OBJECTIVES:
The Learner will:
- Objective 1: Identify diagnostic criteria for migraine headaches.
- Objective 2: Discuss pharmacologic management of migraines, including preventive and abortive medications.
- Objective 3: Identify new and novel medications for the management of migraine.

DISCLOSURES: none

PREVALENCE OF HEADACHES (WHY HEADACHES ARE RELEVANT):
- Before school age:
  - Up to 4% of children start to have significant headaches. Because of their young age, they may not know how to describe pain.
- Children < 12 years old:
  - 5-10% have migraine
  - Up to 30% have tension-type headaches at least once a month.
- Adolescents (12 to 17 years old):
  - 10% have migraine
  - 30% have tension-type headaches.

DIAGNOSTIC CRITERIA FOR MIGRAINE HEADACHES

The International Classification of Headache Disorders, 3rd edition (ICHD 3 Criteria)

MIGRAINE ICHD-3 CRITERIA

A. At least 5 attacks fulfilling criteria B-D
B. Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)
C. Headaches have at least 2 of the following characteristics
   1. Unilateral location
   2. Pulsating quality (throbbing, pounding, stabbing, etc.)
   3. Moderate or severe pain intensity
   4. Aggravated by or causing avoidance of routine physical activity
D. During headache, at least 1 of the following:
   1. Nausea and/or vomiting
   2. Photophobia and phonophobia
E. Not better accounted for by another ICHD-3 diagnosis
**MIGRAINE DIAGNOSIS:**

**PEDIATRIC CONSIDERATIONS FOR MIGRAINE DIAGNOSIS:***

1. In children and adolescents (<18 yo), attacks may last 2-21 hours.
2. When the patient falls asleep during a migraine attack and wakes up without it, duration of the attack is estimated to last from onset until the time of awakening (known improvement).
3. Migraine in children and adolescents (<18 yo) is more often bilateral than unilateral.
4. Photophobia and phonophobia may be inferred from their behavior (signs) vs. reported symptoms, as this may be hard for them to describe.

**HEMIPLEGIC MIGRAINE ICHD-3 CRITERIA**

**Description:** Migraine with aura including true motor weakness.

**Diagnostic criteria:**

A. At least two attacks fulfilling criteria B and C

B. One or more of the following fully reversible aura symptoms:
   1. Visual (flashes of light, zigzagging patterns, blind spots, shimmering spots or stars)
   2. Sensory (paresthesias - numbness and tingling)
   3. Speech and/or language (aphasia - disturbed comprehension or expression)
   4. Motor (if true motor weakness: hemiplegic migraine)
   5. Brainstem (vertigo, dysarthria, tinnitus, diplopia, bilateral visual or sensory symptoms, decreased level of consciousness)
   6. Retinal (isolated short bursts of diminished vision or blindness)

C. At least two of the following five characteristics:
   1. At least one aura symptom spreads gradually over 5 minutes, and/or two or more symptoms occur in succession
   2. Each individual aura symptom lasts 5-60 minutes
   3. At least one aura symptom is unilateral
   4. The aura is accompanied, or followed within 6 minutes, by headache
   5. Motor (if true motor weakness: hemiplegic migraine)

**D. Not better accounted for by another ICHD-3 diagnosis, and transient ischemic attack and stroke have been excluded.**

**PHARMACOLOGIC OPTIONS FOR PREVENTIVE TREATMENT OF MIGRAINE**

**PHARMACOLOGIC OPTIONS FOR TRANSIENT ISCHEMIC ATTACK AND STROKE:**

- Transient ischemic attack and stroke have been excluded.
- D. Not better accounted for another ICHD-3 diagnosis, and transient ischemic attack and stroke have been excluded.

