

# **Chronic Headaches, Migraines, and Tension Subside With Improved Blood Flow to The Brain**

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## **Job One**

The most important job in the body is keeping the lights on upstairs by delivering adequate arterial blood to the brain. Given its importance, one might think that this would not be a problem with most people. If my experience in the last three years is representative, however, conventional wisdom on this score would be wrong. The bad news is that there seems to be an epidemic of brains that aren't getting enough blood. The good news is that this is easy to correct. .

Medicine largely ignores the problem of arterial insufficiency to the brain. So too does almost everybody else, including most bodyworkers, physical therapists, and chiropractors. When they suspect a problem, doctors use doppler radar to measure blood flow through the carotid arteries, but typically as long as flow is at least 80% of "normal" doctors don't intervene. The problem with the 80% approach is three fold: First, who can afford having inadequate blood supply to their CNS? Secondly, if the CNS isn't getting enough blood, neither will any other structures in the body, including possibly the heart muscle, which is probably overworking in an attempt to get more blood to the brain. Finally, if there is an epidemic of arterial insufficiency, what exactly is normal anyway? I'm guessing that what is medically "normal" is a lot less than what the brain considers "adequate" and a country mile from "optimal". Medical intervention consists of drugs or surgery, both inelegant solutions to what is usually a mechanical problem.

## **CerebroSpinal Fluid: Nectar of the Gods**

Some background may make it easier to understand the importance of delivering arterial blood to the brain. Arterial blood carries oxygen, nutrients, immune cells, and neurotransmitters — all of which are critical to the operation, maintenance, repair, and upgrade of the brain, and the rest of the central nervous system. When arterial supplies to the brain are inadequate, the body will short the other organs in an attempt to minimize the brain's shortfall. This has deleterious consequences for every cell in the rest of the body.

Secondly, arterial blood is the raw material from which cerebrospinal fluid (CSF) is distilled at the blood-brain barrier. Absent sufficient arterial blood, CSF volumes will be inadequate, producing symptoms both within and without the central nervous system (CNS). For starters, CSF floats, cushions, nourishes, fuels, bathes, detoxifies, and delivers neurotransmitters and immune cells to the CNS and its components. The brain is tofu-soft and — like a whale — cannot survive long agraound. If your brain isn't fully and continuously afloat in a virtual sea of CSF, CNS structures like the pituitary, hypothalamus, cerebral cortex, and cerebellum will perform inadequately and you will experience symptoms within the head and elsewhere in the body — though you and your physician may be hard-pressed to discover the cause.

## **Brilliant by Design**

The body is intelligent and hierarchical. It routinely sacrifices the needs of less important structures to address the needs of more important structures. Since the brain and heart are the

two most important organs in the body, when blood supplies to either are inadequate, the body puts other structures on short rations and recruits muscles and tissues to minimize the supply shortfall. For the brain, the more obvious indicators of chronic arterial insufficiency are chronic muscle tension in the neck and shoulders, chronic problems with the cervical and thoracic spine, weak cranial rhythm, and chronic headaches. Muscle tension and spinal misalignments shorten the distance between heart and brain, thereby reducing the supply shortfall.

Given the importance of supplying arterial blood and its load of oxygen, nutrients, and immune cells to the brain, one would think that our bodies would be designed a little better. Actually, they are. Redundancy has been built in. Four arteries supply the brain with all its blood, the left and right carotids and the left and right vertebrals. Once inside the brain, the carotids connect to a roughly pentagonal structure called the Circle of Willis. This distributional hub, allows one side of the brain to be served by the opposite carotid, in the event of a complete blockage on that side. Not ideal, but certainly better than having half your brain die from lack of oxygen. The vertebral arteries primarily supply the three lowest structures in the brain, pons, medulla, and cerebellum. These structures play a vital role in basic life support plus communications between the brain and everything in the body below the neck. Rather than flowing into a common circular structure, the vertebral arteries join inside the head to form the basilar artery. This single arterial trunk has the same ability to feed both sides of the pons, medulla, and cerebellum from one vertebral artery when the other is blocked. Finally, the basilar artery connects into the posterior base of the Circle of Willis providing an additional layer of mutual aid in the event of a significant shortfall.

This revenue-sharing, back-up design underscores the importance of getting arterial blood to the brain. So far as I know, no other organ has such an elaborate back-up system. One reliable way to determine if the brain's arterial supply is adequate is to ask the Circle of Willis. Typically, it will tell you straight out.

### **The Snake in the Grass**

Obviously, if arterial inadequacy is epidemic as I believe, there must be some other explanation. In fact, there are several. First, our heads are very heavy, so opportunities for mischief abound. Recent advances in the understanding of, for example, the impact of heading soccer balls or helmet to helmet football collisions on the brain and spine underscore just how vulnerable our brains are. Secondly, in less than 200 years, humankind has gone from walking, running and riding horses-- which are dangerous enough activities-- to moving at extremely high speeds. Of course, our bodies have had no time to adapt to these changes. When there is a problem, we experience horrific acceleration and deceleration, and the associated forces. Also, vascular diseases are on the upswing among those opting for inactive lifestyles and sports injuries are more frequent in the active set. Here in Alaska, both extremes are exacerbated by the the cold, dark climate, slippery roads, trails, and parking lots, the popularity of snowmachines and 4-wheelers, substance abuse, and bad drivers.

