# OPTIMAL HEALTH UNIVERSITY<sup>TM</sup>

Presented by Dr. Peter Hobson & Dr. Ryan Blouin BSc. Hon.

### **Hidden Causes of Headache**

In today's pill-popping culture, drugs are often considered the first line of defense against headache pain. The problem? These drugs have a proven history of ineffectiveness. In addition, they are loaded with potentially perilous side effects.

All-natural alternatives, however — such as the type of chiropractic care provided by your doctor at Hinterland Chiropractic — offer safe and effective ways to end headache pain.

As a provider of holistic health care, your doctor at Hinterland Chiropractic believes it's important for patients and doctors to work together as a team. With that in mind, your doctor at Hinterland Chiropractic is focusing this week's *Optimal Health University*® prevention topic on hidden headache instigators — and what patients can do to halt head pain in its tracks.

#### **Vertebral Subluxation**

When spinal bones (vertebrae) are misaligned, the result is a common condition known as *vertebral sub-luxation*. This, in turn, restricts the movement of nerves and muscles: an underlying cause of headache.

Your doctor at Hinterland Chiropractic restores alignment and movement to the spine with safe, gentle maneuvers known as *chiropractic adjustments*.

#### **Neck Tension**

Migraine and tension-type headaches are often present in patients reporting neck pain, according to researchers in Australia (*Cephalalgia* 2007;27:793-802).

When neck muscles stiffen and contract — a chain of events frequently sparked by poor posture — the result is a tug-of-war with spinal bones: a

scenario that often leads to the development of vertebral subluxation.

That's why medications often fail to alleviate headaches; they focus on symptoms without addressing the root, underlying cause. Chiropractic care, on the other hand, gets to the heart of the matter.

Numerous studies illustrate that chiropractic care successfully relieves neck pain and related tension. For instance, in one study of 119 patients, neck pain was reduced by a whopping 54 percent after four weeks of chiropractic care (approximately 12 visits). And all without drugs (*J Manipulative Physiol Ther* 2000;23:307).

#### **Jaw Problems**

Headache is commonly associated with temporomandibular disorder (TMD): the latter being a possible trigger or perpetuating factor (*Dent Clin North Am* 2007;51:129-44).

TMD is an acute or chronic inflammation of the temporomandibular joint (TMJ) that connects the lower jaw to the skull. A study of 1,940 children illustrated the TMD/headache link when it revealed that "the most common symptom of TMD was headache." (*J Oral Rehabil* 2003;30:1200.)

#### **Eye Strain**



Another well-known instigator of headache is eye strain. Glaring computer monitors and vision difficulties (due to lack of corrective glasses or lenses) are two of the most common causes of eye strain. Flickering fluorescent lights also spark eye strain and headaches.

In the case of uncorrected hyperopia (far-sightedness) and astigmatism (irregularly shaped corneas), the eye's muscles have to work harder to keep an image in focus — leading to tired or aching eyes, poor concentration, headaches and blurring of vision: particularly with close-up work.

#### **Dehydration**

Dehydration — another common origin of headache — is also one of the most simple to remedy. To demonstrate this, researchers in the Netherlands enrolled 18 patients in a pilot study. All of the individuals suffered from migraine headache. In addition, two also had tension-type headache.

Patients received either placebo (fake) medication or advice to drink 1.51 times more water than they typically consumed every day for 12 weeks.

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There was no reported change in the placebo group. However, those who boosted their water intake "reduced the total hours of headache in two weeks by 21 hours." Headache intensity also plummeted (*Eur J Neurol* 2005;12:715-8).

#### **Stress**

Emotional anxiety is one of the most common headache instigators. Fortunately, you *can* diffuse this time bomb before it explodes.

To ward off headache, practice at least one stress-busting technique on a daily basis. Winning techniques include:

- ✓ Yoga, T'ai Chi or Pilates
- ✓ Breathing exercises
- ✓ Meditation
- ✓ Prayer
- ✓ Hiking and nature walks
- ✓ Laughter
- ✓ Dancing

#### Obesity

Obesity is linked to a risk of severe headaches, according to research presented at the 57<sup>th</sup> Annual Meeting of the American Academy of Neurology. The study indicated that "chronic daily headaches were more prevalent in obese and morbidly obese people than in those with normal body weight." (*Nutr Today* 2005:40:118.)

Obese people also reported severe pain more often than the other groups. Those with morbid obesity reported that the pain was usually severe 40.2 percent of the time.

If you are overweight, shedding a few pounds may do wonders to alleviate headaches. Healthy weight-reduction strategies, such as daily exercise and a nutritious diet, are also independent headache-prevention factors.

#### **Medication Overuse**

The continual use of headache and pain medications — particularly those containing barbiturates and caffeine — amplifies the odds of developing what's known as medication overuse headache (MOH). According to scientists, "Medication overuse headache is a clinically important entity and it is

now well documented." (*J Headache Pain* 2005;6:199.)

Painkilling medications also tend to lower blood levels of serotonin: the "feel good" chemical affecting emotion, behavior and cognitive processing. "The principal approach to management of MOH is built around cessation of overused medication," note researchers. "Without discontinuation of the offending medication, improvement is almost impossible to attain." (*J Headache Pain* 2005;6:199.)

This is particularly true in the case of over-the-counter (OTC) drugs. It's estimated that six out of every 10 patients with migraine treat their headaches exclusively with OTC products: ranging from acetaminophen and aspirin to ibuprofen and aspirin-acetaminophen-caffeine combinations. This excessive reliance "contributes to preventable morbidity [ill health] and drug-induced headaches."

(*Pharmacotherapy* 2003;23:494-505.)

When it comes to OTC options, nonsteroidal anti-inflammatory drugs (NSAIDs) may pose the greatest threat. In addition to contributing to MOH, these drugs up the likelihood of stomach ulcers and double the risk of developing heart failure (*Arch Intern Med* 2000;160:777-84).

#### **Hormones**

According to one study, migraine headache is *three times* more common in women than men, "occurring in 18.2 percent of women and 6.5 percent of men. The prevalence significantly increases during the peak reproductive years of women (aged 20-50 years), which represents a period of cyclic fluctuations in ovarian hormones as a result of the female menstrual cycle." (*J Fam Pract* 2007;56:13.)

The researchers noted that pregnancy and menopause can also alter the frequency and disability of preexisting migraine attacks "or may lead to the new onset of migraine in some women."

Instead of resorting to drugs — many of which have potentially serious side effects — talk with your doctor about

adding a magnesium supplement to your diet. In a study of 20 patients with menstrual migraine, sufferers received magnesium (360 mg daily) or placebo beginning on the 15th day of their menstrual cycle and continuing until the next menses for two months. "The patients who received magnesium had a significant reduction in pain scores, number of days with headache, and perimenstrual complaints." (*J Fam Pract* 2007;56:13.)

#### **Carbon Monoxide Poisoning**

Although rare, one of the most preventable — and deadly — causes of headache is carbon monoxide (CO) poisoning.

According to the Washington State Department of Labor and Industries, "Carbon monoxide (CO) is a colorless, odorless gas produced by all internal combustion engines including diesel and propane-powered engines. It is also produced by burning wood, paper or plastic products and from welding when carbon dioxide shielding gas is used."

Fortunately, specially designed detectors can monitor your home's air for the presence of this deadly gas. If you don't already own a CO detector, make sure to pick one up today.

Other common fumes and odorless gasses may also spark headache.

#### **Rely on All-Natural Relief**

Regularly scheduled chiropractic care is the key to preventing pain and illness. The focus of the chiropractic approach is warding off health complaints before they occur. However, if headache does strike, don't reach for drugs. Instead, consider the all-natural relief options promoted by our chiropractic office.

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Presented by Dr. Peter Hobson & Dr. Ryan Blouin BSc. Hon.

## Drug-Free Approaches to Headache Prevention

Do you suffer from headaches? Your doctor at Hinterland Chiropractic wants you to know that relief is possible, without resorting to hazardous medications. Read on to learn winning all-natural solutions to head pain from your doctor at Hinterland Chiropractic.

#### **Get Adjusted Regularly**

Your doctor at Hinterland Chiropractic finds that the root of many headache sufferers' pain lies not in the head but in the spine of the neck (cervical spine). Headaches are often an indication of a hidden condition called *vertebral subluxations*. Vertebral subluxations result from misaligned spinal bones (vertebrae) in the spine. When this disorder affects the spine of the neck (cervical spine), it can spark chronic pain and limited mobility.

One study of more than 5,000 headache sufferers determined that about 40 percent of incidences start in the cervical spine (*Wien Med Wochenschr* 1994;144:102-8).

In another inquiry, radiographic analysis of the cervical spines of 47 patients with headache revealed that 97 percent of all patients exhibited significantly abnormal mobility in at least one segment in their cervical spines, a key sign of vertebral subluxation (*J Manipulative Physiol Ther* 1993;16:428-31). In addition, 43 percent exhibited abnormalities at four *or more* segments. Eighty-four percent had at least two major fixations of cervical bones.

To ward off vertebral subluxations, schedule regular appointments with your doctor at Hinterland Chiropractic. Scientific research shows that chiropractic adjustments slash neck pain and headaches. One such review of

683 patients showed that chiropractic care was as effective as prescription medication for tension-type headaches and migraines — and more effective than massage (*J Manipulative Physiol Ther* 2001;24:457).

#### **Conduct Neck Posture Checks**

One analysis concluded that 77 percent of all headache sufferers studied had a marked reduction, absence or reversal of their normal cervical spinal curves.

"These findings support the premise that the neck plays an important, but largely ignored role in the manifestation of adult benign headaches." (*J Manipulative Physiol Ther* 1993;16:428-31.)

To keep your neck posture perfect, post a sign in eyeshot of your computer or desk to remind you to maintain proper neck alignment.

If you are unsure how to hold your head in proper neck posture, ask your doctor at Hinterland Chiropractic to show you. The doctor can also teach you simple posture-checks and exercises.

#### Pass Up Painkillers

Medication overuse headache (MOH) is a significant cause of headache, even among people who limit their use of pain medication. Studies show that prescription and over-the-counter pain



medicine may instigate headaches, ironically guaranteeing more pain. Research indicates that up to 15 percent of patients at headache clinics and 1 percent of the general population suffer from chronic daily headache due to medication misuse — an epidemic statistic (*J Child Neurol* 2001;16:448-9).

Maintaining regular chiropractic appointments will stave off headaches and curb reliance on pain medication.

#### **Watch Out for Other Drugs**

A plethora of commonly used medications may also spark headache. In addition, most illegal drugs are associated with headache.

Medications that list headache as a possible side effect include oral contraceptives, hormone replacement therapy, antidepressants, cold medications, decongestants, allergy medications, heart medications and drugs for high blood pressure.

Overuse of certain vitamins and dietary supplements, such as iron, vitamin A and vitamin D, may also spawn headache. On the other hand, magnesium, B-complex vitamins and feverfew may avert head pain.

If you suspect a medication you are taking may be to blame for your head pain, look into natural alternatives. For instance, if you have high cholesterol,

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is it possible to control it with diet and exercise interventions? If you find yourself frequently suffering from colds and downing medication, consider natural ways to boost your immune system, such as following a healthful diet, getting enough exercise, employing a stress-reduction technique and getting regular chiropractic check-ups. However, never discontinue use of a medication without consulting with the physician who prescribed it.

#### **Prevent Eye Strain**

Had your eyes examined recently? Vision problems may spark head-aches.

Eye strain from computer work can also provoke head pain. In one study, workers who spent a minimum of 11 hours per week in front of a computer terminal were 50 percent more likely to suffer weekly headaches, compared with their counterparts who did not work at computers (*Am J Epidemiol* 1999;150:1223-8). Limit computer work whenever possible, and take care to give your eyes a break from the screen at least once an hour. Also, if your work requires you to stare at a computer all day, at least limit athome recreational computer time.

#### Limit Alcohol & Avoid Smoke

Drinking alcoholic beverages, even in moderation, may also spark head pain for some individuals. Red wine and beer, which contain the chemical histamine, are particular culprits for migraine sufferers.

Smoking, and exposure to secondhand smoke, may also up the risk of headache.

#### **Exercise Everyday**

Daily aerobic exercise staves off headache, according to research (*Cephalalgia* 2003;23:972-6).

Another way that exercise prevents headaches is by keeping emotional depression at bay. Studies show that people with depression have an elevated risk of headache (*N Engl J Med* 1999;341:1329-35). Regular exercise

is as, and possibly more, effective than antidepressant medication for emotional depression (*Psychoso Med* 2000;62).

#### **Limit VOC Exposure**

Chemical fumes, such as from gas, cleaning products, perfumes, paint and those produced in manufacturing, may trigger headaches. In addition, although no obvious fume is produced, "off-gassing" of toxins from carpets, synthesized fabrics or other materials may incite headache.

These materials emit chemicals called volatile organic compounds (VOCs), which trigger headache and allergy symptoms in some individuals (*Am J Epidemiol* 1999;150:1223-8).

Exposure to VOCs may also raise the risk of developing cancer (*Am J Ind Med* 2005;48:157-67).

To learn how to avoid VOCs, visit the Environmental Protection Agency's Web page on the subject at www.epa.gov/iaq/voc.html.

#### Don't Skimp on Sleep

If you suffer from headaches, take care to get at least seven hours of shuteye per night. Also, maintain a regular sleep schedule with a set bedtime and wake time. Sleep deprivation and inconsistent sleep schedules trigger headache.

Patients with morning headaches should also be evaluated for sleep apnea, researchers report (*Arch Intern Med* 1999;159:1765-8).

Snoring is also linked with chronic headache (*Neurology* 2003;60:1369-71).

#### **Manage Anger & Stress**

In a study of 422 adults, Robert Nicholson, Ph.D. looked at how angry a person is, how much he or she internalizes anger and how severe and frequent headaches are. He also considered whether the individual was anxious or depressed.

"We found that holding in anger is the biggest predictor of headaches, among

the group of patients we studied," explains Dr. Nicholson (*Headache* 2003;43:651).

However, he cautions that "there are times that expressing anger isn't the best thing. ...What I would hope to do is to help people learn ways to lengthen their fuses so they avoid becoming angry."

Employing stress reduction techniques, such as yoga, t'ai chi and biofeedback, also sends head pain packing. In addition, meditation or prayer may be helpful.

#### **Cut the Coffee**

Although caffeine may alleviate headaches, regular caffeine intake can cause drug rebound tension headaches and may also trigger migraines.

#### **Dissect Your Diet**

Some foods may provoke headaches, particularly migraines. Foods to avoid include cheese, chocolate and refined carbohydrates. In people with a sensitivity to gluten, wheat may bring on a headache. Choose food in its natural state. Avoid processed dishes, preservatives and additives like monosodium glutamate (MSG) and nitrates. Sugar substitutes, such as aspartame, may also incite head pain (*Headache* 2001;41:899). And, eating frozen or cold foods quickly produces a phenomenon known as "ice cream headache."

#### **Check Your Blood Pressure**

Individuals with chronic headache should be screened for high blood pressure, say scientists. Although severe hypertension has long been associated with head pain, recent reports indicate that mild-to-moderate hypertension may also provoke headache (*Arch Intern Med* 2000;160:1654-8).

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## **OPTIMAL HEALTH UNIVERSITY**

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### **Medication Overuse Headache**

Headache pain medication ads are everywhere — from glossy magazine spreads to flashy TV commercials. The message is simple: Your headache deserves a strong painkiller, which will instantly cure the problem. Pain should not slow you down, since there's an easy, swift solution. But is there really?

Doctors of chiropractic, such as Dr. Hobson, wholeheartedly disagree with the advertisers' quick-fix pill solution. What the ads don't mention is that the strategy often backfires: The pills can eventually cause more pain than they cure. When this happens, a condition called medication overuse headache (MOH) ensues.



MOH is a relatively new term for a long-standing, "unnamed" and largely unrecognized condition caused by taking painkillers — daily or on a regular basis — for migraines or other headaches. Sadly, this condition is common. Dr. Hobson often cares for individuals with MOH. About one in 50 people develops this problem at some point. It affects five times more women than men.

#### **How Does MOH Happen?**

#### The Dependency Dilemma

Headaches flare up in response to physical or emotional stress. As a "solution," many people take painkillers frequently. Initially, the first doses may provide relief, which reinforces

the idea that painkiller consumption is helpful. On a psychological level, what's known as "positive conditioning" spurs the sufferer to continue reaching for painkillers for relief.

But what's going on may have more to do with chemical changes in the brain than psychological conditioning. Dr. Hobson wants patients to be aware that the side effects of painkillers, such as sedation, mild euphoria and stimulation, may lead to dependency.

Painkillers with caffeine, barbiturates, codeine and other opioids are the most likely to have this effect. For example, caffeine increases alertness, relieves fatigue and improves performance and mood. Caffeine-withdrawal symptoms, such as irritability, nervousness, restlessness and headaches, all encourage patients to continue their abuse.

Abused drugs, from painkillers to alcohol, activate a "pleasure pathway" in the brain and reinforce the behavior. The pleasure pathway, which is called the "dopamine reward circuit," is connected to areas of the brain controlling memory, emotion and motivation.

The pleasure pathway undergoes actual chemical and anatomic changes that create and prolong addiction, affecting a physiological hold on a person's ability to function. This is why



addiction is often referred to as a brain disorder and isn't as easy to kick as simply mind over matter.

Like drugs such as cocaine or heroine, some painkillers trigger the release of the brain's natural "feel-good," painfighting chemicals called endogenous opioids or endorphins. As with any addictive drugs, the more often they are used, the less sensitive the brain becomes to them. These drugs literally alter the brain.

#### Withdrawal Woes

After a period of regular painkiller doses, the body becomes used to the pain medication. When the sufferer doesn't take a painkiller within a day or so of the last dose, then "rebound" or "withdrawal" headaches develop. What the sufferer thinks is just an especially persistent headache is actually a symptom of medication withdrawal.

Not recognizing that the medication is the culprit, he or she may take another dose. When the effect of each dose wears off, a further withdrawal headache develops. In time, sufferers will develop regular headaches that may appear on a daily basis. Some people resort to taking painkillers "routinely" to try to prevent headaches, which only makes things worse.

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#### Which Painkillers Cause MOH?

If you think that only prescription medication can cause MOH, you're wrong. Almost any pain medication that provides rapid headache relief can cause MOH. Culprits include simple pain relievers like aspirin, acetaminophen (Tylenol®) and ibuprofen (such as Advil®, Motrin®, Aleve® and Midol®).

Mixed analgesics, which include overthe-counter and prescription drugs containing caffeine, aspirin and acetaminophen, are especially known as MOH instigators. Other offenders include migraine-specific medications, such as Ergomar<sup>®</sup>, Migranal<sup>®</sup>, Imitrex<sup>®</sup>, Zomig<sup>®</sup>, and opiates, such as Tylenol 3<sup>®</sup>, Vicodin<sup>®</sup> and Percocet<sup>®</sup>.

#### **Children and MOH**

Although children are smaller in stature, their migraines or headaches can be just as big as an adult's. And, studies show that children and adolescents are as susceptible to MOH as adults.

One inquiry reviewed the histories of 79 children and adolescents who sought care from the outpatient clinic of the Department of Neurology of the Leiden University Medical Center in the Netherlands. All of the children were younger than 16 years old and had headaches 15 days or more each month.

Although the quality, severity and location of the youngsters' pain varied, the majority (76 percent) used analgesics to solve the pain. Ten patients used more than one type, and 13 used analgesics daily.

Fifty-seven (72 percent) children had chronic daily headaches for more than six months, which for most lasted more than four hours a day. In one-third of patients, the headaches led to frequent school absences and sleeping problems.

The authors conclude that "chronic daily headache in children is a serious disorder. A relatively large number of patients overuse medication and it leads to frequent school absenteeism

and sleeping problems." (*Headache* 2005;45:678-83.)

#### **MOH and Emotions**

Doctors of chiropractic don't see the body separate from the mind. They realize that the body and the mind have a direct relationship in which both affect each other. That's why chiropractors avoid treating symptoms and instead focus on encouraging patients to seek both physical and emotional wellness.



As you can imagine, doctors of chiropractic weren't surprised by research, performed in France, that strongly linked MOH to anxiety and depression. The study included 41 MOH sufferers and 41 patients with chronic migraines.

The scientists found that MOH participants were especially apt to have substance abuse problems and endure mood disorders, such as anxiety and depression. Migraine patients with emotional problems were more likely to develop MOH than emotionally stable migraine sufferers.

According to the researchers, "MOH patients have a greater risk of suffering from anxiety and depression, and

these disorders may be a risk factor for the evolution of migraine into MOH." (*Cephalalgia* 2005;25:519-22.)

### MOH May Be a Precursor to Other Disorders

Although research into this area is still preliminary, scientists speculate that MOH may be a precursor of more serious conditions. Researchers hypothesize that the same brain changes and chain of events that lead to MOH may trigger other disorders, if medication overuse continues. Besides emotional problems, these disorders may include other forms of chronic pain, fibromyalgia and chronic fatigue syndrome.

#### **Chiropractic Lifestyle Solution**

For doctors of chiropractic, the solution to headaches isn't in a pill. In addition to spawning MOH, pain medication does nothing to prevent future pain and is often accompanied by multiple side effects. The solution is the chiropractic lifestyle, which involves stress reduction, chiropractic care, healthy diets and exercise. All of the components of this lifestyle are proven ways to eliminate head pain and are free from side effects.

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#### Side effects of painkillers:

Medication overuse headache
Intestinal bleeding
Ulcers
Stomach pain
High blood pressure
Heart failure
Kidney conditions