**MIGRAINE WITH AURA ICHD-3 CRITERIA**

**Diagnostic criteria:**

A. At least two attacks fulfilling criteria B and C

B. One or more of the following fully reversible aura symptoms:
   1. Visual (flashes of light, zigzagging patterns, blind spots, shimmering spots or stars)
   2. Sensory (paresthesias - numbness and tingling)
   3. Speech and/or language (aphasia - disturbed comprehension or expression)
   4. Motor (if true motor weakness: hemiplegic migraine)
   5. Brainstem (vertigo, dysarthria, tinnitus, diplopia, bilateral visual or sensory symptoms, decreased level of consciousness)
   6. Retinal (isolated short bursts of diminished vision or blindness)

C. At least two of the following five characteristics:
   1. At least one aura symptom spreads gradually over 5 minutes, and/or two or more symptoms occur in succession
   2. Each individual aura symptom lasts 5-60 minutes
   3. At least one aura symptom is unilateral
   4. The aura is accompanied, or followed within 6 minutes, by headache
   5. Motor (if true motor weakness: hemiplegic migraine)

D. Not better accounted for by another ICHD-3 diagnosis, and transient ischemic attack and stroke have been excluded.

**CHRONIC MIGRAINE ICHD-3 CRITERIA**

**Description:** Headaches must meet all of the following:

A. Headache (tension-type and/or migraine) on ≥15 days per month for ≥3 months

B. Occurring in a patient who has had at least five attacks fulfilling criteria for migraine with aura and/or migraine without aura

C. On ≥8 days per month for ≥3 months, fulfilling any of the following:
   1. Headaches meet criteria for migraine without aura, and/or
   2. Headaches meet criteria for migraine with aura, and/or
   3. Headaches are believed by the patient to be migraine at onset and are relieved by a triptan or ergot derivative

D. Not better accounted for by another ICHD-3 diagnosis, and transient ischemic attack and stroke have been excluded.

**Treatment Considerations:**

- Use an individualized approach to both pharmacologic and non-pharmacologic measures.
- Studies are lacking for headache medications in the pediatric population.
- Providers use anecdotal experiences or extrapolated adult information when selecting medicines for treatment.
- Consider the degree of disability produced by the headache when making treatment choices.
The fundamental goals of long-term migraine treatment include:

1. Reduction of headache frequency, severity, duration, and disability
2. Reduction of reliance on acute medications that may be poorly tolerated, ineffective, or unwanted
3. Improvement in quality of life
4. Avoidance of acute headache medication escalation (rebound headaches or needing stronger and stronger medications)
5. Education and enablement of patients to manage their disease to enhance personal control of their migraine
6. Reduction of headache-related distress and psychological symptoms

When to consider daily preventive medication:

- When frequency, severity, and/or duration of headaches cause(s) significant disability (missing school, missing activities, poor school performance, disrupting sleep cycles, disrupting family life, decreased responsibilities at home)
- A general guideline for migraine prevention is to consider daily preventive medications if patients are having 3 or more migraine days per month

**Pharmacologic Prevention**

**Practice parameters recommend:**

- Start with medications that have the highest level of evidence
- Start with the lowest effective dose of the drug
- Increase slowly until clinical benefits are achieved in the absence of, or until limited by, adverse events
- Give each drug an adequate trial (It may take 2-3 months to achieve clinical benefit)
- Avoid interfering medications (overuse of acute medications)

### Pharmacologic Prevention: Non-prescription Medicines

<table>
<thead>
<tr>
<th>Name of Supplement</th>
<th>Indication for Use</th>
<th>Typical Dosing</th>
<th>Side effects</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riboflavin (Vit B2)</td>
<td>Plays a vital role in maintenance stability of energy-related cellular function</td>
<td>100-400 mg/day</td>
<td>Discolor skin (yellow/green)</td>
<td></td>
</tr>
<tr>
<td>Magnesium Oxide</td>
<td>Influences in inflammation and healing with cortical oxygenation, neurotransmitter release, platelet aggregation, and smooth muscle, all of which are important aspects of pathophysiology</td>
<td>Oral: 350 mg/day 50-150 mg/day</td>
<td>Laxative effect</td>
<td></td>
</tr>
</tbody>
</table>

**PHARMAcologic PREvention: Non-prescription Medicines**

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<th>Typical Dosing</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Migralex</td>
<td>Is a branded supplement which includes magnesium, butterbur, riboflavin, Magnesium, Coenzyme Q10</td>
<td>1 tab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Migrelief</td>
<td>Is a branded supplement which includes magnesium, feverfew, riboflavin, Magnesium, Coenzyme Q10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Laxative effect**

- Non-prescription medicines
- Prescription medicines
Non-prescription Prevention– Evidence Based Practice


Drug treatment for migraine prophylaxis:

“A” (probable effective) = propranolol (40-240mg), valproic acid (500-1800mg), topiramate (250-1000mg), ...

