



CHAPTER 2

HAZARDOUS HEADACHES - TIME FOR IMMEDIATE MEDICAL MANAGEMENT

Red Alert

Headache disorders are estimated to afflict 46% of the adult population globally.¹ This book will provide treatment ideas for the headaches coming from the neck, from tension, and migraines. It cannot be emphasized enough that the person afflicted by headaches needs to

seek out a physician to help direct the treatment program. For example, the management plan for migraine headaches frequently require medication, which should be used only under physician supervision. Do not self-medicate! Overuse of many medications, including over-the-counter, can result in a rebound headache. Physician oversight is crucial. If an unknown dangerous medical situation exists, masking the pain with over-the-counter pain medication allows the underlying problem to go undiagnosed and untreated.

There are other types of chronic headaches that are not discussed in this book that you should be aware of. For example, cluster headaches are severe headaches often felt behind the eye on one side of the head. This type of headache occurs more frequently in men, in contrast to other types that occur mostly in women. These debilitating headaches begin without warning and reach peak intensity in minutes, and do not last longer than 180 minutes. Since the cluster headaches come and go so quickly, determining which technique to use is difficult.

Inflammatory headaches include a group of headaches that occur when a person's whole body is inflamed from diseases such as diabetes and thyroid dysfunction. Headaches from systemic diseases often do not respond well to the conservative physical therapy remedies.

Neuralgia, or nerve pain is another cause of headaches. Occipital neuralgia is a condition where nerves from the top of the spinal cord into the back of the head become inflamed. Trigeminal neuralgia is another inflammatory condition that can result in headaches when one of the facial nerves is compressed and causes sharp electric-like pain on one side of the head, face, temple and eye area.

Temporomandibular joint dysfunction, an inflammatory jaw condition, can also produce headache and is treated successfully with physical therapy, but this condition will not be covered in the scope of this book. Treatment of the temporomandibular joint is done primarily with massage to tight jaw muscles, exercise to reposition the jaw and use of splints manufactured by a dentist specialized in this field.

Most headaches are primary, meaning the headache itself is not caused by another condition. However, sometimes the headache masks a serious underlying condition. Make sure your physician has ruled out any secondary causes before trying to treat the headache directly. Is there a way to tell if you have a medical condition lurking behind your headache, such as neck fracture, concussion, stroke or cancer? If your headache has been present for a long period of time in a stable pattern, it may not necessarily be cause for alarm. However, certain headache symptoms, especially those that have developed in a short period of time, are life-threatening and demand immediate emergency medical attention.

Dr. David Dodick created the acronym **SSNOOPP** for conditions that signal a “red alert” for the headache sufferer to seek immediate medical attention.² The following may be signs that there may be a secondary cause for headaches.

S = Systemic symptoms such as weight loss or fever.

S = Secondary risk factors such as cancer or autoimmune diseases.

N = Neurologic symptoms such as confusion, decreased consciousness, stroke-like symptoms (such as facial drooping, arm weakness or slurred speech).

O = Older age onset new headaches are concerning and need diagnostic workup, especially if over the age of 50 years old.

O = Onset of headache pain that is sudden and/or extreme

P = Pattern change of headache pain can indicate a secondary condition is developing.

P = Previous headache history needs to be kept in mind.

If you recognize these symptoms within yourself, realize that your headache may not just be a headache. The following dangerous headache causes need to be ruled out before proceeding with conservative treatments. *The following does not represent a complete list of all headache causes, and is not intended as a substitute for consultation with a licensed healthcare professional.*

HEADACHE CAUSES FROM DISEASE AND TRAUMA

BRAIN CANCER

A natural fear among headache sufferers is that the miserable pain in their head is a signal of brain cancer. While most headaches do not arise from cancer, there are signs to warn of this insidious disease.

