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*How To Prevent and Treat Arthritis Pain with Nutritional Medicine* Copyright © 2004 Sequoia Education Systems. All right reserved worldwide

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Chapter 1

A Patient's Personal Victory

How often have you said to yourself, "there must be an answer to this terrible pain? You know the pain, wake up in the morning with that awful stiffness, you can hardly lift your head off the pillow, turning over in bed… forget it. The pain... oh the pain... With great frustration, you attempt to take that first step toward the bathroom. Your knees hurt? I know the pain. I really do! Just the simple task of lifting your toothbrush has become a lesson in self-motivation. Why is this happening to me?? This is absolutely ridiculous!!! the shower!! Feels so good!! Hot water over my aching bones gives me some immediate relief, but oh how I wish I could keep that pleasant "no-pain" feeling all day long.

Why in the world did I ever purchase a home with an upstairs bedroom? OK it is time… I have to make my way down the stairs. I think I can muster enough strength to slowly transport my body to the main floor. Here I go! First and second step not too bad. Ouch!! Did someone sneak up behind me a stab me in my right knee with a knife? No blood!! Darn arthritis in my knees. Like this everyday... I dread it! I hate it! Hoping today might be different but unfortunately it's not! Just think about it. I have to climb the stairs later on today. I guess I will just have to grin and bear it. Been doing that for 18 months now!

No real change. My doctor has ordered all types of tests, x-rays, blood tests, MRI, nerve tests. You name it and I probably have had it. My doctor says I have arthritis. Shows up on my x-rays and MRI.

I remember so vividly sitting in the office of a rheumatologist. You know who this is, don't you? A rheumatologist is a doctor who specializes in arthritis. As I sit patiently waiting for the doctors "grand entrance" I contemplate what he is going to do for me. I pray that just maybe he has an answer…just maybe.

I see the door beginning to open and without much hesitation, Dr. S (no need to give names) greets me and begins to ask a few questions. Where does it hurt? How long have you had the pain? What type of treatments have you had? Right about this time, Dr. S gets up out of his chair and "kinda" pokes around my neck, back, knee, shoulders and ask if this hurts and if that hurts. Believe it or not his probing did not really cause me any pain but ask me to get up and try to squat down or reach behind my back. Now that is a different story! Do you think he had me do that?? Of course not! As quick as you can count to 100, Dr. S had his hand on the doorknob and simply said, “yep, you have arthritis, get this prescription filled and see me in 3 months.” Three months??!!! What if this doesn't work (did not say that out loud.. just thinking out loud).
I began to wonder if writing the check for $100.00 hurt as much as the pain in my back and knees. Nah!! I hurt more! I counted the time. I really did. 7 minutes! In and out! $100.00 to tell me something I already knew and believe know all to well.

Well, what can I say, that is the price you have to pay for being outside the network (you know the insurance network) You see Dr. S was not in my insurance book, but I was told by my family doctor that Dr. S was the man to see. Don't get me wrong, I am in no way upset with this doctor. I only wish he could give me some good reason for my pain and tell me something.. .anything please!

By the way.. Dr. S prescribed the most advertised medication on television. Vioxx... take one pill a day and your arthritis pain will go away (I think that is what they say on the commercials.. .something like that??!!).

I really don't like taking medication that doesn't solve the problem. I could see taking an antibiotic if I had an infection, but to take something that will not fix the problem, well I really don't know. Matter of fact… let me see… I'm doing a little research on my computer, I am not an expert but I can at least use a search engine., there we go… Vioxx.. Hmmm... suppose to help with pain (no brainer there). lots and lots of possible side effects.. kinda scary.. 50+ side effects.. sounds like a lot to me.. Look at this.. back pain is listed as one of the side effects. that's odd... Let me see... may go bald, could cause high blood pressure, heartburn, sciatic pain, joint pain and swelling, weight gain, yellow skin and eyes (definitely don't like that one).

Well, where are we? I told you about my wonderful life with arthritis and my experience with Dr. S. Vioxx....Ohhhh.. you know what? I almost forgot.. Did I tell you that I am pain-free! Yes, you read that right. No pain..!!!!!!!!!!!!!!!!!!!!!!!!!!!!

You should see me get out of the bed in the morning. Just yesterday, the alarm went off and I realized that I forgot to put the garbage by the side of the road (if you're like me you probably hate missing the garbage man, boy a another week of garbage sitting in my driveway is enough to drive one....sorry .. I didn't mean to get off the track)... as I was saying… as soon as the alarm clock went off.. something clicked in my head and I suddenly remembered.. GARbage DAY!! Ohhh Nooo!! Would you believe I jumped out of bed and quickly grabbed my robe and yes… basically leaped down the stairs... I did it and met the garbage men just in time.

Hey are you with me? Guess what?? Did you notice anything different?? Of course you did. No PAIN!! I mean it. Can you believe what I did within a matter of seconds. A few months ago, NO WAY could I have ever for one second done what I had done. Matter of fact, simply rolling over in the bed to push the button on the alarm clock would have been a major ordeal.

What did I do? I know you. I really do! I know your pain… your hurts. I know deep down in my gut every inch of pain that penetrates your bones. I know the tears of suffering. I know what it
feels like to watch my son and daughter play outside and how I prayed that one day God would cure me and I could play ball with my son and jump on the trampoline with my daughter.

My prayers have been answered. Just this past weekend I was throwing the football…not bad… might not be as good as I was when I was my son's age, but who cares. I threw the ball and that is the best feeling on planet earth. Yes having no pain is absolutely a dream come true, but the real joy is the true satisfaction to know that I can rub shoulders with my teenage son and do it simply because I want to.

My baby girl…well not really a baby… around 12 years old. She loves to jump and do flips on the trampoline. Well don't let me mis-lead you to believe that I did some flips. Even when I was a young man. I was not that adventurous. I did jump and bounce and well I had a great time. Life is so much better when you are not in constant pain.

I know. I know. You are wondering what did I do to end what I sometimes called "the chains of arthritis"?

You see, I really am better. No drugs. By the way, I did take the Vioxx for a couple of months. I know, what about those side effects. Well for one thing my skin and eyes didn't turn yellow. I will have to say taking the Vioxx did give me some relief. I didn't really have a lot of side effects, but you know what, I tried to stop the Vioxx for 3 days after I was on it for 4 weeks just to see what would happen. Terrible, terrible… the pain came back with a vengeance..

You may say, well if a little pill can make your life comfortable then why not take it.. You do have a point, but I just was not satisfied with the whole picture. Sure, taking the Vioxx gave me relief, but just maybe there was something that was overlooked by my physician that got me in this state to begin with. What if something real bad was going on inside my body and I didn't know because the Vioxx was simply blocking the pain. Did that make any sense?

I sometimes get this picture in my head of a person driving down the road when all of a sudden the red oil light comes on. What would you say or even think if that person simply took a piece of black tape and covered the blinking red oil light? Dumb move! Stupid!! Expensive decision!

Well I think you can see where I am going with this. Of course cover the red oil light and you can just about guarantee that the engine will seize up. No oil, goodbye motor.

Think about it, pain ====red oil light Vioxx====black tape

The only difference between the car and your body is who knows what is going to break down in your body. I just didn't like the thought of knowing that the pain was as close as 3 days without the Vioxx.

Very disturbing thought!! What is causing this pain?? This thought kept rolling around in my head day in and day out.
I was about to accept my fate when I came across a book written by a prominent medical physician from New York who was helping people with chronic pain all over the world. I did some research and discovered that the secret to her treatments were not at all complicated but actually quite simple. I figured "what did I have to lose"..so I followed her recommendations and within 2 weeks would you believe the pain was 50% gone. I began sharing this information with friends and family and started to get calls and e-mails telling me how grateful they were for helping end their pain.
Chapter 2
Facts about Arthritis

Arthritis or other chronic joint pain affects nearly 70 million people in the U.S. alone.

Osteoarthritis (OA) is the most common form of joint disease. OA affects nearly 50 percent of the population older than the age of 65 and virtually everyone over the age of 75. OA affects mainly the hands, knees, hips, and spine. The result is pain, limitation of motion, deformity, and progressive disability. Osteoarthritis may be described as degenerative joint disease (DJD). Typically osteoarthritis presents as pain, stiffness, or swelling in joints such as the hip, hand, and knee or spine, but it may affect other joints as well. Women run a higher risk of developing osteoarthritis than men, and other risk factors include heredity, excess weight, joint injury, and hormonal imbalances.