“B” (probably effective) = amitriptyline (50-150mg), ...

“C” (possibly effective) = gabapentin (1200-1600mg), ...


Recommendations:

“A” (effective) = propranolol (40-240mg), amitriptyline (50-150mg), protriptyline (50-100mg), (venlafaxine, atenolol, nadolol, terazosin, furosemide, timolol, ...) (C) (possibly effective) = magnesium, riboflavin, coenzyme Q10, ...

“B” (probably effective) = flesinoxan, magnesium, ...

“C” (possibly effective) = Co-Q10, estrogen, cyproheptadine

Pharmacologic Prevention– Evidence Based Practice


Drug treatment for migraine prophylaxis:

“A” (established as effective) = propranolol (40-240mg), valproic acid (500-1800mg), topiramate (250-1000mg), ...

“B” (probably effective) = amitriptyline (50-150mg), ...

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Prescription Prevention– Evidence Based Practice


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Pharmacologic Prevention– Prescription Medicines

Prescription Prevention– Prescribed Medicines

Name | Drug Class | Typical Dosing | FDA Approval | Considerations | Side effects
--- | --- | --- | --- | --- | ---
Propranolol | Beta-adrenergic blockers, antiarrhythmics agent | Children: 2-9 mg/kg/ day, divided every 6 hrs; Adults: 160-240 mg/day given every 3-4 weeks; increase by 20-40 mg/day divided TID |否 | |

Prescription Prevention– Prescribed Medicines

Non-prescription Prevention– Evidence Based Practice


Drug treatment for migraine prophylaxis:

“A” (established as effective) = propranolol (40-240mg), valproic acid (500-1800mg), topiramate (250-1000mg), ...

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Name | Drug Class | Typical Dosing | FDA Approval | Considerations | Side effects
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Prescription Prevention– Prescribed Medicines

Non-prescription Prevention– Evidence Based Practice


Drug treatment for migraine prophylaxis:

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Pharmacologic Options for Acute Treatment of Migraine

**GOALS OF ACUTE TREATMENT**
- Treat attacks effectively, rapidly, and consistently to minimize adverse events
  - Teach appropriate timing of medications
  - Instruct on appropriate dosing
  - Monitor for effectiveness
- Restore the patient’s ability to function.
- Minimize the need for stronger or more intensive rescue methods:
  - A rescue medication is used at home when other treatments fail. It permits the patient to achieve relief without the discomfort and expense of a visit to the physician’s office or emergency department.

**GUIDE TO ACUTE TREATMENT**
- Act promptly.
- NSAIDs or combos are options for mild-moderate attacks or those severe attacks previously responsive.
- Use Triptans (DHE in adults) for patients who have moderate or severe migraine or whose mild to moderate headaches respond poorly to NSAIDS or combos
- Select a non-oral route for those with nausea/vomiting
- Do not restrict anti-emetics just to those patient who are vomiting or likely to vomit.

**GUIDE TO ACUTE TREATMENT**
- Limit and carefully monitor opiate and butalbital containing analgesics
- Guard against medication-overuse headache (rebound headache).
  - Attempt to limit acute therapy to 2 days per week
  - If headaches are occurring more than 2 days a week, preventive therapy is needed

**KEYS TO ACUTE TREATMENT**
- Key is to take medication at onset
- Onset of Action – oral, nasal, injection
- Repeating dose and max number of doses a week
- Avoidance of medication overuse
- No Narcotics
  - Migraines are considered a non-opioid-responsive syndrome
  - Potential for abuse and addiction
  - Potential for medication overuse
  - Same do well with occasional use of Triptans, but only consider if:
    - no history of substance abuse or psychiatric illness,
    - limited need for pain medication,
    - contraindication or intolerance to other less problematic agents.

**MEDICATION OVERUSE**
- Technically can happen with pain med use 3+ days per week for 3 months or longer
- If taking this much pain medication, and headaches are increasing, overuse is likely
- Detox is needed
  - Withdrawal of overused drugs for at least 6 weeks
  - Treatment of withdrawal symptoms, which often includes transient worsening of HAs
    - Steroids
    - Hydroxyzine
    - Starting of prophylactic therapy
**Practice Prescription Rescue—Evidence Based**

**Method of Action:**
- Selective agonist of vascular serotonin (5-hydroxytryptamine; 5-HT type 1B and 1D receptors).
- Selective constriction of certain large intracranial blood vessels and/or inhibition of neuro peptide release and reduced transmission in the trigeminal pain pathway.

**CHEAT SHEET FOR FORMS OF THERAPY FOR TRIPITANS**

<table>
<thead>
<tr>
<th>Form</th>
<th>Name</th>
<th>Tablets</th>
<th>Side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasal</td>
<td>Sumatriptan 5 mg</td>
<td>2.5 mg, 5 mg</td>
<td>Dizziness, drowsiness, headache, nausea, vomiting, flushing, dry mouth</td>
</tr>
<tr>
<td></td>
<td>10 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zolmitriptan 5 mg</td>
<td>2.5 mg, 5 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Almotriptan 5 mg</td>
<td>2.5 mg, 5 mg, 10 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rizatriptan 5 mg</td>
<td>2.5 mg, 5 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zolmitriptan 2.5 mg</td>
<td>10 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Naratriptan 2.5 mg</td>
<td>10 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rizatriptan 10 mg</td>
<td>20 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zolmitriptan 10 mg</td>
<td>30 mg</td>
<td></td>
</tr>
</tbody>
</table>

**ADDITITIONAL FORMS OF TRIPITANS AVAILABLE**

- **Patch form of Sumatriptan + Zolmitrac Apotema:** This patch is available in 20 mg and 30 mg doses, and requires placement on the upper back or abdomen.

**Auto-Injectors of Sumatriptan:**
- Zembrace Symotouch, Alkems, Sumavel DosePro

**Nasal powder:**
- Onzestra Xaui (nasal powder exhale)
CONTRAINDICATIONS FOR USE OF TRIPTAN MEDICINES

- Ischemic Coronary artery disease or coronary artery vasospasm, or Prinzmetal's angina
- Wolf Parkinson White or arrhythmias associated with other cardiac accessory conduction pathway disorders
- History of stroke or TIA
- History of hemiplegic or basilar artery migraine
- Peripheral Vascular Disease
- Uncontrolled hypertension
- Recent use (within 24 hrs) of ergotamine or other 5-HT\textsubscript{1} agonist
- Concurrent use of MAO inhibitors or within 2 weeks
- Hypersensitivity to medication
- Severe hepatic impairment

TRIPTAN SIDE EFFECTS

- Common
  - Tightness, pain, pressure and heaviness of chest, transient neck and jaw – noncardiac
  - Nausea and vomiting
  - Paresthesia
  - Dry mouth
  - Dizziness
  - Somnolence
  - Abdominal pain/cramps
  - Dyspnea, dysphagia
- Serious
  - Acute MI
  - Arrhythmias
  - Stroke, subarachnoid hemorrhage
  - Peripheral vascular ischemia, GI ischemia
  - Raynaud’s
  - Transient or permanent visual loss
  - Hypertensive Crisis
  - Seizure
  - Serotonin Syndrome
  - Mental Status Changes

PRECAUTIONS WITH TRIPANS

- Serotonin Syndrome
  - Co-administration with SSRIs, SNRL, TCA, MAO inhibitors
  - Symptoms: mental status changes (agitation, hallucinations, coma); autonomic instability (tachycardia, hypertension, labile blood pressure); neuro muscular abnormalities (hyperreflexia, incoordination); GI symptoms (nausea, vomiting, diarrhea)
  - Can occur within minutes to hours of giving triptan dose
  - The American Headache Society has a position statement on this concern: “Clinically significant serotonin syndrome from simultaneous use of these medications appears to be extremely rare and may not be caused by the triptans at all, and the benefit of adequate treatment for both migraine and depression appears to far outweigh the exceedingly low risk of dangerous “serotonin overload.”
- Saliures
  - New onset of seizure without any other risk factors
  - History of seizures

Other Options for Rescue Pain Medicines:

<table>
<thead>
<tr>
<th>Name</th>
<th>Typical Dosing</th>
<th>Considerations</th>
<th>Side Effects</th>
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<tr>
<td><strong>Prochlorperazine</strong> (compazine)</td>
<td>5-10 mg</td>
<td>May cause orthostatic hypotension, extrapyramidal reactions, akathisia and tardive dyskinesia.</td>
<td>Agitation, agitation, cardiac arrest, seizures, dyskinesia, dizziness.</td>
</tr>
<tr>
<td><strong>Ondansetron</strong></td>
<td>8 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Diclofenac</strong></td>
<td>100 mg</td>
<td></td>
<td></td>
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Anti-emetics:

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</tbody>
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WHEN TO SEND A PATIENT TO THE EMERGENCY ROOM

- "Worst headache of his/her life"
- Migraine with neurologic changes (facial droop, slurred speech, motor weakness, clear balance/gait changes, persistent aura)
- Status migrainosus (migraine lasting >72 hours and unresponsive to medications)
- Concern for dehydration (need for IV fluids)

WHAT MEDICATIONS WILL THE ER GIVE MY PATIENT?

The common migraine cocktail consists of 3 medications (for pain, nausea/vomiting, sedation/restless legs side effects of the other 2 medications)

- Pain medication = typically IV or IM Toradol

Then the migraine cocktail may be followed by an oral dose of a different medication from the chosen IV medication. Such an oral medication may be a medication known to be effective when administered orally.

The medication given will depend on the severity of the headache.

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The medication given will depend on the severity of the headache.

THE MIGRAINE COCKTAIL IN THE ER DID NOT HELP, NOW WHAT?

There are also other issues that can be given to try to break persistent migraine.

- Magnesium: There are limited studies on its effect. The use of this therapy is controversial due to its effects on other parts of the body. The effectiveness of IV magnesium sulfate may correlate with plasma levels.

Within 15 minutes of the injection, patients with low plasma magnesium levels had complete pain resolution with complete elimination of migraine-associated symptoms such as photophobia, phonophobia, and nausea. Non-responders had significantly higher baseline magnesium levels than responders.

- Sodium valproate: This medication is used to prevent seizures and is given as a bolus of 15-20 mg/kg (compared to 10-20 mg/kg for adults). It is absorbed in the four hours after the injection.

Within 15 minutes of the infusion, patients with low ionized magnesium levels had decreased headaches.

Sodium valproate is given as a bolus of 15-20 mg/kg (compared to 10-20 mg/kg for adults). It is absorbed in the four hours after the injection. Within 15 minutes of the infusion, patients with low ionized magnesium levels had decreased headaches.

Possible side effects include significant nausea and vomiting that can occur in 95% of the cases. Other side effects such as muscle cramping, temporary increase in BP may also occur.

DHE is contraindicated for uncontrolled hypertension, history of stroke, vasospastic disorders such as Raynaud’s syndrome, heart disease, or other cardiovascular disorders.

This medication may be given as a series of IV doses per treatment protocol that may vary between hospitals. This medication is typically not given in the ER at this time.

THE MIGRAINE COCKTAIL IN THE ER DID NOT HELP, NOW WHAT?

There are also other issues that can be given to try to break persistent migraine.

- Dihydroergotamine (DHE). Dihydroergotamine (DHE) is a 5-HT1A-5-HT1B-5-HT1D-5-HT1F receptor agonist. Its effect on migraine headache is probably secondary to a central vasoconstriction.

One dose of intravenous dihydroergotamine can be effective in the emergency department. The response to a single dose is often similar to intravenous administration of ergotamine for an intractable attack.

Possible side effects include significant nausea and vomiting that can occur in 95% of the cases. Other side effects such as muscle cramping, temporary increase in BP may also occur.

DHE is contraindicated for uncontrolled hypertension, history of stroke, vasospastic disorders such as Raynaud’s syndrome, heart disease, or other cardiovascular disorders.

This medication may be given as a series of IV doses per treatment protocol that may vary between hospitals. This medication is typically not given in the ER at this time.

NOTHING IN THE ER HAS PROVIDED ENOUGH RELIEF, NOW WHAT?

Patients may be admitted to the hospital for continued treatments, including

- observation
- IV fluids
- Continued boluses of the previous medications
- DHE protocol
- Additional consults (other factors are apparent: psychology, child life, psychiatry) (other medical subspecialties if new signs of disease or other diagnoses present themselves)

Advances in Research and New Potential Treatments
Neuropeptides are small protein-like molecules (peptides) used by neurons to communicate with each other. They are neuronal signaling molecules that influence the activity of the brain and the body in specific ways (a type of neurotransmitter).

CGRP: calcitonin gene-related peptide

CGRP (calcitonin gene-related peptide) is a 37-amino acid neuropeptide. Neuropeptides are small protein-like molecules (peptides) used by neurons to communicate with each other. They are neuronal signaling molecules that influence the activity of the brain and the body in specific ways (a type of neurotransmitter).

CGRP is a potent microvascular vasodilator. It also facilitates nociceptive transmission together with other neuromediators (such as substance P and bradykinin), especially when it is released from the trigeminal ganglia neurons that innervate the cranial vessels.

One assumption regarding migraine is that neuronal dysfunction leads to release of a large quantity of neuropeptides, such as CGRP, from the terminal nerve endings in the meninges and face.

Research shows that increased plasma levels of CGRP are associated with painful syndromes such as migraine and cluster headache, and that these levels are normalized when pain fades.

Research shows that an infusion with CGRP will induce migraine attacks in a large percentage of migraine patients.

Research shows that the rise in CGRP during a migraine attack is normalized by triptan medications.

CGRP-receptor antagonists

CGRP-receptor antagonists

These have been studied, with some benefits, but studies were halted due to safety reasons (liver complications). (rimegepant, alcegepant, telcagepant)

These treatments were trialed to test their efficacy in treatment of a single migraine attack (rescue treatment).

In some studies, patients did report a reduction in headache severity from severe/moderate to mild/none within 2 hours.

These medications were felt to be safe for those individuals who have cardiovascular disease, for which triptans are not considered safe.

Anti-Calcitonin Gene Related Peptide Monoclonal Antibodies (anti-CGRP mAbs)

- Four monoclonal antibodies targeting CGRP or its receptor (anti-CGRP mAbs) have been created and are being studied currently.
  - ALD403
  - TEV-48125 (frestanezumab)
  - LY2951742 (galcanezumab)
  - AMG 334 (erenumab)

Several phase 2 and phase 3 interventional studies currently being conducted on each of these mAbs. These can be found on ClinicalTrials.gov

Trials are looking at dosing and at treatment intervals (monthly to every 3 months) for infusions/injections.
Anti-Calcitonin Gene Related Peptide
Monoclonal Antibodies (anti-CGRP mAbs)

These macromolecules bind specifically their target (CGRP or CGRP receptor), with purpose to prevent repeated CGRP-induced trigeminal nociception transmission. This decreases headache frequency over time and reduces migraine symptoms.

The mAbs have a longer duration of action, with half-life lasting days or weeks. This allows for longer dosing intervals, longer periods of benefit, and better patient compliance. These are also not metabolized by the liver, decreasing risk of drug-drug interactions.

These treatments would be used for prophylactic therapy with goal of reducing the number of migraine headache days per month.

What could this mean?

- More migraine-specific preventive treatment
- Easier dosing schedules (monthly or even less frequent instead of daily medication) could improve patient compliance greatly
- Some of the early study information also shows that patient-reported wellness on headache free days also improves

Remember: The fundamental goals of long-term migraine treatment include:

1. Reduction of headache frequency, severity, duration, and disability
2. Reduction of reliance on acute medications that may be poorly tolerated, ineffective, or unwanted
3. Improvement in quality of life
4. Avoidance of acute headache medication escalation (rebound headaches or needing stronger and stronger medications)
5. Education and enablement of patients to manage their disease to enhance personal control of their migraine
6. Reduction of headache-related distress and psychological symptoms

References:


IN SUMMARY...

Reduction of headache-related distress and psychological symptoms enhanced personal control of their migraine tolerated, ineffective, or unwanted daily medication) could improve patient compliance greatly.
References:


doi: 10.1152/physrev.00034.2013


Additional Helpful Resources:

http://www.cincinnatichildrens.org/service/h(headache-center/pedmidas)

National Headache Foundation: www.headaches.org/content/children-headache-disorders

www.headaches.org/education/Headache_Topic_Sheets/Migraine

www.headaches.org/education/Headache_Topic_Sheets/Chronic_Migraine