

How to head off migraine

Early recognition and swift action are key

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ONE OF THE LEADING CAUSES of disability and workplace productivity loss, migraine is still vastly underdiagnosed and underappreciated. Most patients underestimate their own degree of disability, and don't think there are successful treatments available. Many stop complaining about their migraines to their doctors. Physicians don't place enough emphasis on getting patients to elaborate about their headache frequency and severity. When migraine is diagnosed, not enough attention is placed on correcting lifestyle and on using triptans early in the attacks.

Primary care physicians have a crucial role in reducing migraine disability

- Determine true frequency
- Diagnose migraine if headache accompanied by nausea and photo/phonophobia
- Spend time educating patient, include emphasis on correcting lifestyle issues
- Provide a treatment algorithm — use triptans early in attacks
- Monitor frequency — watch for increase

Making the diagnosis

The formal IHS criteria are listed in the box to the right. But many migraines will not fit all the criteria, which can be cumbersome to use in daily practice.

It's simpler to screen for migraines with the question "Do you get headaches that limit your activity and are accompanied by nausea and sensitivity to light or sound?" Don't use the word "migraine" until you've made a diagnosis. Most patients won't want to use the term if they can help it.

Formal IHS criteria

Description

Recurrent headache disorder manifesting in attacks lasting 4-72 hours. Typical characteristics of the headache are unilateral location, pulsating quality, moderate or severe intensity, aggravation by routine physical activity and association with nausea and/or photophobia and phonophobia.

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
 - unilateral location
 - pulsating quality
 - moderate or severe pain intensity
 - aggravation by or causing avoidance of routine physical activity (e.g. walking or climbing stairs)
- D. During headache at least one of the following
 - nausea and/or vomiting
 - photophobia and phonophobia
- E. Not attributed to another disorder

International Headache Society criteria

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If the patient answers “yes” to the question, treat these headaches as migraines, regardless of how often they occur, and whether or not they are unilateral or pounding.

The importance of making a diagnosis is that it can direct the treatment towards the triptan (abortive) class of medication.

Dear diary...

Diaries can be useful, but many patients present their physician with complex diaries containing weather charts and inconsistent pain scales. Ask your patient to focus on a few key items on a daily basis. How bad is the pain? Teach them the correct use of a 0-10 point scale. (There is no 11 score!)

Also, post on the diary the names and timing of any medications taken.

For women, it's very important to note the first day of their menstrual cycle on their pain diary. A consistent connection can be very helpful in establishing the diagnosis, and formulating a treatment algorithm.

Key points about a diary: Be clear to record *all* headaches, even the mild ones, to get a true count. If there are more than 15 days monthly of combined headaches, the patient is at high risk of having or developing Chronic Daily headache. Also, watch for a gradual increase in headaches, which may signify a worsening hidden trigger, or an ominous intracerebral process.

Weather patterns are not helpful. They are unpredictable and uncontrollable. Also, many patients miss this important point: *controlling lifestyle issues will reduce susceptibility to weather changes.*

Triggers

Triggers are another confusing issue. Most migraines are the result of a combined effect of several triggers. Patients often have “hidden triggers” and underestimate the effect of lifestyle. Hidden triggers are usually neck muscle tension causing upper cervical facet joint irritation, and temporomandibular joint dysfunction. The commonest lifestyle issues are: not enough deep, restful sleep, irregular sleep and eating patterns, and perhaps mild dehydration (not drinking enough water during the day).

Pathophysiology and classification

The days of considering migraine a primarily vascular disorder are long gone. It’s most useful to think of migraine as a neuroinflammatory sensitivity disorder, secondary to a genetic predisposition.

Migraine terminology is confusing and inconsistent. The term “classical” is no longer used. It’s best to refer to “migraine with or without aura.”

Have your radar up for patients who refer to “sinus headaches.” Unless there is incontrovertible evidence for an acute or chronic sinus

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infection, fronto/facial headaches should be considered migraine variants, *even if accompanied by nasal congestion and/or clear rhinorrhea*. This type of headache gets even more confusing. The patients who get primarily facial pain with their migraines are usually those who have had recurrent sinus infections in the past. They’re often unnecessarily treated with antibiotics on speculation, for what are probably migraines. Facial pain (with or without congestion), but without fever, chills, or purulent mucous discharge, is unlikely to be sinusitis.

