

# Clinical Brief

## The Burden of Migraine Headache

Afflicting more than 40 million Americans, migraine headache imposes significant costs on employers in both absenteeism, presenteeism and healthcare spending. Migraine is the 5th most disabling illness in the United States.

American employers lose more than \$12 billion year from 113 million lost workdays due to migraine. Yet, the vast majority of employees must fend for themselves in confronting migraine. An often misunderstood disease, and much more than a headache, migraine is underdiagnosed and poorly treated.

### Prevalence rates and demographic distribution:

About 1 out of every 10 American men and women have migraines, which are about 3 times more common in women (18%) than in men (6%). Migraines most often affect the working age population and peak between the ages of 30 to 50 years old.

There is a 40% chance of having migraine headaches if a parent has a history of migraine and a 75% chance if both parents have a history of migraine.

### Symptoms:

The five symptoms most suggestive of migraine are summarized by the acronym "POUND". three of these

- ▶ Pulsatile quality (headache described as pounding or throbbing)

- ▶ One-day duration (episode of headache lasts 4-72 hours if untreated)
- ▶ Unilateral location (on one side of the head)
- ▶ Nausea or vomiting
- ▶ Disabling intensity (alters usual daily activities during the headache episode)
- ▶ More than 90% of sufferers are unable to work or function normally during their migraine.

### Phases of a Migraine

- ▶ **Premonitory / Prodrome**  
Felt hours or even days before the headache, and can include yawning, cognitive dysfunction, and discomfort
- ▶ **Aura** Migraine headache is preceded by what is termed an "aura" in about 30% of patients, which may include visual, sensory, and/or speech or language abnormalities
- ▶ **Headache** Pain is typically throbbing in nature, and localized on one side of the head. The five



*An often misunderstood disease, and much more than a headache, migraine is underdiagnosed and poorly treated.*

## Migraine is fairly common and costly



50 million Americans suffer from migraine (a majority of whom are 25-55 years old), costing an estimated **\$2.2 billion annually**



Direct healthcare costs for patients with migraine were estimated at **\$2,571 higher** than those for similar patients without migraine



Workers with migraine **cost employers an additional \$2,834** in lost productivity when compared to those who do not suffer from migraine



**\$12 billion**

Total indirect costs from reduced productivity (absenteeism and preabsenteeism) are estimated at **\$12 billion annually**

Source: 2019 Trends in Specialty Benefits – Pharmacy Benefits Management Institute (PBMI) Specialty Drug Report.

associated symptoms as described above occur during this phase.

- ▶ **Postdrome** Residual symptoms continue after the headache ends, and can be felt hours or even more than a day later. These include tiredness, confusion, and residual head pain, which can prolong disability.

## Migraine Headache Triggers

Migraines often begin in association with a specific trigger, which may vary by individual. One person can even have different triggers at different times. Understanding and then avoiding triggers can help to reduce migraine frequency. Triggers have been divided into the following classifications:

- ▶ Environmental (e.g., flickering lights/ visual, noise/sound, changes in weather, odors)
- ▶ Lifestyle (e.g., fasting, irregular sleep, irregular meals)
- ▶ Dietary (e.g., aged cheese, alcohol, monosodium glutamate, caffeine)
- ▶ Physical (e.g., stress, hormonal, fatigue)

## Diagnosing a Migraine

Despite its prevalence, diagnosis of migraine can be challenging, because there is no specific test. Clinicians typically rely on their understanding

of the condition and a detailed history for diagnosis. Imaging of the brain is usually not needed, and is unlikely to reveal any abnormality in individuals with a normal neurological examination. More than half of all migraine sufferers are never correctly diagnosed.

Nearly half of all people who suffer from migraine abandon preventive medications within six months, largely because of side effects. Because of the challenges of symptom control, many overuse pain medications for migraine treatment, which can cause so-called “rebound headaches” which can also be difficult to diagnose and treat. This, coupled with diagnostic challenges for many patients, has resulted in appreciable challenges to effective symptom control.

## Treatment options and challenges

Treatment options can be separated into three broad categories. The first category, complementary, or non-pharmaceutical care includes largely lifestyle behavioral changes, with relaxation, dark glasses, acupuncture, meditation, cognitive behavioral therapy, and biofeedback to address migraine triggers.

Acute symptom management is the second category, used at the onset of a migraine to either relieve pain or

stop symptoms from fully developing. Medications typically used include:

- ▶ **Over-the-Counter Medications** include analgesics (acetaminophen, aspirin, non-steroidal anti-inflammatory drugs with or without caffeine)
- ▶ **Triptans** intended to abort migraines when taken right at symptom onset
- ▶ **Opioids** The American Academy of Neurology recommends that opioid or butabarbital medications NOT be used for treatment of migraine except as an absolute LAST resort. Opioids pose a risk of addiction and are associated with greater disability and healthcare utilization.

The third category is represented by preventive treatments as daily medication or periodic injections to reduce attack frequency and severity. How these medications reduce migraine frequency is not fully understood, and effectiveness is variable. Medications typically used include: anti-seizure medications, antidepressants, beta-blockers, calcium channel blockers, ACE inhibitors, and botulinum toxin.

