ethiopia
- Falkland Islands (Malvinas)
- Farce Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern Territories (the)
- Gabon
- Gambia
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Greenland
- Grenada
- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-bissau
- Guyana

- Haiti
- Heard Islands and McDonald Islands
- Holy See
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran, Islamic Republic of
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Kazakhstan
- Kenya
- Kiribati
- Korea, Democratic People's Republic of
- Korea, Republic of
- Kuwait
- Kyrgyzstan
- Lao People's Democratic Republic
- Latvia
- Lebanon
- Lesotho
- Liberia
- Libya
- Liechtenstein
- Lithuania

- Luxembourg
- Macao
- Macedonia (The Former Yugoslav Republic of)
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
- Marshall Islands
- Martinique
- Mauritania
- Mauritius
- Mayotte
- Mexico
- Micronesia, Federated States of
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar
- Namibia
- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria

- Niue
- Norfolk Island
- Northern Mariana Islands
- Norway
- Oman
- Pakistan
- Palau
- Palestine, State of
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russian Federation
- Rwanda
- Saint Barthélemy
- Saint Helena, Ascension and Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- Saint Martin (French part)
- Saint Pierre and Miquelon
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- Sao Tome and Principe
- Saudi Arabia

- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Sint Maarten (Dutch part)
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Surinam
- Svalbard and Jan Mayen
- Swaziland
- Sweden
- Switzerland
- Syrian Arab Republic
- Taiwan
- Tajikistan
- Tanzania, United Republic of
- Thailand
- Timor Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey

- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- United States Minor Outlying Islands
- Uruguay
- Uzbekistan
- Vanuatu
- Venezuela
- Viet Nam
- Virgin Islands, British
- Virgin Islands, U.S.
- Wallis and Futana
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

**Logic: Hidden unless: #19 Question "Do you currently practice in the United States?" is one of the following answers ("Yes")**

**21) In what state is your practice located?\***

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado

- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania



- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming