Most pain management therapists believe they are able to distinguish between clients presenting with common headaches and more serious conditions such as migraines. Although most recognize that not all headaches are migraines, perhaps only a few can truly differentiate the inherent subtleties between the two disorders. In fact, there are more than 300 different types of headaches, each with different causes, kinds of pain, onset, and frequency. Head pain is rated high on the Top 10 list of the most common complaints encountered by bodywork practitioners. To develop effective treatment modalities for this widespread problem, this chapter provides the reader with a broader look at the symptomology, physiology and related triggers.

**How Are Migraines Different?**

The word “migraine” comes from the ancient Greek word “hemicranos” which means “half-head,” since migraine headaches generally manifest on only one side of the head. Actually, a migraine is a specific type of headache characterized by visual problems and an intense throbbing pain concentrated in a single area.

Migraines and common headaches have different causes. The pain associated with a common headache often results from vasoconstriction, the medical term used to describe narrowing of blood vessels in the brain. A migraine’s cause, however, is just the opposite (Fig. 1). During a migraine, the blood vessels in the brain actually expand in a process called vasodilation. As the tissues surrounding the brain swell, the pain intensifies. If migraine sufferers take headache medicines targeted to treat vasoconstriction, they inadvertently and unknowingly increase blood vessel dilation which, in turn, increases inter-cranial swelling – worsening the migraine.  

**Disease or Symptom?**

Another major distinction between the two is that a headache is perceived as a symptom, while a migraine is typically classified as a disease. Renowned headache specialist, Stephen J. Peroutka and others are convinced that migraines are a “genetically-based illness.” Since it is a disease, a migraine can be accompanied by many symptoms such as nausea, vomiting, sensitivity to light and sound, seeing auras or light spots, and speech difficulties. Unlike headaches, a migraine attack can last for hours, days, or several weeks.

A migraine headache is thought to be caused by an inappropriate activation of a pain warning system. When functioning normally, this warning system is beautifully designed to protect the brain from injury by encouraging the person experiencing the pain to immediately begin searching for a possible cause. When a person has a migraine, this system is turned on inappropriately and repeatedly.

Those who suffer migraine head pain often describe their symptoms in a variety of ways. Some report a sense of numbness that spreads throughout their extremities. Others describe a loss of appetite or severe nausea. Many feel confused and disoriented until the migraine passes. But common to all migraine sufferers is the unrelenting sense of pain. Therapists hear clients describe the condition with statements like, “the pain is big and heavy like a 25 pound bowling ball...”
All Headaches Are Not Created Equal

on my head”. Other times, they may complain that the pain is sharp and concentrated, “like a knife in my eye.”

During a migraine attack, all sensory systems are accentuated, and normal inputs become unpleasant. The degree of discomfort varies although most tend to be of moderate to severe intensity and are accompanied by nausea, sensitivity to light, sound, and sometimes strong smells. During a migraine headache many individuals find that routine physical activities aggravate the pain, and they prefer to lie silently in a darkened room and sleep.

Identifying Symptoms and Triggers

Medical professionals characterize migraines as a “chronic paroxysmal disorder” where the patient is typically free from symptoms in between attacks. They describe the migraine as an episode often followed by “transient focal neurological symptoms,” such as photophobia and blurred vision. In many cases, the pain is severe enough to incapacitate the sufferer and require complete bed rest.

In addition to genetically based dispositions, physicians generally divide the causes of migraines into three main categories:

1. Food Reactions

Scientists have identified several foods that have the ability to trigger migraine headaches. These include alcoholic beverages (especially beer and red wine), aspartame, avocados, bananas, large amounts of caffeine, monosodium glutamate, citrus fruits like lemons and limes, nuts and seeds, onions, dairy products (milk and sour cream), and nitrites.

In addition to specific foods, migraine headaches can also be caused by poor nutrition, skipping meals or not eating regularly. Delaying meals can bring the onset of low blood sugar, setting off a chain reaction that usually leads to a migraine.

Dehydration as a possible cause for migraines is an interesting topic that has stirred attention in recent months and is currently under investigation. Proper quantity, quality and movement of fluids are required at the cellular level to deliver oxygen and other vital brain nutrients into and out of the cells. Adequate fluid consumption, absorption, delivery, and drainage are issues being investigated. In order to have optimum venous drainage, cellular fluid content to the brain must not be in short supply. Some speculate that Americans are one of the most dehydrated of civilized populations (Fig. 2).