If headaches result from trauma, cervical and/or TMJ pathology, infection, etc., the primary cause should be treated, and the headache may be classified as “secondary.”

The role of stress

Stress does not magically or mysteriously produce headache. Stress can have specific physical and metabolic/hormonal effects on patients, and causes changes to their lifestyle. It’s these changes that trigger migraines.

Treatment

Prophylaxis

Since the popularization of triptans, the need for prophylactic medications has been greatly reduced. They generally aren’t necessary if the patient has 12 or fewer headaches monthly, which respond completely to medications (including triptans), resulting in no impact on function. Otherwise, prophylaxis should be considered. There are numerous prophylactic agents available, both prescription and non-prescription. They generally work by enhancing neurotransmitters, or by reducing neurovascular irritability. Try to match prophylactic agents to the patient’s co-morbidities. For example, use a tricyclic antidepressant or melatonin in patients with trouble initiating sleep; don’t use beta blockers in patients with diabetes.

Abortives

Triptans are the mainstay. There are seven medications in this category available in Canada, and you may have to use trial and error to determine the best fit for your patient.

Try each one for at least 3 different headaches. Be sure to emphasize early administration, ideally within the first hour of migraine onset. If the response is still insufficient, add an NSAID (assuming no contraindications) taken simultaneously with the triptan. If nausea inhibits the response, add a motility agent 15 minutes prior, or switch to nasal

spray or injection. This class of medication is one of the leading causes of medication overuse (rebound) headache. Follow the “12 days each month” rule to avoid this complication. Any abortive or analgesic medication taken on more than 12 days a month may produce rebound headaches.

Rescue/Analgesic

This category of medication is best used to help with sleep when an abortive fails, or can't be used (i.e. for financial reasons or medical contraindications).

Stronger medications will be opioid (or opioid-related), thus likely to be sedating, and best used at night, or if lying down during the day. Non-sedating analgesics are extremely popular with patients, and are often used to “just get through my day.” These are not likely to be efficacious for complete migraine relief, and often lead to rebound headaches, with escalation of headache frequency. The “12 days each month rule” should be emphasized.

Non-pharmacological treatment

This category of treatment becomes very important in chronic headaches, thus relatively more important with increasing headache frequency.

Physical therapy

Postural awareness is the most important physical therapy treatment, by far. Any treatment that produces muscle relaxation can be useful, but only if the therapist teaches the patient how to achieve this herself.

Counselling, especially cognitive/behavioural types, can teach a patient to recognize the fight-or-flight response that commonly occurs at the start of migraines, early enough to stop it. When combined with an active postural correcting and muscle relaxing strategy, patients can prevent some of their migraines. I have one patient who has dramatically

reduced her migraine frequency by doing stretches when her shoulders start to tense.

Endorphin-releasing activities

Massage, acupuncture, meditation, biofeedback (endorphin releasing *and* muscle relaxing), tai-chi, qi gong, yoga, relaxation therapy, art and music therapy, exercise and hypnosis are examples.

Nutritional supplementation

The brain needs appropriate nutrition to function properly. The migraine-prone brain may need higher than lab-determined normal levels of various nutrients. I test CBC, B₁₂, folate, ferritin, calcium, magnesium, and if the patient is able to afford the cost, 25-OH vitamin D. It's amazing how often I see deficits, especially

The first corrections to make are to increase protein intake (especially at breakfast) and healthy omega-3 fats

if aiming for the middle of the normal range. One may consider testing hs-CRP and/or other inflammatory markers, as higher inflammation counts may be an independent risk for migraine (clinical observation), and may give you a clue that a patient has a comorbidity.

Correcting nutritional deficits should be considered a “lifestyle” factor, and done before (or at the same time as) moving into pharmaceutical treatment. The first and most important corrections to make are increasing protein intake (especially at breakfast) and increasing healthy omega-3 fats. Other nutritional issues include hypoglycemia, hyponatremia and dehydration.

Other supplements that may help include sleep supplements like melatonin, 5-HTP, L-tryptophan and GABA.

Caffeine may be used for its migraine abortive properties, but only if not used daily. More than 12 doses each month would function as a trigger. **PE**