

# Easing Migraine Pain

By John Upledger, DO, OMM and Lisa Upledger, DC, CST-D, FIAMA

Gone are the days when migraines were considered a psychological disorder reflecting poor coping skills, low stress threshold, clinical depression or a borderline personality disorder. According to the National Migraine Association, migraine disease is now a recognized neurological condition affecting more than 30 million Americans.

In many cases, CranioSacral Therapy is one of the most effective tools you can offer a client suffering from migraine pain. This light-touch modality helps release restrictions in the meningeal membranes around the brain and spinal cord, increasing the healthy flow of cerebrospinal fluid and allowing the central nervous system (CNS) to resume its optimal levels of performance.

Cerebrospinal fluid within the craniosacral system acts as a shock absorber for the brain. It delivers nutrients to the nerves, brain and spinal-cord tissue, and washes away waste products created by various metabolic processes. You can see how critical it is to have a strong, functional craniosacral system.

In addition, research has shown that meningeal membranes and perivascular fascia are the only pain-sensitive tissues in the brain. Therefore, any abnormal meningeal tension can cause pain, as can any pressure on the blood vessels that run through the meninges. That means when you release restrictions in the meningeal membranes, you also take pressure off the blood vessels.

Pressure on the brain stem from surrounding fascia also can cause sensory neurons to relay their messages to higher brain centers, which may correlate with another theory about migraines: that brain stem pain receptors actually cause the migraine pain.

## Cortical Spreading Depression

Historically, the migraine has largely been defined as a vascular disorder in which an event triggers vasoconstriction followed by vasodilation, inflammation and headache. Now, it's believed that the vasoconstriction/dilation is the result of a phenomenon called *cortical spreading depression*.

Cortical spreading depression is a slow, spreading wave of strong, sustained neuronal firing that generates a transient, intense spike of activity as it progresses into the tissue. The spike increases innervation to blood vessels, which strengthens regional blood flow. This is followed by reduced neuronal activity associated with a vasoconstriction that produces a transient ischemia

and a drop in cerebrospinal fluid flow. This neuronal suppression can last for minutes and cause a neurochemical imbalance.

The auras and prodromes (a premonition that the headache is coming) often associated with migraines are likely caused by the vasoconstriction leading up to the rebound and vasodilation. The actual pain of the migraine occurs when there is a rebound of abnormal vasodilation of the intracranial arteries, and an activation of the sensory pain fibers around the blood vessels and meninges.

If a client sustains an impact that distorts or otherwise compromises the pain-sensitive meningeal membranes, this also can increase pressure on the brain and central nervous system, potentially causing cortical spreading depression and triggering a chain reaction leading to migraines.

## **Migraine Phases**

Migraines generally occur in several phases. The first phase is called the prodrome - a forewarning that indicates an alteration in the central nervous system. A highly individual experience, the prodrome may be accompanied by changes in mood or energy levels; a sudden feeling of depression, euphoria or fatigue; or cravings for chocolate or other foods. There also may be an alteration in sensory processing, muscle tone, nasal congestion, fluid retention, cognitive impairment or facial pressure.

In approximately 15 percent of migraine cases, there is an aura phase that generally lasts no more than an hour. While symptoms vary, the most common ones are visual effects such as flashing lights and partial or blurred vision. Other symptoms can include olfactory and auditory hallucinations, tingling or numbness in the face and extremities, confusion, partial paralysis and more. It is widely believed that the aura is caused by the cortical spreading depression. With vasoconstriction resulting in decreased blood flow, the brain will certainly do strange things.

Next comes the mild phase of the migraine - when the pain begins. If the migraine is terminated at this stage, the pain may feel like a tension headache. If the migraine progresses it generally leads to mild pain, sometimes accompanied by nausea and the beginning of throbbing pain.

If not aborted in the mild phase, the migraine will develop into moderate to severe throbbing pain with nausea and sensory sensitivity. At this point the blood vessels are dilated. Any movement or activity increases the blood flow, which causes more dilation, pain and throbbing. This is when many people prefer to lie perfectly still in a dark, quiet room.

A migraine may dissipate over anywhere from four hours to three days, after which a post-headache phase could last another few days. During this time the person may feel exhausted, irritated, sore and unable to concentrate and tolerate certain foods.

### **A Light-Touch Solution**

CranioSacral Therapy helps prevent and end migraine headaches primarily by releasing tensions throughout the meningeal membranes of the craniosacral system. Removing these tissue restrictions takes pressure off the nervous system and allows cerebrospinal fluid to drain correctly, preventing the buildup of pressure. CranioSacral Therapy helps release both primary and secondary dysfunctions of the peripheral body, dural tube, cranium and sacrum. The goal is to correct and balance all craniosacral system dysfunctions and the areas to which they might lead. Removing these meningeal and dural tube restrictions can effectively help release and prevent the pain of migraines.