

# **BioAcoustically Speaking**

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# Methylation...The Methionine Cycle

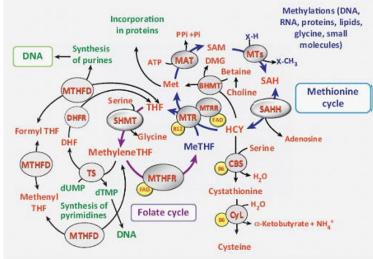
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- SALE! Green Medicine Encyclopedia (HyperHealth's new look)

#### PART 1

The Methionine cycle starts with the end product of the MTHFR cycle which is the 5MTHF or 5 Methyl tetrahydrofolate. Now what happens is that the Methionine synthase (MTR) removes a methyl group from the 5 methyl-

tetrahydrofolate. This



# LINKS

### Methyl Cycle Nutrigenomics

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Contact us at: soundhealthinfo@gmail.com methyl group is then added to homocysteine to form methionine. When the methyl group is removed from the **5 methyl-tetrahydrofolate** it is converted back to Tetrahydrofolate (THF).

The reaction of **5 Methyl tetrahydrofolate** and **homocysteine** to **methionine** cannot occur without the presence of Vitamin B12 Methyl cobalamin and also another enzyme, Methyl synthase reductase. Each time the enzyme Methionine synthase (MTR) removes a methyl group to add to homocysteine, it utilizes (degrades) one molecule of Vitamin B12 Methylcobalamin.

A defect in this gene **Methionine synthase (MTR)** causes an up regulation, meaning the enzyme methionine synthase is always on, grabbing every homocysteine and processing it to methionine and tetrahydrofolate. This process uses up Vitamin B12 faster than it can be generated.

The findings would be low Vitamin B12, and an insufficient amount of vitamin B12 results in elevated homocysteine and low methionine, and possible low 5 methyl tetrahydrofolate and low tetrahydrofate.

The possible problems that can occur are birth defects related to low folate (neural tube defects), elevated homocysteine leading to neuronal and cardiovascular issues. Megablastic anemia can occur as a result of constant low Vitamin B12. Some studies have also documented an increase in the incidence of Downs's syndrome however other factors may be involved.

The other enzyme **Methionine synthase reductase (MTRR**), which is necessary to **methionine synthase** to function can also be defective. If **Methionine synthase reductase** is defective, it will result in decreased regeneration of Vitamin B 12 as well as decreased production of methyl synthase. You may have the same defects as listed above.

#### PART 2 The SAMe CYCLE

Methionine which comes from our food, is now going to be broken apart by the enzyme (MAT)methionine adenosyltransferase also know as S-adenosyl methionine synthetase. The enzyme MAT breaks apart ATP (adenosine triphosphate) in order to have a molecule of adenosine and then adds the adenosine to methionine to create SAMe or "Sammy," as it is affectionately named. This reaction of methionine to SAMe is magnesium dependent. It also requires potassium.

SAMe is the major methyl donor in the body and it performs over 100 different biochemical and biological events. Following, are just some of the donations that SAMe makes. It donates a methyl group to make neurotransmitters dopamine, serotonin, and norepinephrine. It is a major donor in the synthesis of hormones melatonin and growth hormone. SAMe assists in the synthesis of polyamines for cell growth, gene expression and neuronal regeneration. Helps make **phosphatidylcholine** which maintains cell membrane fluidity and function. It also facilitates **glutathione**, a key antioxidant and detoxifier. SAMe also helps with the synthesis of nucleic acids, RNA, DNA. Its is also a donor to the creation of creatine. Recent research suggests that it acts on regions of the brain that regulate gene expression and amyloid proteins. SAMe is used in the body for the trans-sulfuration (the synthesis of cysteine, and other sulfur compounds.) SAMe is mostly made in the liver where it also helps to detoxify toxins. It is critical to methylation and therefore considered by some to be equivalent to ATP. Removal of a methyl group from **SAMe** results in the formation of **S-adenosyl-homocysteine (SAH)** which is immediately converted into **homocysteine** by the removal of the **adenosine** molecule. This is accomplished by **S-adenosylhomocysteine hydrolase. SAHH.** This starts the cycle repeating. Defects in this enzyme are very rare.

#### PART 3 Homocysteine

**Homocysteine** then is created by the removal of a methyl group from SAMe which results in the formation of **SAH s-adenosyl-homocysteine** which is immediately converted into homocysteine by the enzyme **SAHH S-**

**adenosylhomocysteine hydrolase.** Now there is homocysteine which can be utilized again by going through the Methionine cycle. Homocysteine can be converted back to methionine in another minor pathway only in the liver.

Homocysteine is converted directly back into methionine by the enzyme **BHMT Betaine-homocysteine methyltransferase**. It does this by removing the methyl group from Betaine or as it is called **trimethylglycine(TMG)** and places it on homocysteine to form methionine and **DMG dimethylglycine**. **Zinc** is necessary for this reaction.

So homocysteine can be modified by three different pathways. We have already discussed two pathways, but to recap:

1. Homocysteine can be converted to methionine by the addition of a methyl group from 5Methyl THF and Vitamin B12 with the assistance of MTR and MTRR.

2. In another pathway, only in the liver, TMG trimethylglycine is the source of the methyl group transferred to homocysteine to make methionine.

3. In the third pathway, homocysteine is metabolized by transsulfuration in the liver. It has been estimated that 60% of homocysteine is metabolized by this process of transsulfuration. We will address that pathway in our next issue.

The activity of this gene **BHMT Betaine Homocysteine methyltransferase** the 02 version and the 04 version can be affected by stress, by increased cortisol levels and may play a part in ADH/ ADHD by affecting norepinephrine levels. Dr. Amy Yasko believes that they also play a role in gut environment and that **BHMT 08** is related to the impact that psychological stress has on attention levels.

Next issue, we will address transsulfuration.

#### **BioAcoustic Analysis of High Definition Television Frequencies**

Television is a part of most everyone's life. Many families have a T.V. in nearly every room, rather than what was common in past generations one television in the family room. Television is now even in our phones with companies like Xfinity and Comcast making major network television shows available - for a price. Companies like NetFlix are also making their own television shows and broadcasting them on their platform as part of a subscription cost.

Even if you have sworn off of TV in your home, you will no doubt encounter its influence among co-workers, family and friends talking about the latest episode of their favorite show. Some shows are so popular, you will see their personality products in the local drugstore or variety store.

Still, although TV is everywhere, we at times have a love/hate relationship with it; and we ask such questions as:

- "How much [TV watching] is too much?"
- "Why do I have so many channels ... and there's nothing on?"
- "Do my kids and I need to learn something from T.V. or is it okay to just be entertained by it?"
- "Is it going to rot my kid's brain?" and
- "How can I get my kids to read more, and *enjoy* reading when the TV spoon feeds them information in bright colorful light and sound bites?"

There is also some stigma to watching too much television. The word "couch potato" has come from more than one TV generation's tendency to plop down in front of it and to stay in front of it for too long.

In our most recent generation, gamers spend a lot of time in front of a television or computer screen. These are still "couch potatoes" - they're just not watching a television "show".

Being a couch potato was often thought of as a solitary activity, while friends and family might comment out of earshot - "I don't know what I'm going to do s/he seems to be wasting his/her life in front of that thing all day".

But in recent years, we have groups of people doing the "couch potato" thing with a fairly new trend: binge-viewing aka binge-watching. Here's how one website describes this phenomenon: "Call it the evolution of Homo Televisionus: first there were couch potatoes, who would sit for hours while a parade of shows spooled across the screen. Then came channel surfers, who clicked through hundreds of cable stations fighting for fragments of their attention. Now there's a new kind of watcher: the binge-viewer, who inhales an entire season's worth of shows over marathon DVD sessions or, increasingly, streaming video services like Netflix."

We need YOUR ideas. Email Carol at jckuper@verizon.net or Judy at judylahaye@gmail.com to submit your suggestions for articles in your newsletter. So, these are some of the social and cultural aspects of television. Are there other aspects that we should consider? I would suggest, yes. We think of television as a somewhat passive thing sitting in our homes, enticing but passive. We like to watch it; it's a window out onto the world; it can bring laughter, education, entertainment, news, etc. and we don't have to get our fingers dirty reading a newspaper.

We assume that we can go through our lives and control our use of television as opposed to allowing it to control our lives.

BioAcoustic Biology and its analysis of the frequencies distorted by television watching, particularly HDTV, might surprise you by showing that the television is not so passive a part of your home as you might have thought; rather it has frequencies that actively work on your physical, mental, emotional and even spiritual bodies as well as affect your health. For those who have a cynical or conspiratorial inclination, there is even something for you in how these television frequencies influence us.

In a small study done, by Sharry Edwards, MEd. of the Institute of BioAcoustic Biology, in Albany, OH, four (4) individuals were tested with a technique called Vocal Profiling, before and after watching 20 minutes of HDTV. Vocal Profiling involves recording 30 seconds or less of a person's voice and analyzing it through one (1) or more proprietary software programs.

In this case, Edwards used the program nanoVoice, a Time Domain type of Vocal Profiling. This type of Vocal Profile looks at the musical notes in the voice. We don't just speak in one note when we talk. There are different notes that come out along with harmonics, et al, and each note represents different things, physical and emotional. It can suggest also if a particular muscle is tight or weak, as well as if a biochemical, like a vitamin or a mineral, hormone, activator, protein, pathogens, toxins or a host of other things are too high, low, or in stress (i.e., not functioning properly).

She also used Frequency Domain types of Vocal Profiling Software, which give the above information, but in more depth and detail. Edwards and her team at the Institute have nearly 200 computer programs concerning nearly every body system and disease condition. As she has said, "[w]hile others were writing books, I was creating programs and classes for the public to provide tools and Solutions to help people Get Healthy and Stay Healthy..." See <a href="https://www.soundhealthoptions.com/media-c1f29">https://www.soundhealthoptions.com/media-c1f29</a> . To learn more about Vocal Profiling, please see <a href="https://www.soundhealthoptions.com/#!what-is/c1g1h">https://www.soundhealthoptions.com/#!what-is/c1g1h</a>

In her analysis, Edwards found that there was a distinct difference in the before and after Vocal Profiling results of persons who watched 20 minutes of HDTV. She noted that the note of F# was missing in the subsequent prints. Why is this important? The note of F# has to do with the balance between perception and action, and the lack of the frequencies of that note are known to create apathetic behaviors. This means it can essentially take away your ability to follow through with plans (like a "super fluoride"), makes you complacent and likely to accept whatever you hear. Low F# affects digestion, insulin levels, Lyme disease, as if they are aiming at our weakest points. Low F# Vitamin D<sub>3</sub> usage the muscles for balance and low back strength can become influenced.

The note of D# is increased. D# is "server note", usually providing the situation in which you give away your energy and power, time and resources, willingly, to others. The tendency here is, as you might expect, that you will serve who the television tells you to "serve", i.e., a politician, a philosophy, etc.

Other notes that are affected are the notes of A and A#. These are your spirituality notes. HDTV appears to decrease one's ability to manage these notes and also how to manage one's resources. For many of us, our spiritual connection is so important. Practically speaking, it may give us insights, inspirations, intuitions that guide us daily. But for many, it has an even deeper importance, having to do with our connection to our God, or Source. Most people in religious or spiritual practice aspire to having a closer relationship with their spiritual fountainhead, not have it be damaged by a television set or anything else.

The above concerns already raise an eyebrow, at least for me. Some may suspect that these effects are intended by those behind the design of these units; others can just as reasonably call it coincidence. But we're not done.

In addition to individual notes, it appears that the Frequency Equivalents (FE) <sup>TM</sup> of certain important biochemicals were also affected. A Frequency Equivalent<sup>TM</sup> is "a frequency representation of a person, place, thing or condition. In terms of Human BioAcoustics [it is also] the numeric value assigned to a vitamin, mineral, fatty acid, amino acid, hormone, enzyme, muscle, gene, toxin, pathogen, tendon, ligaments, medication, biochemical, organ, cascade, etc. [Lastly, it is] [a] term of use coined as a Human BioAcoustic expression." See Sharry Edwards, "<u>Breaking the Sound Barriers of Disease</u>", 2013, or obtain a copy of <u>Mindscape Issue #12</u> to read the article of the same title from 2017

When a Frequency Equivalent is high, low, or in stress, a BioAcoustic Soundhealth Practitioner can provide a frequency protocol, based upon analysis of the vocal prints and use of biofeedback equipment to determine if the client's body "likes" a particular set of tones (i.e., "tone trials"). The tones that the body likes are usually fed into a "tone box" and a client can take it home with headphones (or come in periodically to listen to it at the office) for a few days, after which it is recommended that another Vocal Profile be done in order to see what improvements there may have been and where the body needs further frequency-based support to further bring it into harmony and balance. Edwards found that HDTV appears to affect adversely our use of Magnesium Cell Salt, aka Magnesium Phosphorica. While you may have seldom, if ever, heard of cell salts, their importance to your maintenance of good selfhealth and vitality should not be underestimated. The following, from www.elixirs.com is informative about this particular type or cell salt:

The internet reports that "Magnesium Phos, #8, is the best remedy for muscle spasms - back, leg, abdomen or calf. Use in the evening for a peaceful night's sleep without charley horse cramps; relaxes tight back muscles; supports intestinal health and is beneficial for abdominal spasms and intestinal problems such as colitis or constipation. Magnesium Phos calms agitated nerves for pain relief of headache, writer's cramp, sciatica, neuralgia. Use before and after dental work to calm tooth pain. Spasmodic is a key symptom and Magnesium Phos calms spasmodic coughs, hiccups and menstrual cramps. Magnesium helps with abdominal pains improved by eating.

Magnesium Phos is from magnesium, an important mineral that is involved in over 300 enzyme reactions in the body. Homeopathic Magnesium Phos goes quickly into the system for prompt relief. *Studies have shown that most adults are deficient in the mineral magnesium*. Refined foods, pollution, non-absorption and insufficient ability of the body to utilize magnesium in the body are some of the causes. It is especially recommended that diabetics, individuals with heart disease and those with high blood pressure have their magnesium levels checked.

Magnesium Phos, especially in low potency 6X, can help your body utilize magnesium in the body and from food and is completely safe (unlike 500 mg supplements that can cause bowel overload with resulting diarrhea)...*Cell Salts can improve the body's ability to absorb Magnesium.* If lacking in Magnesium Phos, nerves are on edge with the inability to relax emotionally (showing as anxiety, nervous disorders, depression) and physically (showing as muscle problems, fibromyalgia - worse with even a light touch, nerve sensitivity - even the skin may feel overly sensitive).

Deficiency symptoms include stress, pain, anxiety, depression, muscle spasms, migraine headaches, PMS headaches, agitation, irritability, constipation, fatigue [Emphasis Added by Italics]." See "Product: #8 Magnesium Phos 6X 1000 tablets", 2014, <u>http://www.elixirs.com/products.cfm?</u> <u>productcode=st24</u>

Some of **the** major complaints people have that affect their well-being are contained in the list of deficiency symptoms above:

stress...pain...anxiety...depression...migraine headaches...pms headaches...constipation...fatigue. In fact, I defy you to go into any store and not see multiple articles about many of these issues and drugs on the shelf to address them. Could this mean that your HDTV is causing some tremendous effects on your quality of life and increasing your costs and opportunity costs in trying to address them (through medicines, therapies, etc.)? Our ability to use Vitamin  $B_{12}$  also seems to be being affected. You have no doubt heard about Vitamin  $B_{12}$  and its effect on our energy levels; and it is so important that it is a fairly common part of blood testing in hospitals.

Yet, B<sub>12</sub> goes well beyond simply affecting your energy levels, as shown by the following from Dr. Joseph Mercola:

"If you've got insufficient B<sub>12</sub> levels in your blood, your health will become vulnerable and defenseless against disease. Daily life gets harder for you to endure as you experience debilitating symptoms such as:

- Muscle weakness
- Fatigue and lack of energy
- Tingling in your extremities
- Mental fogginess
- Memory problems
- Mood swings

Feelings of apathy and lack of motivation

What's even more unfortunate is that you may already have  $B_{12}$  deficiency without you knowing about it! Symptoms of this condition may only manifest after a number of years as influenced by your diet and your body's absorption of  $B_{12}$ .

#### Vitamin B12 Deficiency Makes You More at Risk of Depression, Dementia and Multiple Sclerosis

You should know that Vitamin B<sub>12</sub> is one of those vitally important nutrients that have a significant impact on your health. It affects every aspect of the way your systems function – from how your cells form to how you feel every day. Providing support for your nervous and immune systems is one of the many benefits of Vitamin B<sub>12</sub>.

So, without adequate amounts of this vitamin, your body's ability to perform its job deteriorates. You won't have enough physical, emotional and mental energy to survive through the day.

The more grave effect of Vitamin B<sub>12</sub> deficiency is that it may put in you in danger of suffering from a variety of unbearable health prob-

lems. **Depression, sleep problems, dementia, Alzheimer's disease, cardiovascular disease, anemia, cancer, multiple sclerosis**, and **irreversible brain damage**, among many other conditions, may occur if you don't treat it right away." See " Do You Lack Energy and Vitality Lately? You Most Likely Have Vitamin B<sub>12</sub> Deficiency", 2014, <u>http://</u> www.mercola.com/Downloads/bonus/vitamin-b12/report.aspx

As with the Magnesium Cell Salt, deficiency is no meager matter and the above list includes one of the top 5 causes of death: cardiovascular disease. Speaking of heart issues, Mrs. Edwards also saw some indications in the voice prints to indicate that HDTV can adversely affect the frequency equivalents that control our heart rhythm, certainly a danger to anyone with a heart condition.

Further, she found that one of the enzymes that allows us to digest meat is also affected by HDTV. Certainly, gastrointestinal problems have become epidemic in the last decade with many over-the-counter and prescription remedies available. Many of these remedies actually reduce stomach acid which may cause your body to have an even harder time digesting meat and the rest of your food.

It also interferes with the body's use of a substance called Calcitonin, which has to do with the body's ability to process Calcium, a very important mineral for nutrition. BioAcoustically Speaking Calcitonin is often found unbalanced in persons who have been diagnosed as having cancer. In addition, HDTV disrupts a Frequency Equivalent<sup>™</sup> that adversely affects the liver's ability to produce enzymes and thus certain hormones. Liver function is so important to your overall health, as shown by this excerpt from wikipedia.com:

" The liver is a vital organ of the digestive system present in vertebrates and some other animals. It has a wide range of functions, including detoxification, protein synthesis, and production of biochemicals necessary for digestion. The liver is necessary for survival; there is currently no way to compensate for the absence of liver function in the long term, although new liver dialysis techniques can be used in the short term.

This gland plays a major role in metabolism and has a number of functions in the body, including glycogen storage, decomposition of red blood cells, plasma protein synthesis, hormone production, and detoxification. It lies below the diaphragm in the abdominal-pelvic region of the abdomen. It produces bile, an alkaline compound which aids in digestion via the emulsification of lipids. The liver's highly specialized tissues regulate a wide variety of high-volume biochemical reactions, including the synthesis and breakdown of small and complex molecules, many of which are necessary for normal vital functions. [2] Estimates regarding the organ's total number of functions vary, but textbooks generally cite it being around 500.[3]"

Lastly, HDTV seems to affect a Frequency Equivalent in your body which decreases the ability for men to produce sperm. So, on top of everything else, HDTV may affect your ability to procreate.

So, there you have it. Whether you believe that the choice of frequencies and notes used in an HDTV are there for some nefarious plot or just a coincidence, it is good to be aware of possible health and other concerns to your, and your family's, well-being.

Of course, this was a limited and preliminary study. Further studies canbe done and certain physical conditions or otherwise conditions of the individual may lead to different results. You the reader can do your own "study" if you would like by downloading one of the programs used by Edwards' research foundation: nanoVoice is available at nanoVoice.org. Try it out with friends and family, before and after they watch HDTV and see what results you get. Since the Institute is, among other things, a research facility, you are certainly invited to email in your results to Edwards so that you can help the Institute to make even more breakthroughs. You can also get involved in various ways with the world of BioAcoustic Biology by contacting the Institute at (740) 698-9119 or SoundHealthOptions.com

Disclaimer: These statements have not been evaluated by the Food and Drug Administration. They are not intended to diagnose, treat, cure or prevent any disease. Sound Health and Beauty, Human BioAcoustic Biology, Sonistry and Vocal Profiling are intended to benefit normal structure and function and are not prescribed as treatment for medical or psychological conditions, nor for diagnosis, care, treatment or rehabilitation of individuals, nor to apply medical, mental health or human development principles. All issues are expressed in terms of frequency equivalents.



We have some good news and some bad news.

First, the bad news. Our favorite research tool, HyperHealth is no longer available. So sad!

Now...the good news. Warren Brassel, creator of HyperHealth has created a new, updated and expanded version. And, it has a brand new name...**Green Medicine Encyclopedia**, and it sells for the same \$79 as the original HyperHealth.

How about even more good news? The Sound Health Education Committee has joined the affiliate program, so we are able to offer a discounted price! For a limited time (the whole month of June, 2018) we are offering Green Medicine Encyclopedia for **ONLY \$59**.

But wait...there's more!!!! Before you commit to purchase, you qualify for a **7 DAY FREE TRIAL**! Please email Judy LaHaye (judylahaye@gmail.com) to request a link to receive your 7 day free trial download and a coupon code that will allow you to purchase for only \$59!

## **BioAcoustically Speaking**

We hope you enjoyed this little newsletter. We would like to bring you more topics that will help you. Please email Carol Kuper (jckuper@verizon.net ) or Judy LaHaye (judylahaye@gmail.com) and include any topics you might wish to see discussed in upcoming issues. Until then remember, "The State of your Health is in the Sound of your Voice."



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Human Bioacoustics, as originated by Sharry Edwards, M.Ed. does not diagnose or prescribe for medical or psychological conditions nor does it claim to prevent, treat or mitigate or cure such conditions. All issues/ideas are expressed in terms of frequency equivalents.