Although many people associate osteoarthritis with the "natural" wear and tear of joint cartilage, there are actually a variety of physiological factors that play an important role in the prevention, monitoring, and treatment of this condition. Recently, investigators have strongly emphasized the importance of working to undo actual degenerative mechanisms in the body rather than simply treating symptoms with anti-inflammatory drugs or analgesics.
Chapter 3

Signs and Symptoms

• Morning stiffness or stiffness after inactivity for more than 15 minutes
• Stiffness: rarely exceeds 15 minutes; related to weather
• Instability of weight bearing joints
• Crackling, crepitus joint sounds
• Enlarged bone growth causing gross deformities (e.g., Heberden's nodules of distal interphalangeal joints)
• Localized joint pain (often described as a deep ache), worsened by movement and improved with rest (in severe cases, constant pain)
Chapter 4

Traditional Clinical Lab Assessments

• **Erythrocyte Sedimentation Rate**: ESR (erythrocyte sedimentation rate) is a nonspecific-screening test for various diseases.

• **C-Reactive Protein (quantitative)**: C-reactive protein is a test that measures the concentration of a protein in serum that indicates inflammation.
Chapter 5

Functional Medicine Clinical Lab Assessments

The following laboratory testing can provide valuable information necessary for diagnosis and treatment. The information obtained from these advanced medical tests can be the "key" to finding the "cause" of osteoarthritis.

Fatty Acid Analysis

For years, people have been told that fats were bad. With this came, low fat foods, low fat drinks.. low fat everything. Of course as science continued studying the underlying causes of degenerative diseases, fats began to take on a new light. We now know that fats are very important for overall health. The real issue is not ..are fats good or bad.. but rather what type of fats should we eat?

One thing is very clear: the type and amount of dietary fat that you eat can have a major impact on your health.

Most people have been told for years that hydrogenated fats were good. Unfortunately, it is now proven that margarines (trans fatty acids) contribute to heart disease.

Fats have a very important role in your body. Your body uses fats to make hormones. 60% of your brain is made from fatty acids.

There are three types of fatty acids: Omega 3, Omega 6 and Omega 9. Approximately 90% of the fats we eat are either saturated, trans, or omega 6. The key is balance between all the fatty acids.

People with low levels of Omega 3 frequently have problems with depression, hyperactivity, numbness and tingling in the hands and feet. Matter of fact, it very important that pregnant women have their fatty acid levels checked to be certain that their growing baby is getting enough of the right balance of fatty acids to develop properly. Remember fatty acid is essential for the rapid brain growth and nerve growth of young baby.

Fatty acid balance plays a critical role in inflammation. Low levels of Omega 3 have also been found to be an underlying cause of inflammation that leads to atherosclerosis, heart disease, arthritis, eczema, asthma and many auto-immune diseases like rheumatoid arthritis. If the body’s Essential fatty acids get out of balance, inflammation can get out of control, leading to a number of chronic health challenges.

It has been documented that omega 3 fatty acids deficiency may be the most widespread nutritional deficiency today. The only way to be absolutely sure your fatty acids are balanced is to have them measured.
Fatty acid imbalances are commonly seen in patients with chronic inflammatory conditions such as arthritis. While there can be many causes of inflammation, the medical literature strongly links chemical imbalances as a primary factor.

Scientific studies have clearly shown that people suffering with osteoarthritis have a higher proportion of arachidonic acid, an omega-6 fatty acid in their body. Too much arachidonic causes an increase of the production of the inflammatory hormones called prostaglandins, leukotrienes, and thromboxanes.

This is a consequence of consuming high arachidonic acid content foods: beef, lamb, pork, eggs, dairy products, shellfish, organ meats. If you want to heal more quickly and suffer less severe and less frequent injury, then consume less of these foods (egg whites and non-fat dairy products are fine).

Changes in the Western diet during this century have resulted in increasing consumption of omega-6 oils, including arachidonic acid, with decreasing consumption of omega-3 oils. The net result of this dietary change has been a dramatic imbalance in fatty acid metabolism--causing a shift in production toward more pro-inflammatory eicosanoid hormones.

To make matters worse, these hormones are further affected by a number of dietary factors. Eating foods containing trans fatty acids hydrogenated vegetable oil, which is found in most baked goods, and oils which have been exposed to excessive light, heat or oxygen) will produce more inflammatory hormones. So will eating relatively excessive amounts of carbohydrates.

You may find it of interest to know that NSAIDs drugs prevent the conversion of arachidonic acid into more inflammatory hormones.

Although appearing to be a good idea, the problem has not been corrected. Wouldn’t it be a better idea to simply decrease the overflow of arachidonic acid and balance your fatty acids.

Putting all this information into practical form results in the following guidelines to naturally reduce inflammation:

1. **Reduce your intake of arachidonic acid rich foods.**

2. **Increase your intake of flaxseed oil or cold water fish.**

3. **Reduce your intake of trans fatty acid containing foods, alcohol, and carbohydrates.**
CASE STUDY #3185: Karen C.

The following Fatty Acid Test shows an elevated Arachidonic Acid (pro-inflammatory) and borderline low A-Linolenic (ALA) acid (anti-inflammatory). This test clearly reveals that Karen’s fatty acid balance was in a pro-inflammatory state. Decreasing arachidonic acid foods and increasing omega 3 foods significantly reduced Karen’s arthritic pain.

Recommended Labs

Genova: 800-522-4762

MetaMetrix: 800-221-4640
Intestinal Permeability Assessment

The gastrointestinal (GI) tract is the second largest body surface area and the condition of this organ and the maintenance of its uniquely balanced microflora is essential to optimal health. In addition to digesting, absorbing, and eliminating food substances and nutrients, the GI tract functions as a critical barrier between the internal and external environment. The normal intestinal lining called the epithelium is protective because it constitutes a semipermeable barrier, which prevents toxin and pathogenic molecules or micro-organisms such as chemical toxins and bacteria from entering the bloodstream.

Symptoms of osteoarthritis are frequently treated with nonsteroidal inflammatory drugs (NSAIDS), but chronic use of these drugs can cause serious damage to the lining of the gastrointestinal tract. An abundance of literature clearly shows that these same medications which are suppose to temporary relieve pain will damage the lining of the intestines further aggravating and potentially worsening the arthritis pain. Increased permeability sometimes called “leaky gut syndrome” and inflammation are also associated with chronic NSAID use.

Once the intestinal mucosa is damaged, bacteria, toxins, and allergens normally prevented from penetrating the GI system can permeate into the bloodstream, where they are carried into all parts of the body, both triggering and exacerbating symptoms.

What does a healthy mucosal lining look like?

The following diagram shows what a healthy mucosal lining looks like. As you can see from the diagram, the mucosal lining is intact preventing antigens from breaking through into the lumen of the GI tract. Antigens can be anything that would be detrimental to your health such as virus, bacteria, parasites, environmental toxins, food sensitivities, etc. This is normal and what should occur in a person with a healthy mucosal lining.
What does an unhealthy mucosal lining look like and what are the consequences?

The following diagram is a classic example of what happens when a person has a leaky gut. As you can see, the mucosal lining is NOT intact. Antigens are breaking through the large gaps in the mucosal lining. Matter of fact, when the antigens breakthrough the mucosal lining, they overload the body’s ability to detoxify causing increased stress on the liver.
One study of osteoarthritis patients taking NSAIDS found that over 50% exhibited at least one type of gastroduodenal damage. Another study found an even higher rate--68%--and concluded that "fairly severe gastroduodenal injury occurs in asymptomatic patients with rheumatoid and osteoarthritis" Most importantly, these researchers also noted that symptoms do not necessarily predict the degree of GI tract damage.

A common test to determine if you indeed have damage to the intestinal wall and are suffering with leaky gut is called Intestinal Permeability Assessment.
Intestinal Permeability Assessment

The small intestine has two functions; one being a digestive/absorptive organ for essential nutrients as well as a powerful immune and mechanical barrier to prevent toxics compounds, bacteria, food antigens from entering the circulation. Either one of these functions may be disrupted by a number of mechanisms. This will ultimately result in a number of health problems.

This test will help identify if the small intestine's mucosal lining (microvilli) is damaged resulting in an increase in gut permeability. This means that toxic compounds, bacteria are prone to breakthrough the protective lining bombarding and overloading the circulation. The result has been linked to inflammatory bowel disease, food allergy, inflammatory joint disease, chronic skin conditions. Studies have also shown that certain auto-immune diseases have been linked with damage to the micro-villi. This condition includes: rheumatoid arthritis, vasculitis and other auto-immune disorders.

Damage to the micro-villi also contributes to a decrease ability of essential minerals to be absorbed. This will lead to less available nutrients to assist in the detoxification of toxic compounds, bacteria and other antigens (damaging biochemical elements).

