GOTTA HEADACHE
Handbook

GOTTAHEADACHE DIET CENTER

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www.gottaheadache.com

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Neurological
Headache and
Research
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GOTTA HEADACHE HANDBOOK

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Introduction

Starting a "brain cell fitness"™ program to reduce the frequency of your headaches may be one of the best investments you can make. We appreciate your trust in our headache diet counseling center. We ask that you approach this program as if you were starting a special school. Like with any educational process, there will be a beginning, a middle and end. Your goal will be to gain the knowledge you need to manage your headaches. Every aspect of this program is necessary to help you accomplish your goal. This is your textbook. Bring it with you to every session.

Now that you have been to your first session it is time to consider whether or not you are ready to commit to this program. Over the years I have found that some people are not at the right time in their lives to make the lifestyle changes required to make this program a success. They find themselves frustrated and disappointed with their results. I respect your time and financial commitment. Therefore, I will not encourage you to try the program if you are not ready. Think about it. Discuss it with your friends and family. I want you to make the right decision for you. For those of you who are ready, let us arm ourselves with a big dose of determination, and go after those headaches.

Lastly, here are a few words of encouragement. I know you do not feel well. I know having a disease is a big hassle. Hang in there. You can do this and the pay off is incredible.

C. A. Foster, MD

SEROTONIN

Cause of Headaches

Headache is not a result of bad eyesight, bad sinuses, a bad uterus or even a bad marriage! It is a result of a yet unknown problem with the brain chemical serotonin. If you have frequent headaches, you have a disease. New scientific research suggests headaches and other symptoms of migraine are related to an inherited problem with your brain chemistry. The exact problem with the brain chemical serotonin is unknown. However, many health professionals around the world know that this chemical is somehow related to headaches, anxiety, and depression.

The serotonin-related diseases, such as migraine, are not psychological, but rather biological in nature. Of course psychological stress does make a headache problem worse because serotonin is your "happy juice," and like a car using oil, you may be "a quart or two low." The key to controlling stress is to learn how to stop wasting your serotonin. The more serotonin you have the fewer the headaches.

What is Serotonin?

Serotonin is a neurotransmitter or brain chemical. The entire nervous system is like your very own personal biological computer. It is capable of running millions of programs instantly, sending and receiving electrical impulses simuitaneously. The nerves connect with one another, not by touching, but by releasing certain chemicals. This process in turn causes the adjoining brain cells to react. Serotonin is one of these chemicals.

Biologically, serotonin is produced in your brain from an amino acid called ***tryptophan***. This amino acid comes from the protein you eat. Amino acids are the building blocks of protein, much like the individual cars on a train. Different combinations of amino acids make up thousands of proteins that ultimately are used as natural "happy" chemical, serotonin. The presence of serotonin is very important in the way we control sleep, mood, stress, and pain. Those who suffer headaches might also have symptoms of insomnia, depression, anxiety, fatigue, generalized muscle aches and chronic pain. The presence of such symptoms suggest a possible problem with serotonin in the corresponding part of the brain that controls these functions.

The exact problem with the serotonin in your nervous system is unknown. At present, researchers have been unable to prove if the actual chemical serotonin is abnormal, if the receptors or "parking space" for the serotonin on the brain cell is abnormal, or if the level of serotonin is too low. In any event, most researchers agree that migraine and other headache disorders are related to a serotonin problem.

Where is the Problem Area?

Researchers disagree as to which part of the brain is involved in the process of a migraine. For many years migraine was thought to be caused by a change in the size of brain blood vessels, a theory of Dr. Harold Wolfe. For some unknown reason, the blood vessels constricted or became smaller causing the brain to go without blood. This was thought to cause the aura of migraine. After the aura, the blood vessels became dilated or enlarged, causing the pain of the headache.

It is now thought to be much more complicated than this. Dr. Michael Moskowitz of the Harvard Medical School has postulated that serotonin-controlled nerves from the brain stem activate receptors or "switches" on blood vessels. The brain stem is the part of the brain that connects the brain to the spinal cord. In addition to all the nerves that go throughout the spinal cord, it contains the pain control system, the sleep control system, the balancing system and the vomiting center. The activation of nerves in the brain stem causes the blood vessels to leak fluid and painful chemicals, which then cause the headache. More recent research suggests the migraine starts in the brain stem, and is now referred to as the brain

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stem generator for migraine. The problem with the "brain stem generator" theory is that it does not explain the other symptoms of migraine or why certain environmental changes start a migraine.

Another theory is that migraine results from an abnormality in brain cell functions in the hypothalamus. Dr. Michael Welch from the Henry Ford Hospital in Detroit has spent many years researching migraine. He and his co-workers have demonstrated abnormal electrical activation in the brain during a migraine attack. Dr. Welch has reviewed the work of many headache researchers and summarized his and other's findings in a medical article titled ***Migraine, A Biobehavioral Disorder.*** In the article he discusses the hypothalamus and migraine.

The hypothalamus is a very important, although tiny part of the brain. It is the only area of the brain that could explain the symptoms of migraine and why certain environmental changes trigger a migraine attack. A disturbance in the hypothalamus could then spread to the brain stem and start the biological events in the brain stem discussed earlier.

The best way to describe the hypothalamus is to think of your brain as your personal computer regulating and controlling everything your body does. You do not move a finger, feel the cold rain drops on your skin, have your heartbeat, make urine, feel emotions—in fact you do not do anything with your body that your brain (your central computer) does not control. RH Carpenter said as much in 1990 in ***Neurophysiology*** when he established that the hypothalamus is the interface between the body and the brain. He proved that the hypothalamus coordinates internal stimuli and responses with external ones. Carpenter basically found that the hypothalamus acts as a need detector and response generator.