The gross physical effects of adequate hydration encourage the proper exchanging of fluids, stimulation of blood flow and appropriate venous and lymphatic drainage. Since aging is accompanied by lowered concentrations of fluids, one would expect migraines to worsen with age. At conception, the human fetus is approximately 99 percent water, 80 percent at birth, and the elderly population suffers a decrease to about 60 percent. Some neuroscientists speculate that this reduction in bodily fluids contributes to cellular breakdown and
stagnation of fluids to and from the brain possibly causing or enhancing migraines.

2. Environmental Reactions

Migraines can also be triggered by environmental factors, like strong perfume, bright or flickering light, secondhand smoke, air pollution or even weather changes. This is one reason therapists must insist on clients not wearing perfumes, colognes, etc. in the treatment room. The bodywork environment must stay as pollutant-free as possible.

Other findings include altitude changes and noise, especially loud and constant sounds. Weather-related factors are particularly troublesome for some migraine sufferers. Many clients’ migraines are triggered by weather changes, such as a sudden wind, increased humidity or thunderstorms.

3. Body Reactions

Biochemical changes play a key role in the onset of pain—particularly in women. Approximately, eighteen percent of women and 7 percent of men report having migraines each year. The fact that more women than men suffer from migraines leads many scientists to posit that menstruation and fluctuating estrogen hormone levels may serve as a major factor in triggering migraines in women.

And, of course, there is always the body’s response to emotional triggers like tension and stress. Most migraine sufferers report that their symptoms noticeably worsen in proportion to an accumulation of life’s typical stressors, including job, marital, finances, illness, etc.

Classifying Migraines

A. Classic

The classic migraine headache typically begins with a phenomenon called an aura, where the sufferer sees light changes. This can occur five to 20 minutes before the perception of pain. It is often accompanied by photophobia or hypersensitivity to light. Other signs include numbness or tingling in the arms or legs. Some classics also experience hallucinations such as flashing lights, smelling strange odors and temporary loss of vision. The classic migraine usually affects only one side of the head and can last for several hours or days. Traditional classics affect 20 percent of the estimated 19 million Americans who suffer from migraine headaches.

B. Common

Common migraines do not have the accompanying symptom of aura or light changes. Instead...
of hallucinations, people who suffer from common migraines experience less dramatic symptoms such as mood swings, irritability and fatigue. As in the case of the classic migraine, common migraine sufferers feel pain on one side of the head yet the pain can quickly spread to different cerebral areas. Common migraines occur several times a week, are severe enough to wake a person from a sound sleep, and, like classic migraines, can last for several days if not treated by a qualified manual therapist or physician.

C. Transformed

Often starting as an episodic tension headache, transformed migraine sufferers commonly report the sensation of “a belt being tightly stretched around their heads”. If these tension headaches eventually evolve to migraines, they can last for several hours or even days.

D. Chronic

A chronic migraine is an umbrella category and can develop into either a common or classic migraine. This is sometimes referred to as a “chronic tension headache” or “chronic daily headache.” Chronic sufferers describe it as a headache that occurs every day of their life.

Do’s, Don’t’s and Treatment Options

Migraine sufferers should avoid skipping meals since hypoglycemia or low blood sugar often triggers a migraine. Drinking six to eight glasses of pure water daily is recommended. Physicians encourage patients to eat six small meals a day that contain some protein and some form of complex carbohydrates. Additional medical recommendations include the reduction of simple carbohydrates such as sugar and sweets, especially if these foods are eaten alone.  

In addition to regular meals, nutritional researchers also recommend a diet rich in healthy natural food, with generous helpings of minerals such as:

Why Women Hurt More!

Many manual therapists realize that pain does not afflict the two genders equally. Most medical literature points to consistent findings that women report more musculo-skeletal pain than men, and additionally—the females’ experience seems to differ significantly from that of their male counterpart. Some researchers believe this discrepancy is due to biological issues since female activities are typically comprised of a different set of risk factors for injury and pain. Others blame genetics such as inherited limbic system (emotional) overactivity and physical structural differences.

Some new developments concerning structural differences may add some fuel to the gender phenomena fire. Several biomedical journals have published articles implicating innate anatomical and physiological factors. Studies indicate that, as a group, women have forty percent less neck musculature than men, yet the female head still represents approximately eight percent of a woman’s total body weight which is the same percentage as in males. These conclusions could help explain why many more women, on average, suffer from chronic headaches, migraines, osteoporosis, and degenerative disc disease than men.