People with vascular insufficiency may or may not have symptoms. Even if they do, they usually won't be aware of them. The most common include chronic headaches, chronic neck tension, chronic cervical problems, vision problems, ear problems, balance problems, and hypertension. Even absent complaints, the head will typically tilt toward the artery with the biggest restriction.

Often the pulse of one of the carotid arteries will be visually prominent, the other absent or pale in comparison. If visual clues aren't sufficiently clear, it's usually a simple matter to palpate all four arteries to gain a sense of where the biggest problem is. A perceptibly imbalanced or weak may also indicate arterial insufficiency.

Often, there will be more than one restriction on a given artery, and more than one artery with restrictions. Generally, this doesn't pose a significant diagnostic problem, because the most significant restriction usually exerts the biggest pull on the artery, and this is usually easy to sense manually. Ideally, you treat the most significant restrictions first. Furthermore, regardless of the cause, if you can find a restriction, you can almost always get it to release, using traction, induction, dialoguing, or, in the case of scar tissue and adhesions, the assistance of the immune system.

Although there aren't many practitioners focused on releasing vascular restrictions, the good news is that it's not exactly rocket science. But the effects are dramatic, both in terms of cessation of symptoms as well as over all health improvement and optimization. The neck muscles relax and the spine lengthens. Patients report that chronic brain fog dissipates and they are able to think more clearly and multi-task, as they did prior to their injury. Chronic hearing problems and tinnitus disappear. And, as previously mentioned the cranial rhythm is robust and expansive. .

When flow through one or more of the carotid or vertebral arteries is restricted, tension sets up in the entire system. The situation is analogous to trying to suck the last bit of soda up through a straw. Frequently once the tension is released, the entire head, skull, membranes, brain and associated arteries relax. This is palpable, often to both patient and practitioner. In some cases, however, the entire arterial net of the brain will be skewed and will have to be rebalanced, using one or more of the carotids and vertebrals as handles. In one case, this took about an hour. My patient and I could feel exactly where we were working most of the time, relative to the Circle of Willis, though we couldn't always name the arteries without referring to the anatomy chart. Witnessing the segmental relaxation vascular system deep within the head was an exquisite and extremely spiritual privilege. When it was all over, the patient looked relaxed and radiant as she hadn't in years.

The same could be said the first time I treated her, three years earlier. This woman had been in a horrific car-wreck, Were it not for the marvels of modern medicine, she would not be alive today. That time, we released major restrictions behind her heart stemming from emergency open-heart surgery to repair a partially ruptured aorta. This and a little work in the aorta and lower carotids wiped the pain-pinched look off her face and replaced it with the rosy smile of a face newly flush with arterial blood.

The next time we worked, we found and released big restrictions pulling her heart backward and downward. These we traced down the inferior vena cava to the common iliac veins, where sieves had been surgically inserted and later removed to intercept possible blood clots from her broken legs to prevent their reaching her heart and lungs. The restriction in the left vein responded to manual therapy and quickly released. Not so the right. Further investigation revealed that the glue preventing release was the belief or realization that this person would never be whole and healthy again. A little "Aha!" she had while recuperating in her hospital bed a few weeks after the

accident. As soon as she agreed to let go of this belief, the associated restriction in her right common iliac vein released, freeing the heart. After restoring her heart's visceral motility, her entire thorax relaxed.

On her third visit, a year later, we addressed many of the mechanical imbalances in the thorax stemming from the blunt trauma of the accident and the open heart surgery, restoring mobility, motility, and synchrony to the chamber of her lungs and heart, to the mediastinum and esophagus. I am indebted to this patient and her body for teaching me so much about anatomy, adaptation to trauma, and capacity for healing. She allows me to share our experience in the hope that others will recognize the potential benefits of treating the body as a mechanical enterprise.

Given the importance of the heart and of delivering sufficient blood to the brain, you might think that owner-operators would interfere with this process, but again you would be wrong. Two recent examples come to mind. In the first, embarrassment following a collision with a fixed object while walking had resulted in a restriction in a right carotid for 23 years. In the second, a sense of inadequacy in the presence of peers during a workshop was restricting flow through a vertebral artery. This was discovered and released in an attempt to treat a three-day headache of increasing intensity. There is something ironic and all-too-human about the latter situation wherein our beliefs so patently co-create our reality. Obviously, she didn't intend to restrict the blood supply to her brain and give herself a tension headache, but it virtually guaranteed that she won't be at her best.

I would hazard that these emotion and attitudinal generated situations are far more common than anyone would guess. If you have any history of trauma or whiplash, or any of the aforementioned symptoms of possible arterial insufficiency to the brain, please consider seeking treatment. It can't hurt and it may just make your life a whole lot easier and/or prevent or delay degenerative diseases like hypertension, accelerated aging of the heart, endocrine challenges, and degenerative diseases like Parkinsons and senility. Between the ages of 40 and 60, CSF circulation diminishes by 50 percent. A significant proportion of this is probably due to arterial insufficiency and is therefore, preventable and treatable.