Where the brain is your computer, your hypothalamus is your "stay alive software." It regulates all the automatic functions of the body. It automatically controls your vital signs such as blood pressure, heart rate, temperature and respiratory rate. It makes sure your glucose, the body's gasoline, stays at a certain level to avoid brain damage. It is the body's internal clock as it regulates hormones and sleep cycles. The hypothalamus controls our physical reaction to emotional stress, physical stress and pain. It receives large amounts of blood and is one of the few parts of the brain where substances in the blood can enter the brain.

A problem in the hypothalamus best explains why weather changes, change in altitude, sleep disturbances, hormonal changes, stress, low blood sugar and certain foods trigger or set off a migraine attack. It is likely that the brain cells in the hypothalamus of certain individuals who inherit the migraine gene are more sensitive to such changes because of the abnormality in serotonin levels. Depending on how sensitive the brain cells are, the triggers may set off the migraine attack individually or they may need to happen together over a period of a few days. For example, some people may need to have all of the following occur over several days before they experience a migraine attack: stressful situations, ingestion of the "migraine foods," sleep loss, travel, and a change in hormones such as occurs with menstrual cycles. On the other hand, all it takes for others may be a piece of chocolate or a few hours of lost sleep and within a few minutes or hours, they experience a migraine attack. In summary, migraine is an inherited disease that appears to be related to an abnormality with the brain chemical serotonin and likely starts in the hypothalamus. It spreads throughout the brain causing the headache, aura and other associated symptoms of migraine. The entire process is extremely complicated but we do know it is a real disease!

Migraine is a
Disease,
the headache is only a
Symptom.

HEADACHES

What is a Cluster Headache?

There is another type of severe headache that is seen more often in men, yet rarely found in women. This type of headache is called ***cluster headaches***. Severe stabbing or burning is felt around the eye or on the side of the head. Unlike migraine that slowly becomes more severe, a cluster begins suddenly. It is often described as unbelievable pressure behind the eye. Typically, a cluster is of shorter duration than a migraine, lasting 60-90 minutes. During the pain, the eye on the side of the pain will tear profusely and the eyelid will droop. Often there will be a clear nasal discharge and nasal stuffiness on the side of the headache. The headaches occur in groups or "clusters," hence the name. The sufferer will have 1-4 headaches every day for 3-4 months. The headaches will disappear, only to recur every 6-12 months.

The cluster requires the appropriate medications. The use of narcotics for the pain does little to help the headaches and places the individual at significant risk for addiction. All cluster headache sufferers in my practice are placed on the same comprehensive program as those with migraine. I believe this approach has increased the length of their remissions and shortened each cluster episode. The medical literature suggests that dietary restriction, except the avoidance of alcohol, is not helpful. My experience does not support this theory. Because of the severity of cluster headaches, these men are highly motivated to make the lifestyle changes necessary to control their pain.

Tension, Sinus or Migraine?

There are actually two problems associated with thinking your headaches are tension or sinus headaches when in fact they are migraine. First, you may take medications that are not only unnecessary and potentially addictive, they may actually give you more headaches. Second, prescription and non-prescription pain pills, sinus pills, muscle relaxants, sleeping pills and tranquilizers cause a cycle of headaches. Although we specialists are not sure how it happens, we do know if you take certain pills more than twice a week to treat headaches, it causes ***rebound headaches (medication overuse headaches)*** and prevents appropriate migraine medications from helping.

NARCOTIC USE FOR PAIN DOES LITTLE TO HELP

Are Headaches Inherited?

Many of us with migraine know that migraine is inherited. My daughters, my brother, my nephew, my mother and my maternal grandmother all have migraine. When we look at our family tree, we see that severe headaches seem to plague each generation. For many years it has been known that migraine appears to run in families, but the exact genetic problem has yet to be determined.

In 1994 the first scientific evidence to support a genetic cause for migraine came with the discovery of a gene for a particular type of migraine—hemiplegic migraine. Dr. A. Joutel and other French researchers reported that this gene was located on chromosome 19. This exciting break through in genetic research should gradually change the way migraine is diagnosed and treated.

Many of the serotonin diseases such as anxiety disorders, depression, manic-depression and attention deficit disorders are seen in families with migraine. Studies have shown that those with migraine are nearly four times more likely to experience depression at some time in their life. The same studies indicate that migraine and depression do not cause one another, but are distinct diseases.

It is important to understand that these diseases are inherited. If you are experiencing headaches like your mother, you know this is a biological problem, not a learned behavior. In addition, it helps to understand that your child's complaints of headaches are real.

MIGRAINE

What is Migraine?

Migraine is a disease and the headache is only a symptom. Migraine is characterized by attacks in which people will experience headaches, nausea, vomiting, and sensitivity to light, sound and smells. Sufferers often complain of mood changes such as anxiety, depression and irritability. They may also have difficulty concentrating and suffer from fatigue as well. A few migraine sufferers may experience brain symptoms such as abnormal sensations, loss of balance or movement, speech problems and visual disturbances. These abnormal sensations called an aura often occur before the headache starts and even occur without the presence of a headache. When an aura is not present, a misdiagnosis of "tension headaches" is made, when in fact the patient is suffering a migraine without aura.