According to a Robert Sandos article in the European Journal of Pain, “While education and unemployment seemed to be primarily associated with pain among men, economic worries, half-time work, and being married were the most commonly reported pain-generators among women”.

Sandos’ study suggests that addressing the inequities in the experience of pain could require more that a simple alteration of physical risk factors. It highlights the necessity for greater research into many factors – ranging from employment inequities, social order within specific cultural norms – to biological make-up.

• Copper (seafood, liver, whole grains);
• Folic acid (green leafy vegetables, sprouts, organ meat);
• Iron (oysters, liver, red meat, spinach, tomato sauce);
• Magnesium (wheat bran, vegetables, legumes and nuts);
• Niacin (fish, chicken, mushrooms, asparagus);
• Omega-3 fatty acids (fish oils, green vegetables), and
• Riboflavin (goat’s milk, mushrooms, liver, spinach).

Experts recommend removing environmental triggers known to contribute to migraine sufferers. People with migraines should:
• Avoid using perfumes or perfumed products such as household cleaners;
• Regularly change the air filters in their homes;
• Routinely clean drapes, carpets and upholstered furniture, and
• Reduce humidity in the home due to mold, dust mites, algae, and yeast triggers.

**Bodywork and Alternative Treatment**

The growing interest in natural health and holistic healing has increased the usage of alternative methods for migraine treatments that do not rely on prescription medication. These treatments employ instead a variety of lifestyle changes, relaxation techniques and regular manual therapy procedures that address the many stress and environmentally-related migraine triggers.

Exercise, for example, has proven effective for many migraine sufferers. Walking, swimming or other forms of physical activity for at least 20 minutes a day, three to four times a week, helps the body boost its headache prevention threshold.

Migraine suffers can learn to avoid excessive stress by employing an arsenal of relaxation methods such as:
• Visualization techniques;
• Conscious breathing routines;
• Meditation;
• Yoga, Tai Chi, etc., and
• Routine massage and manual therapy sessions.

**Structurally-Induced Migraines**

Scientists have found that a certain portion of the population presenting with chronic migraines have diminished blood flow to the brain. This means less functional activity in the two areas of the brain that help regulate the amount of pain signals the brain receives. Those that exhibit

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![Vertebral Artery](image)

**Fig 3. Area of Vertebral Artery Occlusion.**

In clients presenting with forward head postures, plaque-ridden vertebral arteries often become overstretched and squashed against the posterior arch of the atlas during head extension and rotation, thus inhibiting adequate blood flow to the back and center of the brain. Note how the greater occipital nerves running through the bellies of head-extensor muscles are also vulnerable to overstretching and entrapment.

*MediClip, Lippincott, Williams and Wilkins 2005, Reprinted with permission.*
insufficient blood flow to areas of the brain often have roots in structural misalignment of the head on neck. In clients presenting with forward head postures, plaque-ridden vertebral arteries often become overstretched and squashed against the posterior arch of the atlas during extension and rotational movements thus inhibiting adequate blood flow to the back and center of the brain (Fig. 3).

Conversely, lack of venous drainage from the brain can also cause problems as the occiput glides forward on the atlas. As much as 85 percent of all venous drainage from the cranium flows from the internal jugular veins as they pass along the occiptomastoid suture between the occipital and temporal bones. Gravity usually aids in proper venous drainage from the brain. However, imperfect head on neck postures can significantly alter the position of these cranial bones causing venous congestion. As intracranial pressure rises, pounding vascular headaches soon degrade into full-blown debilitating migraines.

**Conclusion**

Many people mistakenly believe that a migraine is merely a severe headache. Others delay seeking treatment for their severe migraines due to fear of diagnosis of a brain tumor or some other life-threatening illness.

Either of the behaviors, however, does not address the cause of migraine pain. As a result, the migraine sufferer is condemned to only more pain and isolation. Regrettably, the pain and discomfort can severely diminish the quality and effectiveness of a person’s life.

Recent research findings are aiding medical and manual therapists in developing a more holistic understanding of the intricacies of migraine pain. Until a definitive cure is found, more and more people are seeking relief through manual therapy treatments and other alternative medical modalities. The Advanced Myoskeletal Receptor Techniques demonstrated on page 292 have proven helpful in treating many types of head pain conditions including migraines.

**References:**