Intestinal Permeability may be affected by several mechanisms including intestinal infection, ingestion of allergenic foods or toxic chemicals, trauma, alcoholism, non-steroidal anti-inflammatory medications (NSAIDS) like Vioxx, Celebrax, Bextra.

It is important to note that the actual taking of NSAIDS may be the same thing that contributes to patients suffering with arthritis.

The Intestinal Permeability Assessment directly measures the ability of two non-metabolized sugar molecules, lactulose and mannitol, to break through the intestinal mucosa. Lactulose is only slightly absorbed, but may enter the circulation if the mucosal lining of small intestine is damaged. An elevated finding indicates an increase in gut permeability. This is commonly called Leaky Gut. Mannitol is easily absorbed and will assist the physician in determining how nutrients are being absorbed.

To perform this test, the patient drinks a premeasured amount of lactulose and mannitol. The degree of intestinal permeability is reflected in the levels of the two sugars recovered in a urine sample collected over the next 6 hours.

CASE STUDY #2487: Diane S.

The following test specially checks for leaky gut. As you can see from this test, Diane tested positive for leaky gut. Appropriate treatment directed toward fixing the leaky gut significantly reduced Diane’s arthritic pain.
Another important test is the Comprehensive Digestive Stool Analysis. As we just stated, damage to the intestinal lining has been strongly linked to arthritis and other auto-immune conditions. A thorough digestive and gut investigation will play a major role in helping uncover the real cause of arthritis.

**Recommended Labs:**

- Genova Lab
- Cyrex Laboratories
- BioHealth Diagnostics

**Comprehensive Digestive Stool Analysis**

A comprehensive digestive stool analysis (CDSA) evaluates your gastrointestinal health. The CDSA will show you how well you digest food, absorb nutrients, fight intestinal bugs and eliminate waste.
This important test provides an in-depth look at digestive function, microbial balance, absorption, immunology and other parameters of gut health that can be impacted by the etiology and treatment of osteoarthritis.

Your body is like a finely tuned engine and the food you eat its fuel. If you don’t completely absorb the nutrients, you’re not adequately feeding your body. This lack of adequate fuel or the inability to use it properly –can lead to a variety of health problems including arthritis.

Poor digestion or imbalances in your intestinal flora can result in many illnesses, from annoying gastrointestinal symptoms such as chronic constipation/diarrhea and abdominal pain to more serious illnesses which may appear to be unrelated to digestion, such as asthma or migraines.

The CDSA is a group of 25 tests performed on a stool sample revealing information about your GI health. The CDSA evaluates:

- Digestion of food molecules and absorption of nutrients
- The presence of hidden yeast or bacterial and parasitic infections
- Intestinal flora balance
- Intestinal immune function
- Dietary fiber intake

Most people give no thought to how well they are digesting and absorbing their food. Are you sure the food you eat is fueling your body? Or is your diet causing other problems in your body.

**How Healthy is Your GI Tract?**

Digestion starts with your stomach. But first you must chew your food thoroughly? That’s the first step to good digestion. The mechanical breakdown of your meal begins when your teeth grind food. Saliva triggers the release of powerful digestive chemicals in your body.

Once food travels to your stomach, you need sufficient amounts of hydrochloric acid to break up your protein. Millions of Americans simply do not produce enough hydrochloric acid. This can cause vitamin and mineral deficiencies, osteoporosis, hardening of the arteries, arthritis, colon cancer, food allergies and autoimmune diseases.

Once your food moves from your stomach to your small intestine, the hydrochloric acid and other factors tell the pancreas to release enzymes. These pancreatic enzymes play an important role in the digestion of proteins, fats and carbohydrates. An insufficient amount of pancreatic enzymes can contribute to many of the same problems as inadequate stomach acid.
Nutrients in your food are absorbed into your blood stream from both the small and large intestine. Food that isn’t digested completely will not be absorbed. Partially digested proteins can cause serious gastrointestinal irritation such as colitis, gas, nervous stomach and lead to food allergies.

Your gut is the home of many different microbes totaling in the trillions. You have “friendly” bacteria, which will aid with digesting, vitamin production and immune defense Unfortunately, many common activities can destroy the delicate balance of bacteria. Using antibodies, steroids or hormone pills or diets high in fat and sugar destroys the bacterial levels, leading to imbalances in bacteria and yeast, which can lead to illness.

Chronic infection, food allergies or inadequate nutrition can result in poor immune defenses in your intestine.

Your GI tract may also be infected with bacterial, fungal and parasitic bugs. The CDSA will carefully screen for these microbial pathogens. Each pathogen is unique and may cause a host of health problems including arthritis. Everything from diarrhea, arthritis, to autoimmune disease can result from a gut infested with these bad microbes.

For proper GI health, your body must carefully synchronize the breakdown, absorption and elimination of food. Bacteria must be in proper balance and immune function must be adequate.

The CDSA provides an easy, effective evaluation of how well your GI tract performs these essential functions.

**CASE STUDY #2957: Steve M.**

The following test clearly shows a severe dysbiosis. Dysbiosisis means that there is an imbalance of good vs. bad bacteria. Steve had two bacterial pathogens: Citrobacter and Pseudomona. In addition, Steve’s beneficial bacteria, Lactobacilli and Bifidobacterium were non-existent. Not good. This significant imbalance was a powerful contributor to Steve’s arthritic pain. Appropriate medical and nutritional treatment helped balance Steve’s gut flora significantly reducing his arthritic pain.
The following labs offer this unique and valuable test:

Genvoa Labs

Metametrix

**Amino Acid Testing**

Inflammation is believed to function as primary degenerative mechanisms in the development and progression of osteoarthritis. Amino acids, which serve as the body's building blocks for protein, can impact both of these processes.

Three amino acids are critical to reducing inflammation. These are cysteine, glutathione, and taurine.

Cysteine is necessary for the production of the antioxidant glutathione. Glutathione has been discovered to play an important role in the inflammatory response.
Adequate levels of Taurine will naturally limit the degree of inflammation. When taurine is low, the inflammatory response is enhanced.

Other amino acid imbalances may also contribute to osteoarthritis—particularly methionine metabolism. Methionine is necessary to produce the well studied S-adenosylmethionine (SAMe). Numerous clinical trials have shown that S-adenosylmethionine can greatly reduce degenerative damage and symptoms of osteoarthritis in patients, including related depression. It is important to understand that B12 and folate are necessary for the body to make methionine. As you can see, it is important to have adequate levels of B12 and folic acid in order to make methionine. In turn methionine is responsible for the production of SAMe.

Along with S-adenosylmethionine, glucosamine has also been cited for its clinical ability to promote production of cartilage tissue and improve many symptoms of osteoarthritis. The body depends on glutamine as a metabolic source for the production of glucosamine.
Solving Diagnostic Mysteries

The most advanced Amino Acids Analysis available identifies the levels of 40+ amino acids responsible for healthy body chemistry. It provides the most precise measurement of the "essential" amino acids, the ones we cannot make in our bodies and must get from nutritional sources. When certain amino acids are too high or too low, they can be the cause of chronic fatigue, increased cardiac risk, and impaired neurological development. Intolerances to foods and chemicals, persistent inflammation, and even depression have been linked to amino acid
imbalance. Frequently, the Amino Acids Analysis can give the only clue to the cause of mysterious chronic illnesses-and give physicians their only direction to a cure.

Genvoa Lab: 800-522-4762 25

Metametrix
Chapter 6
Conventional Medical Treatment

Disease-Specific Treatments simply refer to the fact that treatment is directed to suppress symptoms with little consideration to the reasons why a person is sick in the place. Almost all conditions are treated "exactly" the same. Instead of treating the individual patient with the disease, the disease is treated instead. Remember this type of treatment DOES NOT take in consideration, the unique makeup of each individual.

- Physical therapy to improve range of motion, and muscle strengthening exercises.
- Acetaminophen
- Nonsteroidal anti-inflammatory drugs (NSAIDs): Vioxx, Celebrex, Bextra

Celebrex:

Documented Side Effects

Abdominal pain, diarrhea, headache, indigestion, nausea, respiratory infection, sinus inflammation, back pain, dizziness, gas, insomnia, rash, runny nose, sore throat, swelling, allergic reactions, anxiety, belching, blisters in mouth and eyes, blood disorders, blood infections, blurred vision, bone disorders, breast pain, breast problems, bronchitis, cataracts, chest pain, colitis, conjunctivitis (pinkeye), constipation, coughing, cysts, dark-tarry stools, deafness, depression, dermatitis, diabetes, difficult urination, difficulty breathing, difficulty swallowing, drowsiness, dry mouth, dry skin, earache, ear infection, ear ringing, esophageal perforation, eye infection, eye pain, fainting, fatigue, fever, flu symptoms, fungal infection, gallstones, gangrene, general swelling, glaucoma (pressure in the eye), hair loss, heart failure, heart irregularities, hemorrhoids, hepatitis, hernia of the stomach, herpes infection, hives, hot flashes, increased appetite, increased blood pressure, increased heart rate, increased muscle tone, increased urination, infection, inflammation of the digestive tract, inflammation of the bladder, inflammation of the blood vessels, intestinal bleeding, intestinal obstruction or perforation, itching, jaundice, joint pain or inflammation, kidney problems, laryngitis, leg cramps, liver problems, loss of appetite, loss of balance, low blood sugar, menstrual disorders, migraine headache, mouth ulcers, muscle ache, nail disorders, neck stiffness, nerve pain, nervousness, nosebleeds, pain, painful urination, pancreatitis, phlebitis, pneumonia, poor coordination, prostate problems, severe diarrhea, severe skin rash and peeling, skin reaction due to sunlight, skin sensitivity, skin tingling, stroke, suicide, sweating, swollen face and throat, taste disturbances, tendonitis, tiredness, tooth disorders, urinary incontinence, urinary tract infections, vaginal problems, vomiting, weakness, weight gain
If Celebrex is taken with certain other drugs, the effects of either could be increased, decreased, or altered. It is especially important to check with your doctor before combining Celebrex with the following:

ACE-inhibitors (a type of blood pressure and heart medication, including such drugs as Capoten, Vasotec, and Prinivil) Blood thinning agents such as Coumadin Fluconazole (Diflucan) Furosemide (Lasix) Lithium (Eskalith, Lithobid) Thiazide diuretics (water pills) such as hydrochlorothiazide and Dyazide
Chapter 7

Patient-Specific Treatment Options

* The following treatment options have been researched and found to be effective in the management of depression. It is highly discouraged to assume that any of the below natural products are going to cure your health condition.

Unfortunately, many people attempt to self diagnose or believe that a specific supplement or natural treatment will cure their problem.

You first **MUST** be evaluated to determine **EXACTLY** what natural treatments will help. Once you are properly tested, your physician will then be in a position to pinpoint the probable causes of your arthritic pain and make the appropriate recommendations. For instance, if your physician finds that your fatty acids are imbalanced, then he/she can then personalize your treatment. On the other hand, if your physician tests you for a leaky gut and the test comes back negative, you can see why treating for a leaky a gut would likely not help.

Remember, instead of treating a "disease" we are treating the "person with the disease". No two people are alike. For one person, the cause of their * Disease-Specific Treatments simply refers to the fact that treatment is directed to suppress symptoms with little consideration to the reasons why a person is sick in the place. Almost all conditions are treated "exactly" the same. Instead of the treating the individual patient with the disease, the disease is treated instead.

Remember this type of treatment **DOES NOT** take in consideration, the unique makeup of each individual.

**Patient-Specific Treatment Options** is the future of medicine. Identifying the cause of your health problem then personalizing the treatment will soon be the accepted norm for people who are sick and tired of simply treating symptoms but instead want to get well.
Chapter 8
The Arthritis Recovery Plan

First and foremost, it would be wise to consider getting the recommended tests to uncover the potential cause(s) of your arthritis.

The recommended tests include:

- Fatty Acid Test
- Intestinal Permeability
- Comprehensive Digestive Stool Analysis
- Comprehensive Amino Acid Tests

In the event you would rather begin a natural approach without pinpointing the probable cause(s), you can start with the following natural recovery program.

Please understand that the following program will still be quite effective in stopping your pain, however, you would get more precise treatment recommendations from the results of the above recommended tests.

All in all, here is a powerful program that has produced long lasting results for thousands of arthritis sufferers:
Chapter 9

Foods That Cripple

Foods such as potatoes, tomatoes and eggplant sometimes referred to as “nightshade foods” could be the cause of stiff joints, pain and inflammation. As early as the 1940’s, Norman F. Childers, Ph.D. discovered the link between foods that share a botanical family and his own arthritic symptoms.

Over the last 20 years, researchers have debated whether or not there really is any connection between foods in the nightshade foods and arthritis. Data has been growing to support the evidence of many sufferers.

What Foods are in the Nightshade family?

Curiously, many of the foods in the nightshade family were viewed with great suspicion when first introduced into the country in the fifteenth century, as the leaves and fruits of the European members of the family were mostly extremely poisonous. Today we enjoy several well-known vegetables in the nightshade family.

These are: * Tomatoes * Potatoes * Eggplant * Peppers * Chili * Red and Green Peppers * Paprika.

Many food products, especially processed foods, contain derivatives of nightshade foods such as potato starch and tomato paste.

Why do these foods affect arthritis symptoms?

According to a study conducted in 1993 by Childers, eating nightshade foods results in “a buildup of cholinesterase inhibiting glycoalkaloids and steroids…and may cause inflammation, muscle spasms, pain, and stiffness.” The less cholinesterase the body produces as it ages, the less agile the body will be. Therefore, anything that additionally inhibits cholinesterase will add to joint deterioration and stiffness. Cholinesterase inhibitors such as nightshade foods affect mostly rheumatoid-type arthritis. Additionally, the study also reported a link between osteoarthritis and vitamin D3, which is produced by the nightshade foods.

The researchers concluded that “osteoarthritis appears to be a result of long-term consumption of the nightshade foods, which naturally contain the active metabolite vitamin D3, and in excess causes crippling and early disability. Other research suggests that these nightshade foods all contain a substance called solanine, a bitter poisonous alkaloid that inhibits nerve impulses.

What improvements can I expect with a nightshade-free diet?
Several surveys and studies report on good improvements in arthritis symptoms for people who stopped eating nightshade foods. The 1993 study, published in the Journal of Neurological and Orthopedic Medical Surgery, reported that “rigid omission of nightshade foods, with other minor diet adjustments, has resulted in positive to marked improvement in arthritis and general health.” In general Childers reports that “We have got around 70% positive results in reducing arthritic problems if the cooperator can stay rigidly with the (elimination) diet from here on in. People truly rigid may get 94% freedom from arthritis in surveys we have made. This included many forms of arthritis, all of which seem to be affected by the nightshades.” Researchers are quick to point out that when these people accidentally ate one of the foods or tried to go back to their former diet, their symptoms would return. The worse the initial problem, the longer it will take to see any signs of improvement. It could take several weeks or months to notice any benefits to dietary changes.
I have a violent allergy to one category of foods that is life threatening. This family of foods, the deadly nightshades, includes, potatoes, tomatoes, peppers, eggplant, and spices. These foods can be hidden in many recipes. Here is a detailed list of hidden ingredients that I need to avoid:

**Potato**

Baked, mashed or scalloped potatoes, French fries and potato chips. Hidden sources include: potato starch, potato water in soups, stews, breads, biscuits, donuts, stuffings, gravies, sauce. Another common hidden source includes: seafoods and sausage that often contain modified food starch, potato starch, vegetable protein (sometimes labeled MVP) or hydrolyzed vegetable protein (HVP).

**Tomato**

Tomatoes, spaghetti sauce, tomato juice, Bloody Mary mix, sun-dried tomatoes and pizza. Most condiment sauces like steak sauces, Worcestershire sauce, Tabasco sauce, barbecue sauces

**Peppers**

Peppers include red, green, yellow, orange, jalapeno, chili and pimentos

**Spices**

This is the sneakiest category of hidden nightshades. Spices of the deadly nightshades family include cayenne, chili, ground red pepper, crushed red pepper, curry and paprika.

Avoid any ingredients that are listed under the hidden label: natural flavoring.

Because I can die from one hidden ingestion, I avoid any dish that is red and ethnic, especially Thai, Tex-Mex and barbecue, Cajun, Mexican, Southern and Jamaican.

What can I eat? Lots of other vegetables, including sweet potatoes and many other spices like black pepper, garlic, basil, rosemary. All unprocessed meats, fowl and seafoods, wines and fruits are safe providing the precautions above are taken.
Chapter 11
Tobacco: A Crippling Habit to Break

Tobacco is probably the most addicting and therefore the toughest nightshade family member for people in pain to quit. Each puff on a cigar or cigarette is like an intravenous injection of nightshades. Sometimes it takes years of smoking before the chronic pain sets in. Many prisoners of pain will never stop hurting until they stop smoking and then it takes 2-8 months to detoxify this from the body.
How To Get Started With Nightshade Elimination:

If you want freedom from pain, start by avoiding all members of the nightshade family right this moment for three months.

If you are serious about ending your battle with arthritis then you need to question everything that enters your mouth.

Do Not Make Excuses

I am always amazed at the number of people who complain and say they want to get better but are simply unwilling to do what it takes to get well.

For these people, the only thing I can think of is the fact that just maybe they don’t hurt bad enough to make these changes.

Let me tell you now, so there is no mistake. You are either on the diet, or off. There is no half way. DO not kid yourself. Yes it may be a challenge to stay off nightshade foods, but the results will be your prize.

Remember, are your willing to stop eating a group of foods for a period of three months that is likely to the cause of your pain?

Without strict avoidance of nightshades for 3 months, you will deny yourself access to one of the easiest and most common solutions for chronic musculoskeletal pain, anywhere in the body.
Chapter 12

The Miracle of Cetyl Myristoleate

If anyone had told me there was anything that could turn off the pain of arthritis, I would have dismissed him or her as a quack. You would think that if this were so, you would have seen it on CNN and all the international news services.

Imagine if there was something that:

Could end arthritis pain in just 1-4 months

Then imagine that after 4-6 months use, the pain relief was permanent. Yes I said permanent; you would never need it again

Now imagine that this miracle product requires no prescription.

And more thing… Imagine if it had no side effects. Wouldn’t that just be too fantastic to be true?

Well, there is such a thing and I promise you that you will not see it advertised on television or promoted by any of the powerful drug companies.

This product has been available for years but has resulted in helping many arthritis suffers.

This wonderful product is called Cetyl myristoleate.

CM is a common fatty acid found in fish oils, whale oils, dairy butter, and animal fats.

Cetyl myristoleate was a new compound to science when discovered in 1964 by Harry W Diehl, an experienced medical researcher, who was employed at the time by the National Institute of Arthritis, Metabolism, and Digestive Diseases at the National Institutes of Health.

Mr Diehl was an accomplished researcher, having discovered an improved method of making the sugar 2-deoxy-d-ribose, which was patented by the government and subsequently used by Dr Jonas Salk as the culture medium for his polio vaccine.

CM was a project of personal interest for Mr Diehl, not a government sponsored effort. His motivation for researching CM is really quite interesting and altruistic.

In the late 1950's, Mr. Diehl observed his neighbor, then just 40 years old, fall ill with rheumatoid arthritis. The neighbor's knees began to swell and each week he got worse. No doctor who treated him could arrest the progress of the disease, much less offer a cure.

Over the next fifteen years, the neighbor took just about every medicine that had been discovered, but nothing worked to arrest the disease. He first became bed-ridden, then one leg
had to be amputated, followed shortly by the other. Finally, he was admitted to a nursing home
where he died, weighing just 86 pounds.

Mr. Diehl wrote that every time he visited this suffering soul, he wished he had something that
was a cure, and those memories lingered with him, finally motivating him to start the research
that led him to the discovery of CM.

Diehl was frustrated by trying to create a "disease model" in mice, because he found that he
could not induce arthritis in the mice. He wrote to Dr Fay Wood at UC Berkeley, who responded,
"If you or anybody else can give mice arthritis, I want to know about it, because mice are 100%
immune to arthritis." At that moment, Diehl's research instincts told him that what he wanted was
already somewhere in those mice.

Working in his home lab, Diehl pursued his theory that there had to be something specific in the
mice that prevented them from getting arthritis. He soon isolated a compound, CM, from mice
that did not occur in their biological kin, rats, which can easily be given arthritis experimentally.
The next step was to see if experimentally induced arthritis in rats could be blocked or cured by
CM.

His research was published in the Journal of Pharmaceutical Sciences in March, 1994. Diehl
reported that a group of normal rats were injected with CM. Then, 48 hours later, they were
injected with Freund's Adjuvant to induce polyarthritis. A control group of rats were given
Freund's Adjuvant only.

The rats protected by CM developed no arthritic pathological changes and grew 5.7 times faster
than the control group, which did contract arthritis. Diehl's experiments showed that CM gave
virtually complete protection against adjuvant-induced arthritis(5).

CM Works for Harry Diehl

Like many older Americans, Diehl himself fell victim to osteoarthritis in his hands, heels, and
knees. His heels were so painful he could hardly walk.

Diehl's doctor gave him cortisone injections, but it reached a point where cortisone was no
longer advisable, and the doctor told Diehl that there was nothing else to do but take NSAID's.

At that point, he was eighty years old and decided to make a batch of CM to try on himself,
which successfully cured him of all symptoms of his arthritis.

Mechanism of Action

Some authors and practitioners believe that cetyl myristoleate has the ability to reprogram faulty
memory T-cells, thus treating the cause of arthritis. Cetyl myristoleate may have the ability to
normalize hyper-immune responses, thus [producing] the favorable results in treating
autoimmune conditions such as rheumatoid arthritis and systemic lupus erythematosus, but it seems to function more effectively as a lubricant and a powerful anti-inflammatory."

**Clinical Study on Rheumatoid Arthritis in Humans**

A multi-center, clinical research study involving 431 patients with various forms of rheumatoid arthritis was performed in 1996 using various established measurement criteria, including joint swelling, joint pain, chest expansion, blood analysis, urinalysis, radiographic assessment, and physician and patient assessment.

The patients were divided into three groups and tested for one month. One group received CM. Another group received the same amount of CM plus glucosamine and other adjuvants. The third group received a placebo. The remarkable results showed significant improvement in 63.3% in the group using CM alone, and 87% improvement in the group using the combination of CM, glucosamine, and other adjuvants. The placebo group showed only a 14.5% improvement.

**Adverse Reactions**

In the same study, there were no adverse reactions in 205 patients who received CM alone or in combination. None of the patients receiving CM reported CNS symptoms. Only five of 205 patients receiving CM reported gastrointestinal symptoms (GI), while three of 226 patients receiving the placebo reported GI symptoms.

Recommended companies that sell CM:

CM-Plus from Longevity Science: 1-800-933-9440

CMO from Knollwood: 1-800-829-1514

True CMO from Jarrow Formulas: 1-800-890-8955

Myristin from EHP Products: 1-888-EHP-0100

Myristin from Bio Via International: 1-800-467-7810
Chapter 13

Magnesium Deficiency & Arthritis

Even though magnesium has received a lot of praise combating heart disease and migraines, it should be part of everybody's arsenal against arthritis.

Not any magnesium will do. It MUST be magnesium chloride solution 18%.

Since over half the population is deficient (Journal of the American Medical Association, June 13, 1990) and a deficiency causes muscle spasm and pain, the odds are likely that you will benefit from magnesium. Remember, if you use the better tasting capsules, it may not work and you will discount one of the most powerful treatments against arthritis.

The solution is like an I.V. in making sure you get maximum gut absorption.

Start with 2 teaspoons per day

Recommended companies that sell Magnesium 18% Solution:

ARG/Nutriology/Allergy Research Group: 1-800-545-9960
Chapter 14

Glucosamine and Chondroitin Sulfate

Glucosamine is an important building block needed by the body to manufacture specialized molecules called glycosaminoglycans, hyaluronic acid and proteoglycans. These substances are the foundation of many of the body's tissues including tendons, ligaments, cartilage, collagen, basement membranes, mucous membranes of the digestive system, membranes in the respiratory tract and synovial fluid in the joints. Proteoglycans are proteins that make up the connective tissue of cartilage giving joints their elasticity, strength, and resilience.

Tissues in the joints become damaged when lubricating fluids in the joint spaces wear thin causing a loss of healthy cushioning. With this loss of cushioning, degeneration of bones and cartilage begins, accompanied by reduced flexibility of the joint. Glucosamine supplementation helps to make fluid thick and elastic increasing the support between the joints.

Most studies have revealed that glucosamine is effective in decreasing pain and improving joint function. This powerful supplement has been reported to reverse or at least stop the progression of the disease without inducing serious adverse effects.

Results of clinical trials have reported that glucosamine has produced consistent benefits showing a 50 percent overall improvement in symptom of patients with osteoarthritis. In some cases, it may be equal or superior to ibuprofen in controlling symptoms and with far fewer side effects.

Clinical Note: It may take three to four weeks before glucosamine is effective.

Chondroitin Sulfate

Chondroitin sulfate is one of the primary structural components of cartilage. Chondroitin sulfate has been found to stimulate the re-building of cartilage. In fact, it has been found to help prevent deterioration and also supplies the body's needs for the primary materials needed to repair and rebuild degenerating joints.

Results of a double-blind study with chondroitin sulfate (800mg/day), indicated that therapy was effective in reducing joint pain and increasing overall mobility. In a three-year double-blind study, 119 patients with finger-joint osteoarthritis taking chondroitin (400mg, three times daily) had much less progression of the disease compared to placebo patients. In osteoarthritis of the knee, 80 patients in a six-month double-blind study took chondroitin (400mg twice daily) or a placebo. The chondroitin demonstrated significant improvements in walking time compared to placebo controls and a significant reduction in the consumption of pain-killing drugs. Excellent tolerability was also observed.
Chapter 15

Lyprinol

More Powerful Than NSAIDS Without the Side Effects

Lyprinol is a powerful inhibitor of the 5-lipoxygenase pathway, thus its ability to markedly reduce the damaging effects of persistent inflammation that one may find in various allergic reactions including arthritis and other inflammatory disorders.

Since many of the currently used anti-inflammatory drugs, in particular the non-steroid anti-inflammatory drugs (NSAID), function via the cyclo-oxygenase pathway, much recent international research and effort has gone into the development of inhibitors of the second major pathway, the lipoxygenase pathway.

There is little doubt that Lyprinol can provide a potent means of controlling and inhibiting the damage caused by the excesses of the body's inflammatory responses.

In vivo studies undertaken at The University of Queensland in Australia tested the anti-arthritic properties of Lyprinol

Using the standard model for evaluating the potency of anti-arthritic drugs, Lyprinol was measured against its ability to reduce the swelling which occurs in adjuvant induced poly arthritis in rats. Published in the Journal "Inflammopharmacology".

The results were dramatic, with Lyprinol reducing joint swelling by 93% compared with untreated controls.

Following these outstanding findings The University of Queensland scientists set out to compare Lyprinol with two widely used anti-arthritic drugs, namely Indomethacin & Ibuprofen.

When given orally at the same dose rate (5mg/kg body wt./day) Lyprinol outperformed the drugs Indomethacin & Ibuprofen by a factor of 2:1. This was a staggeringly successful outcome for Lyprinol

More recently a double blind clinical trial conducted at the West Glasgow Hospital University NHS Trust involving 60 patients, 30 of whom had classical rheumatoid arthritis and 30 with clinical & radiological evidence of osteoarthritis, showed outstanding results.

Both rheumatoid and osteoarthritis patients showed a significant improvement with 76.7% of the rheumatoid and 70% of the osteoarthritic patients benefiting from the trial. If the drop-outs are excluded, then 79% of rheumatoid patients and 80% of osteoarthritic patients benefited.

The results from this paper have been published in the journal "Complementary Therapies in Medicine". (Sept. 1998)
A similar pilot study conducted in Denmark showed that Lyprinol dramatically decreased the level of pain in a 2-3 month period in patients suffering from osteoarthritis. The study is currently being expanded.

These four powerful steps will usually help 85% of arthritic suffers. For specific information on companies that sell the above products, simply send me a blank e-mail with the words Arthritis Products in the Subject Section of the E-mail. I will promptly forward a list of companies that have met the high standards that I always look for.. I want to state to all who are reading this report.. that I have NO financial interest in my recommendations of any product.. PERIOD

The following link will provide distributors of lyprinol

http://www.lyprinol.com/home.htm
Chapter 16
Enzyme Therapy for Arthritis Pain

For some people aches and pains in the joints flare up with cold weather. For several million Americans, however, suffering from arthritis, stiff and swollen joints are the result of a storm in the body's immune system. The body normally produces chemicals that fight off infections. It is when the body turns on itself, and these chemicals practically flood the tissue in the joints, attacking them as if they were the pathogens invading the body, that the ravages of arthritis begin to take their toll on the body.

One of the several theories about the onset of arthritis proposes that osteoarthritis is caused by an abnormal release of enzymes from cartilage cells, which leads to cartilage breakdown and progressive joint destruction. It is also likely that some people may be born with defective cartilage or may have slight abnormality in the manner the joints fit together. These conditions may accelerate cartilage breakdown with advancing age. It is commonly thought that there are no effective remedies to alleviate the persistent pain, let alone to correct the root cause of the disease. The standard medical treatment, therefore, has been routinely to treat the symptoms with medications such as non-steroidal anti-inflammatory drugs (NSAIDs). These medications, however, have serious side effects including headaches, dizziness, ringing in the ears and gastrointestinal problems, which could potentially lead to ulceration and microbleeding. One of the more pernicious side effects of NSAIDs, which is rarely mentioned, is that they inhibit the repair of the cartilage that, in turn, further aggravates the cartilage destruction and worsens the progression of the condition.

Since there is good evidence suggesting that the depletion of enzymes leads to cartilage destruction, one of the more exciting recent developments has been the availability of orally ingestible systemic enzymes as a nutritional means to alleviate the pain in osteoarthritis.

What are systemic enzymes?

The term systemic enzymes encompasses those enzymes such as trypsin, chymotrypsin and the like, that are found naturally in the body. Of course, some of the enzymes found in plants are also included in this term, since they function in a manner similar to those indigenous to the human body. Systemic enzymes should be clearly differentiated from digestive enzymes, which are essentially responsible for aiding the digestive process.

In contrast, systemic enzymes exert their beneficial effects at a cellular level replenishing, in advanced years, the declining reservoir of naturally occurring enzymes in cells. These enzymes belong to a category of protein that are referred to as proteases: Enzymes, that is, which break down other proteins. Therefore, systemic enzymes may be seen as a pair of molecular scissors that cut and prune.
The explanation as to how oral enzymes work in the body is best demonstrated by an understanding of the processes that wreak havoc in the body as autoimmunity sets in with diseases such as arthritis. Cartilage in the joints is destroyed as the immune system turns on the body itself. Around the synovia, or the space between the joints, is the so-called synovial fluid, protected by synovial membranes, which essentially serves as a lubricant for the joint to move effortlessly without pain.

In arthritis, the immune system goes awry when specific types of immune cells penetrate the joint as invaders, migrate into the synovial membrane and attack the cartilage to destroy it. The invading cells produce a series of so called proinflammatory chemicals known as cytokines. These cytokines trigger a local inflammatory response and continue to fuel the fire, so to speak, as the symptoms progress and worsen. As such it becomes a vicious circle that feeds on itself.

How do systemic enzymes interfere with the processes that lead to the arthritic conditions?

Systemic enzymes effectively reduce the production of proinflammatory cytokines helping to reduce local pain and regional swelling and gradually improve joint function. By reducing the amounts of proinflammatory immune complexes in the body, systemic enzymes empower the body to heal itself.

**Recommended Products:**

Wobenzyme:

Inflazyme Forte
Chapter 17

Leaky Gut and Arthritis

Leaky Gut Syndrome (LGS) is a major cause of disease and dysfunction in modern society, accounts for at least 50% of chronic complaints, as confirmed by laboratory tests.

In LGS, the epithelium on the villi of the small intestine becomes inflamed and irritated, which allows metabolic and microbial toxins of the small intestines to flood into the blood stream. This event compromises the liver, the lymphatic system, and the immune response including the endocrine system.

Leaky Gut Syndrome is reaching epidemic proportions within the population. Historically, the only way bowel toxins entered the blood stream was through trauma, for example by sword or spear. This quickly led to septicemia that might be treatable, or more probably, ended in death. Outside of trauma, the body maintained a wonderfully effective selective barrier in the small intestine, one that allowed nutrients to enter, but kept out metabolic wastes and microbial toxins rampant in the intestines.

What modern event allowed such a break-down? Primarily it has been antibiotics, secondarily non-steroidal anti-inflammatory drugs (NSAIDs, Motrin, Aleve and Advil) with NSAIDs being the major cause of leaky gut because they so viciously inflame the intestinal lining, causing a widening of the spaces between cells and sometimes hemorrhaging. Other common causes are chemotherapy, ingested alcohol, inhaled formaldehyde from a new carpet, food allergens, stress emotions, lactase deficiency, gluten/gliaden allergy, abnormal gut flora (bacteria, parasites, yeasts).

Antibiotics Destroy Beneficial Bacteria

Antibiotics create their damage in two ways. The first is by destroying beneficial bacteria. The small intestine and large intestine host over five hundred different kinds of beneficial bacteria. These bacteria perform hundreds of functions required for healthy metabolism and immune response. Through enzyme secretions, bacteria transform metabolic and microbial wastes before they are discharged by the body. These wastes include cellular debris, hormones, chemical wastes, bile, pus accumulations, viral toxins, bacterial toxins, etc.

For example, the body creates bile not only as a lubricant to flush wastes out of the liver, but also, to detoxify many of the poisons accumulating in the liver. Bile however is extremely damaging to large intestine epithelium. When bile enters the small intestine via the common bile duct, beneficial bacteria break the bile salts down into a less toxic compound, making it non-damaging by the time it reaches the large intestine. When you take antibiotics you destroy these bacteria and the bile salts freely enter and damage the large intestine. I believe this contributes significantly to the high incidence of colon cancer plaguing today's society.
Beneficial bacteria also break down hormone secretions that are discharged from the liver to the small intestine. If you lack the bacteria to break down estrogen and the intestinal permeability has been altered, the patient is now reabsorbing estrogens in their original state. The body will deposit these in estrogen sensitive areas such as the breast, uterus, or ovaries, contributing, if not causing, fibroids and tumors. The same scenario is responsible for premenstrual syndrome as well.

**Antibiotics Promote the Growth of Fungus**

The second way antibiotics damage the intestines is by fostering the growth of Candida albicans and other pathogenic fungi and yeast. This event, more than any other, precipitates Leaky Gut Syndrome. In a healthy situation the small intestine epithelium maintains tight cell junctions, which contributes to the physical barrier involved in intestinal absorption. In addition to the physical barrier, there is an important chemical barrier within the mucus that contains immune agents, which neutralize any toxin that comes in contact.

Candida exudes an aldehyde secretion, which causes small intestine epithelial cells to shrink. This allows intestinal toxins to infiltrate through the epithelium and into the blood. The secondary barrier - immune agents in the epithelial mucus - remain the sole agent for neutralization. Eventually, the immune system becomes exhausted rising to this challenge.

The damage done by Candida is to the intestinal epithelial barrier, allowing the absorption of serious toxic agents and chemicals, which then enter the blood and affect numerous organs, including the brain.
Chapter 18

Food Allergies: The Complicating Factor

When the integrity of the intestinal barrier has been compromised, intestinal toxins are not the only pathogens to be absorbed. The barrier, in a healthy state, selectively allows digested nutrients to enter the small intestine when all is ready.

With leaky gut, nutrients can be absorbed before they are fully digested. The body’s immune response, through specific antigen-antibody markers, will tag some of these foods as foreign irritants. Every time that particular food touches the epithelial, an inflammatory immune response is mounted which further damages the epithelial lining. What started as a Candida irritation with shrinking of the cells has now been complicated with active inflammation every time a particular food is eaten. Food allergies are a common secondary problem to Candida, and if present, will maintain the leaky gut continuously, even if the Candida is eradicated.

The most common food allergies are dairy, eggs, gluten grains (wheat, oats, rye), corn, beans (especially soy), and nuts. There are seldom real allergies to meat, rice, millet, vegetables, or fruit, although an allergy to garlic is not uncommon. We have to distinguish a real allergy - that which causes a histamine inflammatory reaction at the site of the small intestine (SI) epithelial from sensitivity, which may cause uncomfortable symptoms, but seldom is damaging. Sensitivities are usually due to low stomach acid or pancreatic enzyme secretion, that is, poor digestion.

In the healing of the intestinal lining, exposure to a significant allergy can sabotage the treatment. For example, one may be very good at restricting wheat, dairy and eggs, but then compromises the treatment by taking garlic tablets.

The Role of the Liver and Lymphatic System

The metabolic and microbial toxins that enter the bloodstream during leaky gut end up in the liver, which has the job of detoxifying and discharging the poisons. Under normal conditions, the liver is taxed just by processing the daily metabolic wastes created by cell and organ activity. Imagine the further load created by dumping serious intestinal toxins on a regular basis. There is a point when the liver becomes saturated; it cannot further detoxify the poisons, and they are returned to the blood circulation. The blood has sophisticated mechanisms for preserving chemical homeostasis, and will diffuse as much of the toxic chemicals and physical debris into the interstitial fluids as is possible. From here the lymphatic system will attempt to collect and neutralize the toxins, but unable to send the toxins to the liver, the body essentially becomes toxic. Microbes grow and develop, hence there can be chronic lymphatic swelling, especially in children. Over a period of time, toxins will be forced into distal connective tissue around muscles.
and joints, causing fibromyalgia, or into the cells, which can precipitate genetic mutation and ultimately cancer.
Chapter 19

Stress to the Immune and Endocrine Systems

The immune system is stressed in three major ways. First is at the site of the intestinal mucosa. As toxins and food antigens brush up against the mucosa, the immune system mobilizes to neutralize the toxins. Normally, much of this work would have been done by beneficial bacteria, which have been destroyed by antibiotics. For toxins that make it to the mucosa, the body will tag them with a chemical secretory IgA (SIgA), which attracts macrophages and other white blood cells to consume the toxins. It is not long before this immune response is overwhelmed and depleted. This can be measured directly with a stool or saliva test for the intestinal SIgA level.

The second stressor happens in the liver and lymphatic system, which, also overwhelmed, puts demands on the immune system. The third stressor is a consequence: as the immune response diminishes, more microbes (viruses, bacteria, and fungi) multiply, allowing for a chronic state of infection.

The most important organ in the production of immune agents seems to be the adrenal gland, and Leaky Gut Syndrome slowly diminishes adrenal function. In the early and middle stages, there is actually an adrenal excess, as measured by excess cortisol output. Eventually, cortisol levels drop, and one now has exhaustion.

The Role of the Digestive Tract

Candida flourishes when the terrain in the intestines favors it. Just killing Candida is usually not successful, because the chemistry and vitality of the terrain has not been normalized, and Candida returns. Antibiotics are the original cause of the change on the terrain. By killing acid forming bacteria (Lactobacillus bacteria produce lactic acid, for example), the environment becomes alkaline, which promotes Candida. Antibiotics and chronic illness reduce stomach acid production, contributing to the alkalinity, and also allowing poor digestive absorption. In fact, many people with LGS are malnourished and will lose excessive weight, no matter how healthy the food is that they eat.

The idea that lactobacillus supplementation is all that is required after antibiotics is somewhat delusional; in fact most of the lactobacillus from supplementation does not survive in the intestine, due to poor terrain.

Just to make sure you have a full understanding of the seriousness of Leaky Gut, the following is a summary:
1: When the gut is inflamed it does not secrete digestive enzymes to digest foods properly or absorb nutrients and foods properly. The result can indigestion with gas and bloating, called irritable bowel syndrome (IBS).

2: When large food particles are absorbed, food allergies and new symptoms are created (e.g., IBS, gallbladder disease, arthritis or fibromyalgia).

3: When the gut is inflamed, carrier proteins are damaged, so malabsorption and nutrient deficiencies occur. These deficiencies slow down the ability of the gut to heal and can cause any number of other symptoms (e.g., magnesium deficiency – induced angina or gut spasms, chromium deficiency – induced high cholesterol or sugar cravings, zinc deficiency – induced prostatitis or lack acid formation).

4: When the detoxification pathways that line the gut are compromised, chemical sensitivity can arise. Furthermore, the leakage of toxins overburdens the liver so that the body is less to handle everyday chemicals in foods, water and air. Now many foods can cause symptoms that never did before, because the gut’s detoxification (liver) system is unable to cope with the hundreds of chemical additives, dyes, colorings, preservatives and pesticides common in our foods.

5: When the gut lining is inflamed, the protective coating of the gut antibodies can be lost. With loss of the secretory immunoglobulin A (SigA), the body becomes more vulnerable to infections in the intestines from bacteria, viruses, parasites and yeast and they become resistant to treatment. Ironically, the more resistant the bugs become, the more-high powered antibiotics doctor prescribe, resulting in more overgrowth of resistant fungi (Candida). As the unwanted bugs grow, the gut gets more inflamed and “leaky” initiating a vicious cycle of worsening condition – and major cause of so many “incurable” diseases.

6: When the intestinal lining is inflamed, bacteria and yeast can translocate. In other words, they can pass from the gut cavity into the blood stream and set up infection anywhere else in the body, including the brain. This is often the mysterious and undiagnosed cause of infections in the teeth and gums, bones, prostate, bladder and sinuses.
7: With the formation of antibodies, the food antigens that leak across the gut wall can sometimes resemble the natural antigens on tissues. Protective antibodies will then attack the antigens, as they should and the tissues, causing further damage. It is the very reason why auto-immune diseases begin. Lupus, multiple sclerosis, rheumatoid arthritis, myocarditis, iritis and thyroiditis are some of the members of this ever-growing category of mysteriously “incurable” auto-immune diseases.
Chapter 20

Natural Herbal Medications

Turmeric/Curcumin (Curcuma longa)

Most Frequently Reported Uses:

Turmeric has been used for centuries internally as a tonic for the stomach and liver and as a blood purifier. It has also been used externally in the treatment and prevention of skin diseases and in arthritic complaints. The laboratory and clinical research indicates that turmeric has unique antioxidant and anti-inflammatory properties. The anti-inflammatory strength of turmeric is comparable to steroidal drugs such as indomethacin. Turmeric has been reported to be anti-rheumatic, anti-inflammatory and antioxidant.

Curcumin reportedly has a similar action to that of aspirin, aspirin-like anti-inflammatory agents and more recently the new Cox-2 inhibitors. Curcumin may be preferable for individuals who are prone to vascular thrombosis and require anti-inflammatory and/or anti-arthritic therapy.

Drug/Herb Interactions:

Anticoagulant medications: warfarin, heparin, dalteparin, tinzaparin, enoxaparin, danaparoid sodium, antithrombin III, lipirudin, argatroban, bivalirudin

Antiplatelet medications: aspirin, dipyridamole, anagrelide, cilostazol, clopidogrel, ticlopidine, abciximab, tirofiban, eptifibatide.

Most Common Dosage:

300mg (standardized extract), 3 times a day with meals. Tea: 2 cups taken between meals using 1 gm herb per cup. Tincture: 10 drops 2 times daily at a ratio of 1:10.

Ginger

Clinical Uses of Ginger: Treatment of nausea, morning sickness, motion sickness, indigestion, migraine headache prevention, reduces joint inflammation, decreases platelet aggregation

Drug/Herb Interactions

Ginger can inhibit platelet aggregation which may alter the effects of the following medications: Warfarin, heparin, dalteparin, tinzaparin, enoxaparin, danaparoid sodium, antithrombin III, lipirudin, argatroban, bivalirudin, aspirin, dipyridamole, anagrelide, cilostazol, clopidogrel, ticlopidine, abciximab, tirofiban, eptifibatide.

Recommended therapeutic dose
250mg (standardized extract), 3 times a day.

**Boswellia**

**Clinical Uses of Boswellia:**

Crohn's Disease, osteoarthritis, ulcerative Colitis, acute and chronic bronchoconstrictive conditions. Boswellia has also been reported to have anti-inflammatory qualities. Research has also found that Boswellia may benefit rheumatoid arthritis

**Recommended therapeutic dose**

200-400mg (standardized extract), 3 times a day.

**Cat's Claw**

Cat's claw is one of the most promising herbs and has been found to have a positive effect on the immune system. It acts as a potent free radical scavenger. It has been researched in Europe over the last several years with many positive reports. It is of potential importance in GI disturbance, arthritis and fibromyalgia.

Cat's claw has been found to reduce inflammation and edema. A study found the use of cat's claw superior to placebo in people with osteoarthritis of the knee. A small human double-blind study involving 40 patients with active rheumatoid arthritis were treated with cat's claw experienced a reduction in the number of painful and swollen joints.

Cat's claw is reported to have the ability to soothe irritated and inflamed tissues and help eliminate pathogens from the GI tract.

Its anti-inflammatory activity, antiallergic (antihistaminic) activity, and edema reducing effects lead to the claim that cat's claw may be beneficial in reducing cardiovascular risk factors.

**Drug/Herb Interactions:** Cat Claw may alter the effects of these medications and possibly the dose needed for treatment. Check with the pharmacist before using with any of the following medications

Anticoagulant medications: warfarin, heparin, dalteparin, tinzaparin, enoxaparin, danaparoid sodium, antithrombin III, lipirudin, argatroban, bivalirudin

Antiplatelet medications: aspirin, dipyridamole, anagrelide, cilostazol, clopidogrel, ticlopidine, abciximab, tirofiban, eptifibatide.

**Most Common Dosage:**

For the 3% alkaloid and 15% total phenol extraction, 500mg 3 times a day.
Chapter 21

Arthritis Acupressure Treatment Points

Arthritis Acupressure Points:

**LI4:** This point can be found in the webbing between the thumb and the index finger. If you make a fist, you will see the muscle bulge. This is the belly of the muscle and the exact spot that should be treated. This point has been found to help relieve pain and inflammation in the hand, wrist, shoulder and neck.

**LI11:** This point can be found on the "thumb side" of the elbow (elbow crease). This point has been found to relieve arthritic pain, especially in the elbow and shoulder.

**TW5:** To find this point, measure two and half finger widths above the wrist crease on the outer forearm. This point is in line with the "third" finger. It has been found to relieve tendonitis, wrist pain and shoulder pain.

**GB20:** You can find this point below the base of the skull, in the hollow between the two large muscle liters on both sides of the neck. This point has been found to help relieve arthritic pain, headaches, insomnia, neck pain, fatigue and general irritability.

**ST36** is one of the most effective acupressure point for pain. You can find this point by first measuring four finger widths below your kneecap, then place your fingertips one and half inches on the outside of the shin bone. You may also find this spot by simply moving your foot up and down and look for the muscle contract right below the knee on the outside. I recommend that you treat this spot by making a fist and rubbing up and down on this point. This powerful acupuncture point has been found to relieve fatigue and overall arthritic pain.
How To Self Treat Acupressure Points

Acupressure is an ancient healing art developed in Asia over 5,000 years ago that uses the fingers to press key points on the surface of the skin to stimulate the body's natural self-curative abilities.

When these points are pressed, they release muscular tension and promote the circulation of blood and the body's life force energy to aid healing.

Acupuncture and acupressure use the same points, but acupuncture employs needles, while acupressure uses gentle but firm pressure. There is a massive amount of scientific data that demonstrates why and how acupuncture works.

I have personally used acupressure with many of my patients with outstanding results. The following are the most "potent" acupressure points for various health conditions.

How to Treat Yourself using Acupressure:

Use the charts and the descriptions of each point listed with the specific condition below to find the acupressure point. Once you have identified the acupressure point then you have a few choices to "self-treat".

1: Firm pressure: this is the most common method for self-treatment. You can use your thumb, fingers, palms, the side of your hand, knuckles to apply firm but steady pressure. One minute is usually sufficient to treat a point.

2: Slow motion kneading: this technique uses the thumb and fingers and involves squeezing large muscle groups. Think about kneading a large piece of dough

3: Quick tapping: use your finger tips and tap the acupressure point. This technique works best on unprotected areas with little muscle such as the face
Chapter 22
Treatment Options

Option #1: Shotgun approach to nutritional therapy.

This approach is practiced by many well-meaning health care professionals and will work for many people. The down side to this approach is simply the fact that some people are likely to experience excellent results while others either may have little overall improvement. All in all, it is a good first start for people not looking to investigate the underlying cause of their arthritis pain.

**Step #1:** Eliminate Nightshade Foods for three months:

**Step #2:** Begin taking Cetyl Myristoleate and 18% Magnesium Chloride

**Step #3:** Begin taking Proteolytic Enzymes: Wobenzyme or Inflazyme Forte

**Step #4:** Begin Lyprinol

**Step #5:** Begin Glucosamine and Chondroitin Sulfate

**Step #6:** Use acupuncture points for self-treatment

**Clinical Note:** Approximately 75% of most people will be free of pain in less than 4 months following Option #1
Option #2

Patient-Specific Treatment Options

Treatment Protocol Based on Functional Medicine Lab Results

This is way I would treat a patient in my office. Although the above may provide relief for many people, there are some who need a personalized approach based on scientific lab testing.

This approach is called Patient-Specific Treatment Options

The following will provide the recommended treatments based on the results of abnormal lab testing.

**Abnormal Intestinal Permeability Test and Digestive Stool Test**

**Treatment:**

Consider the following actions: Consider "4 R" approach to GI health:

- **Remove mucosal irritants** such as allergenic foods, alcohol, gluten (if sensitive), NSAIDS. Recommend having your physician order a comprehensive stool test to determine if you have a bacterial or parasitic infection. If positive, your physician will prescribe either a pharmaceutical or natural agent to eliminate the pathogen(s).

- **Reduce sugar**, refined carbohydrates, saturated fat, red meat (meat can induce bacterial enzyme activity)

- **Replace** agents for digestive support: disaccharidase deficiency would indicate a need for consider pancreatic or plant enzymes.

- **Reinoculate** with friendly bacteria, if the stool test shows a decreased level of beneficial bacteria. Consider probiotic supplementation, including Lactobacilli and Bifidobacteria

- **Repair** mucosal lining:

  Consider L-glutamine, EFAs, Saccharomyces boulardii, Seavive, Sialex, Mucin, UltraInflamX, whey globulin concentrate, or bovine colostrum to improve local immunity and increase SigA

**Fatty Acid Imbalance**

Based on the results of this test, your physician can pinpoint if you are in need of a specific fatty acid.
Amino Acid Imbalance/Deficiencies:

Based on the results of this test, your physician can pinpoint if you are need of a specific amino acid.

For More Information on Functional Medicine, I recommend subscribing to our Clinical Rounds.

Go to www.ClinicalRounds.com

References