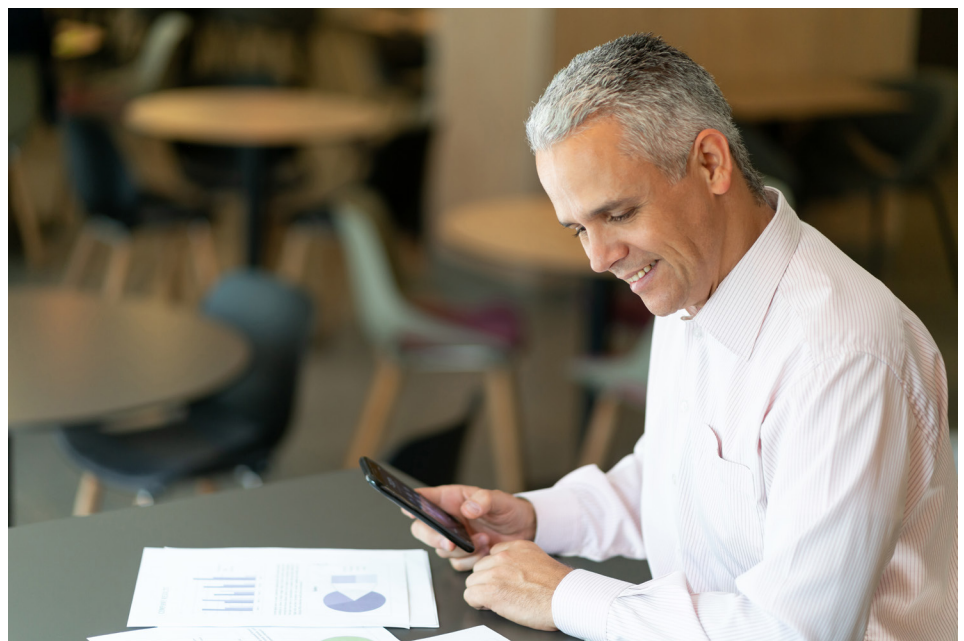
A new category of preventive migraine drugs has recently become available, and targets a specific compound called CGRP (calcitonin gene-related peptide),

a protein that is released around the brain. When CGRP is released, it causes intense inflammation in the coverings of the brain (the meninges), and for most migraine patients, causes the pain of a migraine attack. Blood levels of this protein increase in the setting of acute migraine, and individuals voluntarily receiving injection of CGRP experience acute migraine symptoms. Blocking CGRP action or reducing CGRP levels can help to reduce migraine frequency and severity. These medications hold promise for migraine control, particularly for individuals with frequent headaches.

## Employer Considerations

With an understanding of the business costs of migraine and their employees' need for support, employers have begun to incorporate migraine management programs within the framework of their employee well-being initiatives. For example, a global financial services organization offered a migraine education program to its US employees. The program included webinars, e-mailed educational tips, and intranet-based resources, which were shared with session attendees. (REF below)

Improvements were observed in the severity, workdays missed, effectiveness at work during migraine, and work/activity limitations. Participants reported taking action to identify and reduce migraine triggers.



However, no change was found in the frequency of migraines. Nevertheless, a worksite disease education program for migraine headache has the potential to significantly impact lost productivity and absenteeism for people who suffer from migraine.

## Resources

1. Employer Toolkit: Working with Migraine (to access send Name, Role, Organization Name and e-mail address to [workingwithmigraine@amgen.com](mailto:workingwithmigraine@amgen.com) Once registered an e-mail will be sent with access information)
2. Consumer Website: Speak Your Migraine [https://www.speakyourmigraine.com/?gclid=Cj0KCQiAn4PkBRCDARIsAGHmH3ddoEnOJblQg4D\\_HVJKXperZEixCeLUoCobwYTmNsQtUoXFqcELEmUaAgFaEALw\\_wcB&gclidsrc=aw.ds](https://www.speakyourmigraine.com/?gclid=Cj0KCQiAn4PkBRCDARIsAGHmH3ddoEnOJblQg4D_HVJKXperZEixCeLUoCobwYTmNsQtUoXFqcELEmUaAgFaEALw_wcB&gclidsrc=aw.ds)
3. Burton WN, Landy SH, Downs KE, Runken MC. The impact of migraine and the

effect of migraine treatment on workplace productivity in the United States and suggestions for future research. *Mayo Clinic Proceedings*. 2009; 84(5): 436-445. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2676126/>

4. Warshaw LJ, Burton WN, Schneider WJ. Role of the workplace in migraine disease management. *Disease Management Health Outcomes*. 2001; 9(2): 99-115.
5. Warshaw LJ, Burton WN. Cutting the costs of migraine: Role of the employee health unit. *Journal of Occupational and Environmental Medicine*. 1998; 40(11) 943-953.
6. ABIM Foundation - Choosing Wisely - Migraines, <https://www.choosingwisely.org/patient-resources/treating-migraine-headaches/>
7. In The Clinic: Migraine. *Annals of Internal Medicine*. April 2017. ITC 49-64.
8. The State of US Health, 1990-2016. Burden of Diseases, Injuries and Risk Factors among US States. *JAMA*. 2018. 319(14) 1444-1472.
9. Burton WN et al. Evaluation of a workplace-based migraine education program. *Journal of Occupational and Environmental Medicine*. 2016; 58(8): 790-795.