Migraine Phases

PHASE I
Prodromal
PHASE II
Aura
PHASE III
Headache
PHASE IV
Postdromal

Migraine is a process with fairly consistent symptoms experienced over several days. This process has been described like acts of a play. Not everyone will experience all of the symptoms, and individuals may experience different symptoms with each migraine attack.

The first phase of a migraine attack, the ***Prodromal Phase*** or Act I, last 12-24 hours. During this time period one will experience changes in appetite, either decreased or increased. Some will experience cravings for certain foods. Hands and feet may swell and constipation may be a problem. Mood changes are frequently present during this phase. One may feel anxious or depressed. Difficulty concentrating is very common. There may be difficulty spelling, doing simple mathematics or word finding problems. Many will feel tired and find themselves yawning excessively.

The next phase of a migraine attack, Act II, is the ***Aura Phase***. Doctors describe this as a transient or temporary neurological symptom that disappears within 23 hours. It usually last 30-60 minutes and precedes the headache by 20-30 minutes. Usually, these symptoms are visual disturbances. One may experience momentary spots of color, black spots or bright flashes of light. Others may start to have a change in their central vision. It may be total loss of vision or a visual distortion like looking through broken glass or a kaleidoscope. Often there will be bright silver zigzag lines surrounding the area of vision loss. The area of visual loss may expand gradually over 20-30 minutes. Infrequently, objects may appear to move or change shape or size. Instead of visual disturbances, some may experience a tingling sensation in the arm or around the mouth. Others may experience difficulty speaking, vertigo, or loss of balance.

The next phase, or Act III is the ***Headache Phase***. The headache is frequently one-sided but can be a steady or squeezing pressure. The headache may last hours to days. Typically, the headache is of shorter duration in children.

The final phase, Act IV, is the ***Postdromal Phase***. Many describe this as a migraine "hangover." It lasts 12-24 hours. The most common symptoms are mood changes, either depression or euphoria, increased urination, diarrhea and/or food intolerance.

When migraine attacks occur frequently, many of the symptoms may go unrecognized by some physicians which can lead to unnecessary testing and treatment.

"SEROTONIN CREDIT CARD"

Since we believe serotonin is involved in the process of migraine, anxiety and depression, allow me to use a word picture, which seems to work for many in my practice. I would like you to consider your serotonin system like a "serotonin credit card."

The serotonin credit card approach is a concept you can use to manage your migraine and the stress in your life. The premise of this approach is that you need enough serotonin in your brain to calm brain cells and prevent a headache. Because migraine is an inherited disease, you can think of your serotonin credit card as having a *balance due* from the start.

Each time you are exposed to an environmental trigger that activates brain cells, you will have to use your serotonin credit card to calm that brain cell. If you exceed your *credit limit*, meaning that there is not enough serotonin left in the system, you will get a headache. The system becomes overly sensitive to environmental triggers when you maintain too high of a balance on your credit card. Just like a real credit card debt, the *high interest rate* keeps you in the pit of debt of constant headaches.

The approach outlined in the remainder of this handbook will help you understand how to control environmental triggers as much as possible and learn ways to increase your serotonin level. You can start to *pay off* your serotonin credit card and then keep yourself out of serotonin debt. Make a habit of considering how much serotonin you are *spending* on your reaction to stressful situations, an over loaded work schedule or on food.

ENVIRONMENTAL TRIGGERS

Changes Trigger Migraine

The hypothalamus, the "stay alive software," regulates and resets the system each time the internal or external environment changes. It is critical that migraine sufferers maintain their treatment 100% during environmental changes. Migraine, more than any other disease, reflects how our environment affects our body. Anyone who has experienced a migraine after a change in altitude or weather, missing hours of sleep, a missed meal, a stressful day or the ravages of ever-changing estrogen levels can testify to this. The brain is very sensitive to environmental influences.

Hormones, Internal Triggers

The most obvious internal environmental influence on migraine is the hormonal system. The hormonal system that most commonly affects the frequency of migraine is the natural change of estrogen levels in women. Studies have shown women are four to five times more likely to suffer frequent migraine attacks. This is not to say that men do not have migraine, it just means that women have more frequent headaches. It does not necessarily mean a woman's hormonal system is abnormal, it simply means the brain of a woman with migraine is more sensitive to changing estrogen levels.

One of the most enlightening facts I have realized in my medical career was that estrogen could activate serotonin receptors. To better understand the effects of hormonal changes on migraine, one needs to have a better understanding of how hormones work in the body.

What are Hormones?

The brain controls everything in your body. The majority of the messages relayed to and from the body pass along nerves and the spinal cord. However, there are bodily functions that are too critical to maintaining life to be left up to nerves and a spinal cord which could be

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damaged by illness or trauma. These life-sustaining functions are regulated by the brain via hormones; natural chemicals produced in glands scattered in strategic places throughout the body.

The master hormone gland, the pituitary gland, is located in the brain just below the hypothalamus. The hypothalamus controls the release of hormones from the pituitary gland, which then controls the release of hormones from the other hormone glands. Think of the hormones as floating messengers regulated by the brain, which control many of our life-sustaining functions.

The glands which comprise the hormone system include the thyroid gland, the parathyroid gland, the pancreas, the adrenal glands and the ovaries or testes. Any illness that affects the hormone system will increase migraine attacks as the hypothalamus works overtime trying to regulate a system that is not functioning properly. An adequate medical evaluation will include laboratory studies to insure that hormonal system is normal.

Ever-Changing
Estrogen Levels
Affect The
Serotonin
System

Changing Estrogen Levels

Recall that serotonin is our calm chemical, sleep chemical and joy chemical. Estrogen can activate serotonin receptors in the brain. During the month, estrogen levels increase from the first day of the menstrual cycle until about four to seven days before the next period. There is also a small drop in the estrogen level at mid-month during ovulation. Estrogen bathes the brain cells acting like serotonin—then suddenly it is gone. If you have normal serotonin levels in the brain, this change in estrogen level does not make a difference in brain function. However, when you do not have enough serotonin, the brain cells no longer have the chemical that keeps them calm. It is at this time that women experience the onslaught of a menstrual migraine, anxiety, depression, irritability and/or insomnia.

Routine and Sleep Disruptions

How do disruptions in one's daily routine or sleep schedule affect headaches? We have biological clocks located in our hypothalamus. The hypothalamus regulates all biological functions that work on cycles. The sleep-wake cycle, blood pressure, heart rate, hormones, metabolism and many other body functions change depending on what time of day, what time of the year and what stage of life we're in. This process is preprogrammed and influenced by our genes. Any interference with the programming of this internal environment can trigger a migraine. Therefore, it becomes necessary to keep a regular schedule. Go to bed and get up about the same time each day.

Travel Affects Migraine

Travel for business or pleasure is always a difficult problem for the migraine sufferer. It is difficult to control what you eat while traveling. In addition, your brain has to reset the biological clock to adjust to the different schedule. You are staying in a different place, possibly a different time zone. Travel has increased adrenaline levels, which uses serotonin. The most important thing you can do is maintain your special migraine diet regimen and get your exercise. Limit the stress of traveling by planning ahead and avoid last minute rushing.

BIOLOGICAL STRESS RESPONSE SYSTEM

Adrenaline versus Serotonin

Recall that your hypothalamus is your "stay alive software." Something perceived as a threat to your body causes a reaction aimed to protect you. This process is initiated and controlled by the hypothalamus and is referred to as the "flight or fight" response. Your body goes into a defensive mode charged by a lot of adrenaline. Once the threat is over, the system reestablishes itself by the serotonin system. You can imagine how it must take large amounts of serotonin to compensate for all the adrenaline produced in someone's life that is always under the constant attack of stress.

Stress in Life

Turn on the news or pick up a paper and the effect of stress on our society is obvious. The stress of life at times seems overwhelming and the future seems bleak. The good news is, your body has a system that can together with your spirit conquer any and every stressful event that life throws at you.

If you only remember to take care of your biological stress response system, then the steps necessary to make the psychological and spiritual life transformation necessary to deal with the stress of life will be made all that much easier. I encourage you to use the information found in this program in conjunction with the appropriate psychological and/or spiritual experts to move toward a life filled with emotional, spiritual and physical well being.

Stress Affects Migraine

In any study undertaken by migraine researchers to determine triggers for migraine, the number one answer was stress. Like much that is still left unexplained about migraine, the exact mechanism of how stress triggers a migraine is unknown. The best explanation for the connection between migraine and stress is in the hypothalamus. Brain cells in this location, already overstimulated by excess adrenaline produced during the "fight or flight" response, would be vulnerable to starting a migraine.

Remember our earlier discussion about viewing your serotonin system like a "serotonin credit card?" This is where it all starts to make some sense. Serotonin is needed to calm brain cells down after the brain uses all that adrenaline to get the system excited when you are under stress. Your brain can only produce so much serotonin in a day. With each stressful event you pull out that handy little serotonin credit card and start making charges. The problem is this, before you know it, you are head over heals in debt and there is not enough credit or serotonin left to make any further purchases. Then it seems like you are always anxious and irritable. Every decision in life seems like such a chore because you have a headache and cannot sleep.

Handling Stress

Make a decision to alleviate or at least reduce the stress in your life. Every time you encounter stress in your life, remember you are in control. You can choose how much serotonin you are going to spend in that particular situation. Just think of all the serotonin you might be wasting getting upset with people in traffic or that family member or co-worker who is not acting the way you think they should. *Should* is the operative word and it implies judgment. Every time the word should comes out of your mouth, either directed at yourself or someone else, it does nothing to change the circumstances and uses a month's worth of your serotonin. My advice is to eliminate the word *should* from your vocabulary and watch your serotonin credit card debt go down dramatically. The lower your serotonin credit card debt, the better you feel.

Every day of our life is filled with stress because that is the reality of human existence. Stop spending precious serotonin on the situations in life you cannot change. We must stop going over and over it in our minds. Self-pity, anger, resentment and fearfulness increase the level of adrenaline and use

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serotonin. It is time to accept and forgive certain circumstances or people in life and move on. Make practical decisions to change your situation and act on that change with determination and excitement. Life can be so full of joy, with precious family moments, good times with friends and success at work. The one thing I want more than anything else for you is that start to experience the joy of life without lost time to a migraine.

Increasing Serotonin

Increasing the serotonin level in your brain begins to pay off some of the "credit card" debt. You will need to add to your daily routine some kind of stress-reduction activity *in addition to* a regular daily exercise program. An exercise program will be discussed later.

What you choose to do to reduce stress is up to you, as long as it is not drugs, smoking, alcohol abuse or some other unhealthy addictive or illegal behavior. Using addictive behavior to self-medicate stress is a one-way, dead-end street, which will only keep you in the pit of severe credit card debt. Please take my advice and don't go there. If you find yourself on that street, stop and seek the help of professionals in the field of addictions. A special note about cigarette smoking: ***don't!*** Not only is it an unhealthy habit for all the obvious reasons, it will definitely make migraine worse.

Do something to relax and allow your brain's biology to restore itself and replenish its serotonin. When you run out of gas, stop! It is all right to slow down when you are tired. Our society encourages us to constantly be on the go to be happy. In fact, many of us are doing too much. I tell patients all the time, "when you are burning the candle at both ends, remember your candle is made out of serotonin."

Every time you do something that makes you feel good, things such as sleeping, a hobby, reading a good book, listening to soft music or spending time with someone you love, your brain is producing serotonin. Take time to add stress-reduction methods to your life. A few examples are meditation, prayer, biofeedback, yoga and Ti Chi. Remember serotonin is your body's calm chemical, your happy and joy juice. You cannot experience these feelings unless the biology is there to make it happen.

Look at your psychological and spiritual health. Are you doing everything you can to grow in these areas of life? Are you thinking and behaving in ways that build or use serotonin? This is not about character—it is about biology. You cannot have a healthy biological system if your feelings and behaviors are abusing the system. Seek the appropriate professional help if you need spiritual and/or psychological counseling in these areas. You are not weak or bad, just a *quart low,* a quart low on serotonin.

Is Serotonin the Biology of Love? I can not answer that question but I can say that nothing makes me feel better than the love for my family and the love for my Lord.

> "When you are burning the candle at both ends, remember your candle is made of Serotonin."

It is here that I wish to remind everyone of the obvious, life is stressful. Some days may be collections of routine hassles and setbacks. On other days, calm goes to chaos and we find ourselves needing to be rescued from the storm of our life. Everyone will someday find himself or herself in such a storm. When you find yourself there, have your biology in good shape and try God. No matter what, God loves you and promises He will be there for you. We are not here to be your spiritual or psychological advisors. You must make your own choice about how you handle stress, however it must be addressed because like certain food it is **using your serotonin**!

Serenity Prayer

God...
Grant me the serenity
to accept the things
I cannot change...

courage to change
the things I can

and the wisdom to know
the difference

EXERCISE AFFECTS MIGRAINE

When you exercise regularly, it is thought that the brain produces natural chemicals called endorphins and serotonin. Many in the fitness world know regular exercise improves mood and general feelings of wellbeing. It is as easy as walking. Daily walks make your brain produce serotonin. You must give your brain a daily dose of exercise to obtain and maintain the effect. Think of it as making a payment on your serotonin credit card. You **must** make a daily payment.

It is more difficult to make the time for an exercise program than it is to actually do the exercise. I encourage you to follow the advice I give myself, which is simply to develop the habit first, then increase the time by five minutes. Before you know it, you will be walking 40 minutes every day. In six months or less you will feel the best you have ever felt in your life since every day you exercise you will be increasing your serotonin levels.

To my knowledge there are no studies to prove exercise increases the brain serotonin level. Such a study would require the spinal fluid of individuals doing the exercise be analyzed frequently, requiring numerous spinal taps. I do not know of anyone who is that dedicated to the advancement of scientific knowledge...do you?

DIET and FOOD CHOICE AFFECT MIGRAINE

Skipping Meals

Sometimes the journey of life does seem too long and too much, especially if you are trying to make the journey with a headache. To sustain life the brain needs glucose just like it must have oxygen. If you go too long without eating, your brain will protect itself from brain damage by telling your body to make glucose from fat or protein (muscles). By skipping meals you allow your glucose or blood sugar level to drop to such a low level that it irritates brain cells. You must not go longer than three (3) hours, while awake, without eating.

Increasing your protein intake is a critical part of your dietary changes. Many individuals with headaches crave carbohydrates or sweets. This causes the release of insulin and a sudden drop in blood sugar which triggers a headache. Increasing the protein in your diet prevents the low blood sugar or hypoglycemia and headaches. The end result fewer headaches and fewer pounds!

Affects of Food Choices

It goes without saying that none of us have enough time to eat as healthy as we would like. Most American households have now become dependent, even if reluctantly, on "convenience" or "fast foods." We often find ourselves eating out for lunch or dinner multiple times during the week because of heavy work schedules or merely for entertainment. Let's face it, eating is fun and who wants to stop and think about what to eat? Ask anyone with diabetes how difficult it is to follow a special diet in order to stay healthy.

Many people who have experienced migraines and have sought advice from doctors have been given a list of certain foods to avoid "if they think they caused their headaches." That would be like telling me that if I think banana splits are not fattening, then I can eat all I want. What do you think I will want to believe? The reality is that all of the foods that have been found to trigger headaches most likely effect the brain's chemistry whether you actually get a headache or not. Many people with migraine are never informed of the influence food has on how they feel simply because their healthcare providers are unaware of the connection between food and brain chemistry. Some food and food additives change the brain's chemistry, for example coffee. Why do you think you have to stop by the local coffee shop so often? Because it is not always obvious that a certain food triggers a headache or another symptom, you may find yourself gambling that you will not get a headache or feel bad because you enjoy eating that particular food. Unfortunately, our immediate gratification sometimes outweighs the consequences of our actions. This reminds me of something a country preacher in West Virginia said, "Sometimes we just have more zeal than sense." We want to feel good now and hope that we will not get a headache.

Another important factor about how you eat is the quantity of the migraine foods consumed over a certain period of time. In other words, eating certain foods together throughout the week may add up but not trigger your migraine until the weekend. It appears that the longer you have migraine, the more sensitive you become to certain triggers.

The most important aspect about a food trigger is that it may change how the brain cells work, thus making them more sensitive to migraine, anxiety or depression as the years go by. The food may not just cause a headache the day you eat it, but it is without any doubt contributing to your disease. It is my experience that certain foods and food additives make migraine worse. Like a diabetic you must change how you eat if you want to control your disease.

Changing What You Eat

First, accept that changing your food choices is not going to be easy, but we are here to help. In this handbook is a list of foods allowed and a list of foods to avoid. Follow these lists 100%. Secondly, I encourage you to take full advantage of your dietary sessions.

FOODS TO AVOID

BEVERAGES

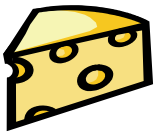
- ***Alcoholic beverages*** (no wine or beer)
- ***Alcohol-free beverages***
- ***Malt beverages***
- ***Caffeine*** such as coffee & cola-type sodas in excess of 2 servings per day
- ***Carob, Chocolate or Cocoa***
- ***Diet Drinks*** (all contain aspartame-Nutrasweet/Equal)
- ***Flavored coffee/creamers***
- ***Lemon-lime sodas***
- ***Sport's drinks***
- ***Tea*** - *all varieties*

BREADS AND CEREALS

- ***Containing BHA or BHT***
- ***Containing yeast extracts***
- ***Croutons***
- ***Doughnuts***
- ***Sour dough breads***
- ***Stuffing mixes***

DAIRY

- ***Aged cheeses*** (including: Blue, Boursault Brick, Brie, Camembert, Cheddar, Feta, Gouda, Jack, Mozzarella, Muenster, Parmesan, Provolone, Roquefort, Romano, Stilton, Swiss)
- ***Buttermilk***
- ***Chocolate milk***
- ***Skimmed milk***
- ***Sour cream***
- ***Yogurt***



DESSERTS

- ***All containing aspartame***
- ***All containing chocolate***
- ***All containing fruits*** on this avoid list
- ***All containing nuts***
- ***Gelatin*** ("Jello" and other products containing gelatin
- ***Licorice***
- ***Maple syrup***
- ***Molasses***

FRUITS

- **Avocados**
- **Bananas**
- **Cantaloupe**
- **Dates**
- **Figs**
- **Grapefruits**
- **Grapes**
- **Guava**
- **Honeydew melon**

- **Kiwi**
- **Lemons**
- **Limes**
- **Mango**
- **Nectarines**
- **Oranges**
- **Papaya**
- **Pineapples**
- **Plums**
- **Prunes**
- **Raisins**
- **Tangerines**

MEATS - aged, cured, fermented, pickled, processed, smoked and with tenderizer, soy sauce, soy products nitrates or yeast extracts.

- ***Aged or canned ham***
- ***Aged game***
- ***Anchovies***
- ***Bologna***
- ***Caviar***
- ***Corned beef***
- ***Dried/salted fish***
- ***Hot dogs***
- ***Jerky***
- ***Junket***
- ***Liver***
- ***Meat extracts***
- ***Packaged meats***
- ***Pepperoni***
- ***Salami***
- ***Sardines***
- ***Sausage*** (fermented or summer, containing nitrates &/or nitrites)

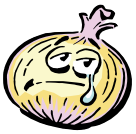
- ***Snails***
- ***Tuna*** containing veg. broth
- ***Pickled herring***

NUTS & SEEDS and their oils

- ***All nuts***
- ***Caraway seeds/oil***
- ***Flax seeds/oil***
- ***Peanuts/oil***
- ***Peanut butter***
- ***Poppy seeds/oil***
- ***Pumpkin seeds/oil***
- ***Sesame seeds/oil***
- ***Sunflower seeds/oil***

SAUCES, SOUPS & GRAVIES

- ***All Bouillon-cubes & soups***
- ***All broth*** (except homemade)
- ***All canned & bottles soups***
- ***All canned & bottles gravies***
- ***All bottled sauces with MSG***
- ***Ramen noodle***
- ***Miso, Worcestershire®, Soy, Sweet & Sour, &Teriyaki sauce***



VEGETABLES

- ***Beets***
- ***Fava beans***
- ***Garbanzo beans***
- ***Italian beans***
- ***Kidney beans***
- ***Lentils***
- ***Lima beans***
- ***Mushrooms***
- ***Navy Beans***
- ***Onions*** (except Flakes & Powder)
- ***Olives***
- ***Pickles***
- ***Pea Pods*** (English, Chinese, Snow)

- ***Pinto Beans***
- ***Pole or Broad beans***
- ***Rhubarb***
- ***Sauerkraut***

MISCELLANEOUS

- ***Aspartame***
- ***Diet Drinks***

FOODS TO AVOID

FOOD ADDITIVES that CONTAIN GLUTAMATE:

- ***Autolyzed yeast***
- ***Flavoring*** (almost always)
- ***Hydrolyzed Plant Protein (HPP)***
- ***Hydrolyzed Vegetable Protein (HVP)***
- ***Kombu extract***
- ***MSG***
- ***Natural Flavoring*** (almost always)
- ***Soy or Soy products***
- ***Yeast extract***
- ***Seasoned salts***
- ***Soy sauce***
- ***Tenderizer***

COMMERCIAL SALAD DRESSINGS and MAYONNAISE - *made with vegetable or soy oil*

MONOSODIUM GLUTAMATE - MSG
NITRATES OR NITRITES

PICKLED, PRESERVED, MARINATED FOODS

FOODS that USUALLY CONTAIN LARGE AMOUNTS OF MSG:

- ***Canned and dry soups***
- ***Cured & Luncheon meats*** (ie: bologna, pepperoni, and salami)
- ***Diet Foods*** (including liquid diet drinks)
- ***Flavored potato chips***
- ***Frozen Foods*** (lunch or dinner entrees)
- ***Health bars & drinks***
- ***Multivitamins***
- ***Packaged or Frozen meals***
- ***Prepared meals***
- ***Protein bars & drinks***
- ***Most Mayonnaise***
- ***Most bottled or canned Sauces*** (ie: tomato, BBQ with MSG)
- ***Most Salad dressings***
- ***Weight loss powders***
- ***Weight loss prepared foods***

READING LABELS

Read all labels. Do not use products containing food additives listed below:

Aspartame (Nurtrasweet/Equal) ®
Check mints, tooth-paste, sugarless gum and any food with sugarless on the label, medications and all diet and "low" fat for aspartame

Nitrates

- **Autolyzed or Hydrolyzed-Protein/Soy/Veg.**
- **Beef flavoring**
- **BHA or BHT**
- **Bouillon/broth/stock**
- **Caseinate**
- **Carrageenan**
- **Corn starch**
- **Flavor(s) or flavoring(s)**
- **Gelatin**
- **Glutamate or glutamic acid**
- **Gums**
- **Kombu extract**
- **Malt: barley/extract/flavoring**
- **Maltoxdextran**
- **Modified food starch**
- **Monosodium glutamate – MSG**
- **Smoke flavoring**
- **Seasoning(s)/salts**
- **Soy/soy sauce/soy lecthin**
- **Spice(s)**
- **Whey protein**
- **Vegetable oil**

ALLOWED FOODS

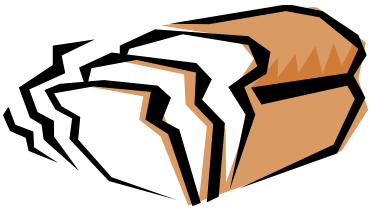
CARBOHYDRATES♠

BEVERAGES♠

- ***Apple Juice***
- ***Bottled water***
- ***Cranberry juice***
- ***Cream soda***
- ***Gingerale***
- ***Pear juice***
- ***Purified tap water***
- ***Raspberry soda***
- ***Strawberry juice***
- ***Colas (no diet)***
- ***Decaf. coffee***

BREADS and GRAINS♠

(No soy or veg. oil, BHA/BHT)

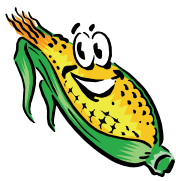


- ***Bagels***
- ***Corn tortillas***
- ***English muffins***
- ***Flour tortillas***
- ***French bread***
- ***French rolls***
- ***Italian bread***
- ***Muffins***
- ***Pita breads***
- ***Rye bread***
- ***Wheat & White bread***
- ***Hamburger buns***

DRESSINGS, SAUCES, JAMS & VINEGAR ♠

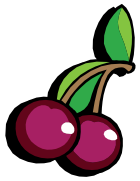
(no MSG)

- ***Catsup***
- ***Chili sauce***
- ***Cranberry***
- ***Fruit jelly*** (allowed)
- ***Jams*** (allowed)
- ***Mustard***
- ***Pizza sauce***
- ***Seafood cocktail sauce***
- ***Spaghetti sauce***
- ***Vinegar***



CEREALS, CRACKERS, COOKIES♠

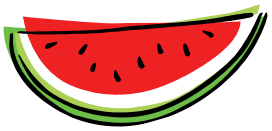
(No soy or vegetable oil)



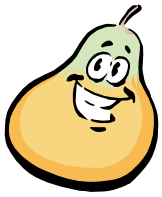
- ***All cereals with OK ingredients***
- ***Cream of rice and wheat***
- ***Old fashioned oatmeal***
- ***Pretzels***
- ***Rice cakes***
- ***Rye crackers***
- ***Tortilla corn chips***

FRESH FRUIT♠ - Canned or Dried

(check labels.no sulfites)



- ***Apples***
- ***Applesauce***
- ***Apricots***
- ***Blueberry***
- ***Cherry***
- ***Coconut***
- ***Cranberries***
- ***Peaches***
- ***Pears***
- ***Pumpkin***
- ***Raspberries***
- ***Strawberries***
- ***Watermelon***



TREATS♠

- ***Pastas***
- ***Potatoes***
- ***Carrots***
- ***Corn***
- ***Popcorn*** (no microwave)
- ***Pound Cake***
- ***Rice*** (brown, white, wild)
- ***Rice pudding***
- ***Vanilla pudding***
- ***White cake mix***
- ***Angel food cake***
- ***Butterscotch chips***
- ***Vanilla chips***
- ***Butterscotch pudding***
- ***Sugar***