- Did the headache come on after 40 years of age?
- Does the headache remain constant, never fully go away, and gather intensity as time goes on?
- Does the headache increase when lying down?
- Is there unexpected, significant weight loss? A rapid weight loss unexplained by dieting is a warning sign of possible cancer. A previous history of cancer is also a red flag of which to be suspicious.
- Is there loss of vision, hearing, taste or smell, which could be a sign of a tumor affecting the sensory nerves? Numbness might be present in the face or forehead, and swallowing difficulty and coughing could be present. Does the coughing and any increased abdominal pressure make the headache worse?

It is important to remember that most people with headaches do not have a brain tumor, whereas people who have brain tumors will commonly have headaches.³

HEART CONDITIONS

Migraines can be the signal of a heart attack, and immediate medical attention is crucial.⁴⁻⁷ A person with a headache resulting from aerobic workouts may find that a weak heart may be producing the headache. Migraines will appear more frequently in those who have another heart condition called patent foramen ovale, which is where there is a hole in the heart.⁸⁻⁹ Heart conditions such as mitral valve prolapse or atrial septal aneurysm also occur more often in headache patients. Weak heart symptoms could surface as head pain when on a stress test.¹⁰ While aerobic exercise is a treatment for some headaches, it should be abandoned if the cardiac exertion increases head, chest or arm pain.

Men with migraines are at 42% higher risk for heart attacks than men who do not suffer from migraines.¹¹ Some heart conditions will also prevent the use of some prescription headache relief medications, and various over-the-counter pain relief medications can increase blood pressure, which can put strain on the heart.¹²

STROKE

A headache that appears for no apparent reason, along with other symptoms such as facial drooping, arm weakness or slurred speech could be signs of a stroke. Some strokes can occur from a clot being thrown from another blood vessel somewhere else in the body to the brain. Just as in heart attacks, immediate medical attention is required since the effects of strokes caused by blood clots are reversible to some extent if clot-busting drugs can be given within 4.5 hours. These drugs work when the cause of the stroke is from circulatory clots, not rapid bleeds from some type of head trauma.

A migraine headache can display some of the same symptoms that a stroke does, but one should not take chances and it is safest to get checked out by a medical professional. Paralysis of an arm or leg on one side can occur in those having a stroke, just as it can in a very small percentage of migraine sufferers who have auras. Auras are sensory signs that 20-30% of migraine sufferers have that a headache is imminent. Since both migraines and strokes are “brain attacks,” these overlapping symptoms can be tricky. Auras from the migraine condition can also cause slurred speech, tingling or numbness in an arm or leg. All symptoms are reversible when they arise from migraines.

However, do not wait to see if the symptoms will reverse themselves. If your aura lasts longer than one hour, you should contact your doctor or emergency room to rule out a stroke. If these symptoms occur, call 911, because rapid emergency treatment can limit their severity.

The migraine aura increases stroke risk in women but not men. Migraines that don't come with an aura don't increase the risk of stroke. The stroke risk further worsens for women who have migraine with auras, smoke and take oral contraceptives.¹³ High blood pressure can

fuel headache problems as well as increasing the chance for strokes, so consult with your personal physician regarding blood pressure and other medications.

CONCUSSIONS

Falls, motor vehicle accidents and sports injuries are common causes of concussions. Many concussion injuries occur to those serving in the military,¹⁴⁻²³ with most of the damage coming from blast injuries.²⁴ Some symptoms that might result from head trauma would be trouble with memory, difficulty concentrating, dizziness, loss of balance and emotional struggles. The techniques provided in this book may provide some benefit by strengthening and stretching the neck muscles damaged from the inciting injury.

NECK FRACTURE

If you have had any injury involving the head, neck or shoulder you need to have a heightened awareness of the possibility for neck fracture. The neck fracture does always cause excruciating pain, which is why it is important to determine if a neck fracture is sitting in a precarious position requiring immediate surgery.

- Is there extreme rigidity of the neck, such that the neck can only turn several degrees in either direction due to this locked in place sensation? A neck fracture could be producing the block. The Canadian Cervical Spine Guidelines indicate that if a person can't turn the neck at least 45 degrees in any direction, there is likely a serious underlying condition. The area of suspected fracture would most likely be tender to the touch.
- Does bending the neck cause a sharp radiating pain into the arm or leg? If there is fracture or spinal cord compression, pressure on the neck would compress the spinal cord enough to affect the arm or leg. Leg symptoms suggest a deeper problem at the spinal cord level itself. In this event the neck should be stabilized immediately! A neck collar at the very least should be applied as soon as possible to prevent neck movement.

- Does pain go down both arms into the hands? Symptoms that go into both arms as opposed to one arm are much more concerning. Shooting pain into one arm can be serious and suggests a disc bulging in the neck. Radiating arm pain could be caused by a neck disc herniation and be treated conservatively. The disc is the shock absorber and transmitter that sits in between the bones of the neck. If it deteriorates, it can apply pressure to the nerves that exit the neck and go into the arms.
- Is there numbness and tingling in any extremity along with the headache? This sign points to a nerve being pinched at some level of the spine.
- Are the hands weak such that they can barely grasp an object? This symptom could be caused by a fracture or pinched nerve in the neck.
- Sometimes fractures are easier to detect several weeks after the initial injury and may not be apparent at first. If the fracture does not show up on the initial imaging results, do not be complacent if the neck and head pain does not go away. Get additional imaging to make sure nothing was missed the first time.
- If there is even a chance that a fracture is present, do not try to force moving the neck. Forcing the neck movement is never a good idea because one does not know what inside the neck is blocking full motion.

INTERNAL BLEEDING

A very dangerous condition occurs when pressure from bleeding inside the head causes a headache, as it can be potentially fatal if not attended to soon enough. Pressure needs to be relieved immediately, and an increasing headache is a warning sign of internal damage. The following are red flags warning of imminent danger:

- Did the headache occur only after striking the head? Bleeding can occur underneath the surface of the skull, even when no cuts are visible.

- Have imaging studies been done to rule out the possibility of fracture or bleeding into the skull or brain?
- Is blood thinning medication being taken? Bleeding inside the head can be amplified with thinner blood that does not clot as easily. Even if the initial imaging was negative, a headache that keeps getting worse requires a second check-up with the doctor. The slow bleed, not visible at first, may build up fluid pressure over time and become apparent on a recheck. A person on blood thinners needs to realize that the uncontrolled bleeding effects of some medications are easier to stop than others.
- Does the headache come on rapidly, within 30 seconds? This could be a sign of a sub-arachnoid hemorrhage, which is bleeding under the membrane covering the brain. This condition might be caused by a ruptured blood vessel in the brain, or aneurysm. If an aneurysm is un-ruptured, an increase of blood pressure or a head injury could be the tipping point that blows out an artery, which then spills blood inside the head and can cause a massive headache.²⁵⁻²⁷
- Is there blurred vision, nausea, and dizziness? Does turning the head one way or the other, especially looking upward, trigger these symptoms? These symptoms could suggest that the neck and brain circulation is involved, with decreased blood flow causing these symptoms.
- Does the intensity of the neck or headache pain lead to uncontrolled vomiting?

If any of these signs are present, call 911 immediately. Conditions can deteriorate quickly, and time is not on the side of the person experiencing internal bleeding.

MENINGITIS

Meningitis is an infectious disease of the lining that covers the brain and spinal cord. Bacterial meningitis can kill a person in a matter of hours. One of the first signs of this disease can be a ferocious headache and vomiting, indicating increased pressure in the brain. A sensitivity to bright light could make one think the episode is nothing more than a

severe migraine. However, the neck is often stiff, and bending the neck forward could generate more severe pain. Immediate medical attention is imperative, as time is of the essence to prevent what can be fatal consequences.

GIANT CELL ARTERITIS AND GLAUCOMA

Blindness can result when the headache is caused by a condition called Giant Cell Arteritis, or Temporal Arteritis, where the temporal arteries on the side of the head becomes tender and swollen. If the swelling narrows or blocks the blood supply of the artery going to the retina of the eye, vision will worsen.²⁸ This headache can occur in people over 50 years old and should be checked by a medical professional immediately to prevent possible blindness.²⁹

Some types of glaucoma cause eye problems which require emergency treatment. Any visual loss with sudden onset of headache should be attended to immediately.

TEARS IN THE ARTERY WALLS OF THE NECK

Small tears can occur in the neck arteries, which can result in bleeding into the blood vessel wall. If the pressure gets too high, the vessel becomes blocked and increasing the likelihood of a stroke. The long medical name for this condition is cervical arterial dissection. People with migraines are more likely to have it than those people without headaches.³⁰ Minor neck trauma can cause damage to the internal carotid and vertebral arteries, which occurs in younger or older people alike. While unusual, medical treatments involving rapid movements of the neck, called manipulations, can worsen an existing problem or cause a new condition of neck artery tearing.³¹⁻⁴¹ The artery tears may initially appear as headache or neck pain, and there has been no known foolproof test found that can identify those people who are likely to get the artery tears with neck manipulations.⁴² A sensible precaution for people who are stretching their necks is to make sure the motion is never forced. Furthermore, if any unpleasant symptoms, such as pain, headaches, blurred vision, dizziness or nausea start to develop, the stretching movement must be stopped immediately.

AVOID FULL NECK MOTIONS WITH CERTAIN SYSTEMIC CONDITIONS

Headaches must not be treated with aggressive neck movements. This is especially true for people with conditions that lead to inflamed or weakened bones and joints such as rheumatoid arthritis, osteopenia, neck trauma, steroid use, gout or bony abnormalities, or Ehlers-Danlos Syndrome. People with Ehlers-Danlos Syndrome have overly flexible joints and in more severe cases have easily ruptured blood vessel walls. Even gentle neck stretching should be done slowly and cautiously, and pulling the neck to its motion limits is generally not the best treatment.

MEDICATION INTERACTIONS WITH HEADACHES

HEADACHES MAY BE A SIDE EFFECT OF MEDICATION

Be aware that an unexplained headache may not be caused by a medical problem, but may be a “rebound headache” from medication overuse. Unfortunately, the side effect of headaches can occur from many medications including antidepressants, oral contraceptives, statins, multiple other medications and even vitamins or herbal supplements.⁴³⁻⁴⁷ It is not within the scope of this manuscript to list specific medications, but to point people to their personal physician to balance out the medication dosage needed to get the maximum benefit with the minimum side effects.

People frequently discount that vitamins and herbal supplements are also medicines that can interfere with the effectiveness of other medications. It may also be the lack of a vitamin or supplement that may lead to headaches.⁴⁶

Be aware of any unusual symptoms that may develop at the time a change is made in one’s medication. Physicians may not consider how common it may be for medication to cause a person’s headache.⁴⁸ Taking headache medication more than twice a week puts one at risk for medication overuse, and potential rebound headaches.⁴⁹

HEADACHE MEDICATION MAY PRODUCE SIDE EFFECTS

Finally, just as medicine to treat unrelated medical conditions may cause the side effect of headaches, the headache medication itself may produce unexpected systemic side effects.⁵⁰⁻⁵³ The great irony of headache medications is that when they are overused, the medications can actually produce the headaches they were designed to get rid of.⁵⁴ Medication doses need to be carefully taken according to the physician's prescription. The headache sufferer must not try to self-medicate haphazardly. If a person suffering from headaches withdraws the headache medication without being weaned off by the physician, a withdrawal headache could be set off. There are dangers associated with adjusting the medication dose either up or down without physician monitoring.

The following chapters will provide a wealth of ideas for headache management, but you must include your physician to clear you of any secondary conditions. Headache management is much more involved than what it might at first appear! Humans are incredibly complex beings and perhaps, given all the things that can go wrong with us, the greatest miracle is that we can function at all.

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