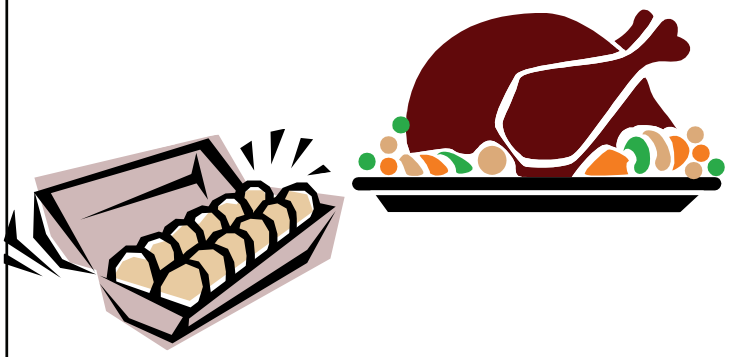
ALLOWED FOODS

PROTEIN♦
(only strict vegetarian navy & pinto beans

DAIRY and CHEESE♦

- ***American cheese***
- ***Butter***
- ***Cottage cheese***
- ***Cream cheese***
- ***Eggs***
- ***Evaporated milk***
- ***Farmer's cheese***
- ***Fresh mozzarella***
- ***Heavy cream***
- ***Margarine*** (no soy, MSG)
- ***Milk*** (No Skim)
- ***Ricotta***

MISCELLANEOUS ♥ *(No MSG or Soy)*
- ***Dry baking yeast***
- ***Extracts***(almond,maple,rum, vanilla)
- ***Flour*** (unbleached, whole wheat)
- ***Garlic*** (cloves, powder, salt)
- ***Honey***
- ***Oil*** (canola, corn, olive)
- ***Onion*** (flakes, powder)
- ***Salt***
- ***Pepper*** (all)
- ***Shortening*** (no soy)
- ***Tobasco sauce***
- ***Baking & Cooking Spices***
- ***Baking powder***
- ***Baking soda***
- ***Tomato juice***



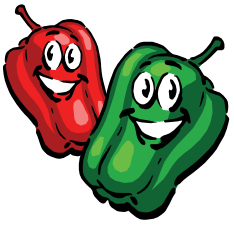
MEATS, POULTRY and SEAFOOD♦

- ***Crab***
- ***Chicken***
- ***Fish***
- ***Beef***
- ***Lamb***
- ***Fresh pork*** (no bacon orham)
- ***Lobster***
- ***Scallops***
- ***Shrimp***
- ***Steamed clams***
- ***Turkey***
- ***Veal***
- ***Canned chicken*** (no MSG)
- ***Salmon***
- ***Water-packed tuna*** (no MSG)
- ***lunch meats*** (chicken, roast beef & turkey, no MSG and no nitrates)

FREE carbs. ♥

FRESH VEGETABLES **(Canned OR Dried,** MUST check labels **)**

- ***Asparagus***
- ***Broccoli***
- ***Brussels sprouts***
- ***Cabbage***
- ***Cauliflower***
- ***Celery***
- ***Chilies*** (green or red)
- ***Cucumber***
- ***Eggplant***
- ***Garlic***
- ***Green beans***
- ***Jalenpenos***
- ***Lettuce***
- ***Peppers*** *(green, red, yellow)*
- ***Pimentos***
- ***Pumpkin***
- ***Radishes***
- ***Spinach***
- ***Squash***
- ***Sweet potatoes***
- ***Tomatoes*** (all)
- ***sauce***
- ***Yams***
- ***Zucchini***



Menu Planning

When planning your menu you must ensure adequate protein intake to avoid headaches. Avoid all carbohydrates at breakfast and for the bedtime snack. It is critical that you drink at least 8 fluid ounces of water with each meal and snack. You must eat every 3 hours while awake. Remember the in between meal snacks are just that, a snack. You are not eating because you are hungry; you are eating to control your headaches. Do not exceed 5 servings of carbohydrates per day or 100 grams. Restricting carbohydrate intact to less than 100 grams may trigger headaches by dropping your blood sugar.

Step 1: From the list of allowed foods choose 5-6 servings of protein ♦. You need one serving for each meal and 1/2 serving for each snack.

Step 2: From the list of allowed foods choose 5 servings of carbohydrates ♠ (no more than 20 grams per serving, try for less). You may have these servings at anytime except at breakfast and the bedtime snack. Every serving of carbohydrate must be eaten with a serving of protein.

Step 3: You are allowed all the free carbohydrate ♥ vegetables you want, so eat up. You need at least 5 servings of these daily for good health. Eating this many veggies you will not need those high dose soy containing multivitamins.

The list of allowed foods will have a symbol by each food group to show if it is a limited carbohydrate, a protein or a free carbohydrate.
The symbols are as follows:

Protein = ♦

Limited Carbohydrates = ♠

Free Carbohydrates = ♥

These symbols are found on the food diaries to assist you in your menu planning and remind you to make sure you have a protein with each serving of limited carbohydrate.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Breakfast ♦							
Snack ♦ ♠1/2 ♥							
Lunch ♦♦ ♠♠ ♥♥							
Snack ♦ ♠1/2							
Dinner ♦♦ ♠♠ ♥♥							
Snack ♦							
Headache: **Length:**							
Exercise **# of min.**							
Stress Mgmt. **# of min.**							

GOTTA HEADACHE HANDBOOK

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Breakfast ♦							
Snack ♦ ♠1/2 ♥							
Lunch ♦♦ ♠♠ ♥♥							
Snack ♦ ♠1/2							
Dinner ♦♦ ♠♠ ♥♥							
Snack ♦							
Headache: **Length:**							
Exercise **# of min.**							
Stress Mgmt. **# of min.**							

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Breakfast ♦							
Snack ♦ ♠1/2 ♥							
Lunch ♦♦ ♠♠ ♥♥							
Snack ♦ ♠1/2							
Dinner ♦♦ ♠♠ ♥♥							
Snack ♦							
Headache: **Length:**							
Exercise **# of min.**							
Stress Mgmt. **# of min.**							

Diet and Nutrition Notes: