Click here to return to: CISRA--SynergyHN Home Page

Issue 8, Sept. 2005--
Marshall Protocol: Conference (Chicago, March 12-13), Update, Corrections

*** Issue 9, Feb. 2006 New Articles on the Marshall Protocol: The Marshall Protocol (MP) in Laymen's Terms Plus Q & A; "Success Through A Slow, Cautious Approach to the MP;" Supplement Suggestions and Other MP Links

Issue 7, Fall 2004: A New Protocol for Autoimmune Illnesses, Chronic Fatigue Syndrome, Fibromyalgia and Lyme Disease: Combating Cell Wall Deficient Bacteria and Excessive Inflammation (Marshall Protocol)

by J. C. Waterhouse, Ph.D.

(Disclaimer: This material is intended for information only and is not medical advice. Neither CISRA nor the editor receive funding from any doctor, lab or manufacturer of any medication or associated products.)

Abstract

This article gives a general outline of a possible cause and new treatment protocol for sarcoidosis and a number of illnesses involving TH1 inflammation. The evidence supporting this approach is strongest for sarcoidosis, however patients with a number of other illnesses, like rheumatoid arthritis, chronic Lyme disease, fibromyalgia and chronic fatigue syndrome, are also having promising initial results using this protocol. The protocol, developed by Marshall et al (1, 2, 3), involves immune system modulation and antibiotics to combat cell wall deficient bacteria (CWD). It has been found that the vitamin D hormone (1,25 D) and angiotensin II are key factors that help the bacteria evade the immune system and multiply over time, leading to increasing inflammation. A temporary elimination of all sources of vitamin D, combined with an angiotensin receptor blocker, Benicar, is able to slow the excessive inflammation and thus reduce symptoms and improve the immune system's ability to combat the CWD bacteria. Antibiotic therapy is begun at a very low dose on alternate days, since a gradual approach has been found to actually increase the antibiotic's effectiveness. This method also avoids excessive symptom-provoking inflammation associated with Jarisch-Herxheimer bacterial "die-off" reactions. Minocycline is used initially and then two other carefully-chosen antibiotics are slowly added, beginning at very low doses, in the second two phases of the protocol. After 2 years of this protocol's use, over 90% of a sample of sarcoidosis patients (including some advanced cases) are in remission (3). The ratio of the two most important forms of vitamin D is found to be useful to help determine who would be likely to benefit from this approach and to monitor progress (for accurate 1,25 D levels, the sample must be frozen). The angiotensin receptor blocker, Benicar, is used at a higher than usual dose (120-160 mg daily) and must be taken in divided doses every 6 to 8 hours. The scientific background for this approach can be found in medical textbooks, published scientific research and clinical experience. As the approach can not be fully explained in this brief article geared to the non specialist, the reader is referred to free online sources of information designed for patients, doctors and researchers. This approach is still quite new, particularly for non sarcoidosis patients, and continues to evolve, so many may want to wait and observe the progress of others before trying the approach themselves. **Warning: No one should begin this approach without understanding its detailed requirements,** being determined to follow the protocol exactly, and being aware of possible side effects related to Jarisch-Herxheimer reactions (see newly revised protocol for first 3 months at www.sarcinfo.com/phase1.pdf). Remember, that **serious and even life-threatening reactions are possible if you take even ordinary doses of certain antibiotics,** even if you have tolerated them before starting the protocol. This is because the antibiotic's effects are greatly enhanced by the lowered vitamin D and Benicar used in the protocol. Experiences reported by Marshall et al (1, 2, 3) have shown that the protocol can be followed safely, if the instructions are followed carefully.

Introduction: Proposed Cause and Treatment Protocol

Many people with certain unexplained or incurable diseases, ranging from fibromyalgia and chronic fatigue syndrome (CFS), to autoimmune illnesses and chronic Lyme disease, are finding increasing scientific evidence for the role of elusive bacteria in their illnesses. The purpose of this article is to give a general, simplified outline of a proposed cause and treatment protocol developed by Marshall et al (1, 2, 3), and to describe how the necessary detailed information

can be obtained for those doctors and patients who want to know more (the approach is sometimes called the Marshall Protocol or MP).

The type of bacteria thought to be involved are in a category called cell wall deficient (CWD or CWD capable). To put it briefly and in a simplified form, they are hard to combat primarily due to 3 characteristics of the bacteria and their effects on the immune system:

1. the CWD bacteria are very small and are able to hide from the immune system by living inside cells and other methods;

2. the bacteria's presence stimulates macrophages (a type of immune cell) to convert an inactive form of vitamin D (25 D, abbrev. of 25 dihydroxyvitamin D) into an active form of the vitamin D hormone (1,25 D, abbrev. of 1,25 dihydroxyvitamin D), which stimulates the production of greater numbers of macrophages, causing a vicious cycle that increases inflammation, pain, fatigue and other symptoms over time,

3. the bacteria stimulate angiotensin II production, which also contributes to inflammation and associated symptoms.

The result is that the immune system overreacts in a way that actually helps the bacteria to multiply and evade the immune system, and causes excessive symptom-provoking inflammation (1). TH1 inflammation, which results in increased levels of certain proinflammatory cytokines (like TNF alpha and IFN gamma) is the term used for the type of inflammation discussed here. The excessive production of the active form of vitamin D shows up in an abnormally high ratio of the active 1,25 D form of the vitamin D hormone relative to the inactive 25 D form of vitamin D (1,25 D:25 D).

A new approach (1, 2, 3, 4, 5, 6, 7), developed and tested in the often fatal granulomatous autoimmune illness, sarcoidosis, is now being tried in a number of other illnesses, whenever an increase in the above vitamin D ratio indicates that excessive TH1 inflammation is occurring. To respond to this excessive TH1 inflammation, the first part of the approach involves avoiding vitamin D in the diet and nutritional supplements and from exposure to the sun (sunlight causes the skin to produce vitamin D) and bright light. This new protocol requires that this avoidance of vitamin D begin immediately and continue during the protocol (as one gets better, one can gradually tolerate more sun and vitamin D). After beginning vitamin D avoidance, one begins Benicar, an angiotensin receptor blocker (ARB). Next, one starts an antibiotic that is especially effective at penetrating cells and can help the immune system kill cell wall deficient (CWD) forms of bacteria. This antibiotic, minocycline, is started at a very low dose on alternate days and then the dosage is gradually increased. On the whole, the approach improves the ability of the immune system to recognize and kill the bacteria without as much inflammation as would otherwise occur.

After 2 years, more than 90% of the sarcoidosis patients treated with this new protocol are in remission, and it should be noted that some were quite ill before treatment began (3). Testing of vitamin D levels has indicated excessive inflammation in a number of other diseases, and the protocol has shown promising initial results in patients with diseases such as rheumatoid arthritis, chronic fatigue syndrome, Lyme disease and fibromyalgia (6, 7, 8).

The Importance of Vitamin D Testing

Many people with chronic illnesses may be taking vitamin D to prevent or treat osteoporosis. Testing of vitamin D levels may be important, particularly in those who are at risk for osteoporosis (e.g., through using prednisone, through chronic bed rest, aging etc...). However, the above information on CWD bacteria's overstimulation of macrophages makes it even more important to test the active form of vitamin D level in certain types of illnesses involving inflammation. Just giving vitamin D without testing may lead to a worsening of bone loss due to vitamin D excess or intoxication (9, 10). This is because the inflammatory macrophage's excessive conversion of the inactive vitamin D (25-D) to the active vitamin D hormone (1,25-D) may result in excessive levels of the active vitamin D hormone. This may be true even in people with fairly low or normal levels of dietary or sunlight-derived vitamin D. Normally, the kidneys regulate the conversion of the vitamin D to the active form, but the macrophages' production of active vitamin D in the above illnesses is unregulated and can lead to excessive levels (9). In the past, the inactive 25 vitamin D has been what is usually measured, but more recent evidence shows that if one only measures one form, it is more important to measure the active 1,25 vitamin D hormone form (8). Like other hormones, it is important to keep it in the correct range.

The protocol requires that the 2 forms of vitamin D are measured at labs which freeze the sample for transport, since it has been found that labs that do not freeze samples tend to have less accurate results (Quest Labs, 800-377-8448, is a convenient national lab and they generally freeze the sample). One must obtain a copy of the raw data with the actual levels, not just a conclusion that the levels are "normal" or low or high. The ranges for "normal" vary from lab to lab, and the Marshall Protocol refers people to the Merck Manual's normal ranges, which are narrower. The Merck ranges are 25 to 40 ng/mL (62.4 to 99.8 nmol/L) for 25 D and 20 to 45 pg/mL (48 to 108 pmol/L) for 1,25 D.

The value for the active form (1,25-D) is divided by the value for the inactive form (25-D) to obtain the D-ratio (1, 2). This D-ratio can be used to monitor the level of inflammation. In sarcoidosis, the D-ratio may exceed 4.0, whereas normally it is around 1.3 (1). Levels of 1,25-D above 36-45 pg/ml or a D ratio above 1.6 are considered to suggest TH1 inflammation, the type of inflammation found in sarcoidosis and many other autoimmune illnesses (8). Vitamin D supplementation may be dangerous for those with sarcoidosis and similar diseases (www.sarcinfo.com/d-ratio.htm), since it may increase inflammatory symptoms. It is probably advisable to present your results for help in interpretation to one of the web sites discussed below. Sometimes results that may not seem significant may actually still be compatible with this approach, particularly in patients with elevations in other inflammatory markers and/or unusual past reactions to minocycline or Benicar.

Angiotensin Receptor Blocker (Benicar)

The angiotensin II receptor blocker, Benicar, has been found to be useful in sarcoidosis because it helps to interrupt the vicious cycle of excessive inflammation caused by the CWD bacteria. It has been especially effective at reducing the suffering of patients experiencing bacterial die-off reactions (Jarisch-Herxheimer reactions). It also allows them to tolerate the larger bacterial die-offs occurring at low antibiotic doses in the context of the Marshall Protocol. It is thought to suppress the release of inflammatory cytokines, like TNF alpha, apparently without disabling the immune system (4). Other ARBs have been tried, but none have been nearly as effective as Benicar.

Benicar also appears to help the immune system more effectively kill the CWD bacteria, so that some people appear to experience die-off reaction symptoms when they begin Benicar even before antibiotics are begun. These die-off reactions cause some people to have an initial increase in symptoms when starting Benicar, although others feel better soon after they begin taking Benicar. In some patients, there are also some neurological symptoms during the first week of adjustment to the Benicar (e.g., adjustment symptoms may include fatigue, headache, photosensitivity). Benicar, through reducing inflammation, tends to lower the amount of 1,25 vitamin D hormone to a level closer to normal, and there may be symptoms as a result of the process of other hormones adjusting to this change. Once the Benicar and avoidance of vitamin D intake reduce the levels of 1,25 D, patients often feels better, but they also tend to notice the negative effects of any accidental sun exposure or other sources of vitamin D to a greater degree.

According to the Marshall Protocol, it is very important that Benicar is administered at higher than usual doses **in divided doses** throughout the day to effectively achieve the angiotensin receptor blockage in all the inflamed tissues (120-160 mg, or 40 mg, taken 3 or 4 times daily). Although this is higher than the dose used for lowering blood pressure (the usual use of the drug), research on the drug shows it to be safe at this dose (see FDA guidelines at: www.fda.gov/cder/foi/label/2002/21286lbl.pdf and web sites, below). If taken only once a day, sarcoidosis patients will actually feel worse, so it must be taken in divided doses. A gradual ramping up of the dose is not recommended, since experience has shown that most patients adjust better if they begin with the full amount. There is very little difference in the blood pressure decrease produced by Benicar at 160 mg compared to 40 mg (8), and at any dose the effect is not very large.

One must be sure to get the type of Benicar that **does not** include a thiazide diuretic. Home monitoring of blood pressure has been done by some patients to reassure both patients and doctors unfamiliar with the approach, but for most patients home blood pressure monitoring is not really needed, since blood pressure lowering from Benicar has not been found to be a significant problem. If blood pressure gets especially low, it is probably due to the effect of the bacterial die-off reaction caused by the antibiotic and in some cases, a lower dose of antibiotic may be appropriate (see below). Typically, chronic fatigue syndrome patients with low blood pressure have been told that it is also helpful to increase intake of salt and water to insure adequate hydration, and the Marshall Protocol also advises drinking plenty of water (e.g., 8 glasses of water per day would be a typical amount). It is the author's experience that reducing exposure to food allergies/sensitivities also helps normalize low blood pressure. In general, avoiding inhaled allergens

and foreign matter is recommended, as they increase the inflammatory tendency in the lungs (1). It would seem to this author that a similar avoidance strategy in regard to food allergies, sensitivities and intolerances would make sense, particularly for those with gastrointestinal symptoms (11).

Antibiotics

The first antibiotic is not started until one has used Benicar at the full dosage (40 mg, 3 or 4 times daily) for at least 1 to 2 weeks. The Benicar is a necessary part of the protocol and is intended to be continued throughout therapy (see web sites, below, for circumstances when it should be stopped, like when one needs to treat an acute infection). The first antibiotic used in the Marshall Protocol (MP), minocycline, was chosen because it has greater penetrance and is more effective against a wider array of CWD bacterial forms. It is started at a low dose, since a wide variety of symptoms will tend to increase as the bacteria die-off in response to the antibiotic and cause an increase in proinflammatory cytokines. This die-off reaction is called a Jarisch-Herxheimer reaction or “Herxheimer” or “Herx” for short (12).

The initial dose presently recommended is 12.5 mg every other day. The Marshall Protocol seems to greatly increase the effectiveness of the minocycline through its immune modulation and associated effects, and thus relatively large die-off reactions will occur even at these low doses of antibiotics. For example, a patient who previously tolerated 200-300 mg minocycline or even IV antibiotics for several months when not on this protocol, might find 12.5 mg minocycline on alternate days to produce an even stronger die-off effect than the high dose antibiotics did, when not on this protocol. Some patients have even experienced quite strong Herxheimer reactions to doses as low as 1 to 6 mg. In a number of these cases, the severity of these reactions at very low doses was probably due to not following the instructions regarding avoiding vitamin D and exposure to the sun and bright light in the manner required (8). It is important for the patient, and if possible, the doctor, to be a part of the free Internet discussion groups discussed below. Strategies are continually being developed to help patients through every aspect of the protocol, including dealing with difficult Herxheimer reactions. By being in the online group, one can stay informed about the most current information and have rapid access to the web site staff, who can answer questions.

The current recommendation is to gradually increase the dose, by increments of 12.5 mg, until one reaches 100 mg of minocycline every other day. It is important not to increase to a higher dose until one has been at the lower dose for a week or more and the die-off reactions have decreased to a minimal level. To obtain doses lower than 50 mg, one can either discard part of the contents of the pull-apart capsule or buy empty capsules (e.g., from health food stores or one can order from NEEDS at 800-634-1380) and evenly divide the minocycline from one capsule into 2 or more empty capsules.

When the bacterial load is reduced to the point where the die-off reactions have mostly disappeared at the 100 mg dose and one has been in the first phase for at least 3 months, one obtains the Phase 2 instructions (see web site discussion group, below). In Phase 2, one begins low doses of a second antibiotic carefully chosen for its effectiveness against CWD bacteria. Later, low doses of a third antibiotic are added in Phase 3. The entire process of reaching Phase 3 may take from 9 months to a year or more. Improvement usually begins in the first few months, but there is great variation among patients. Some feel better in the first month, others feel worse for several months during the Herxheimer reactions, before feeling better. However, one of the advantages of this protocol is its flexibility with regard to the pace of dosage increases, so that one can choose less strong "Herx" reactions and a slower pace of recovery, depending on one's circumstances and needs. Trying to rush the recovery process can be counterproductive.

Light Exposure, Supplements, Cautions, Most Common Errors

Before proceeding further, it should be emphasized that this overview article can not adequately explain all the details one needs to know to do the MP, nor can keep up with changes and refinements in the protocol as more experience is gained. **One should only begin this experimental approach with a full understanding of it and with a determination to follow the protocol exactly.** One also must become familiar with the effects of bacterial die-off reactions (see newly revised protocol for first 3 months at www.sarcinfo.com/phase1.pdf) and study the answers to frequently asked questions (www.marshallprotocol.com/forum32). Remember, that **serious or even life-threatening reactions are possible if one takes even ordinary doses of certain antibiotics that one has tolerated before, since the antibiotic’s effects are greatly enhanced by the lowered vitamin D and Benicar.** Experience has shown that the protocol can be followed safely if the instructions are followed carefully (1, 2). One should join the Internet

discussion groups discussed below to keep up with any refinements being made to the protocol.

One must go at least a full week without any antibiotics that one may have been on before beginning Benicar (note: patients should not stop an antibiotic without first discussing it with the treating physician). It should be noted that Zithromax must be stopped 2-3 weeks before beginning the protocol, as it lingers in the tissue longer than other antibiotics. Certain drugs should not be used while on the protocol (see web sites, below). Also, pregnant or breast feeding women must not take Benicar.

During the initial phase and throughout most of the protocol, it is essential to minimize vitamin D intake from food and supplements and exposure to the sun (13). It has also been found that special sunglasses that block certain wavelengths of radiation must be worn outside and when in bright light indoors or looking at a computer screen or T.V. Research has shown that the eyes have a complete renin-angiotensin system (14), and this probably is the reason that this eye protection has been found to be necessary for the protocol to be successful.

Also, most non essential treatment protocols and supplements must be stopped while using the protocol, since in most cases, it is not yet known how they might interact with the Marshall Protocol. While on the protocol, it is recommended that patients keep their intake of supplements to a minimum, trying to satisfy nutritional needs from the diet first, and then only taking what supplements, if any, are needed to reach the RDA or to correct a deficiency found by laboratory tests. Folic acid is thought to help bacteria increase, so the protocol recommends not taking more than the RDA of this nutrient from supplements and the diet. Calcium should be taken only at the RDA level and vitamin D should be avoided entirely. Potassium supplements, including from sources like sports drinks, are to be avoided for those on Benicar. Yogurt with live “friendly bacteria” or acidophilus-type supplements are recommended to protect the intestinal tract.

The most common errors made in using this protocol seem to be:

1. not avoiding exposure to bright light by wearing the right type of sunglasses both indoors and outdoors and not adequately avoiding both direct and indirect sun exposure of the skin (sunscreens **have not** been found to be helpful in this),

2. increasing antibiotic doses too quickly,

3. not seeking help from the Marshall Protocol staff when one is having difficulties,

4. taking supplements or medications that should be avoided,

5. obtaining information from web sites or other sources that do not give accurate information on the Marshall Protocol (refer to posts from staff members at the web sites named below for accurate information),

6. mistakenly assuming an unusual reaction to Benicar or minocycline or other antibiotics used in this protocol is an allergy or intolerance to the medication, rather than a Jarisch-Herxheimer reaction, which is a sign of the protocol’s effectiveness in treating the disease process (allergies to these medications are rare).

Cell Wall Deficient Bacteria (CWD)

The Marshall Protocol is based on the increasing evidence for the involvement of a hard to detect form of bacteria in autoimmune disease. This form of bacteria is called 'Cell Wall Deficient' (CWD) and has also been called by a variety of other names, such as L-form, pleomorphic, mollicutes, mycoplasma or cysts. They tend to be very small and their cell walls tend to be thinner and more flexible than the more typical rigid bacterial cell walls. Over 20 years ago, CWD bacteria were found in a variety of tissue samples from sarcoidosis patients (15, 16, 17). The bacteria, which may be found inside macrophages and other cells types, are usually slow growing and difficult to study and grow in the lab, but now have been photographed and studied independently by a number of researchers (16, 18, 19, 20). Recently, one type of bacteria has even been photographed in the process of replication inside immune cells in sarcoidosis (21).

Many bacteria are capable of transforming into cell wall deficient forms when in a hostile environment, as when under

attack by the immune system or certain antibiotics. The Lyme disease organism, *Borrelia burgdorferi*, is an example of a CWD capable bacteria, and research shows that it can transform back and forth between its spirochete and cyst forms (22, 23, 24). Marshall et al (2) describes further details regarding the bacteria thought to be involved in these illnesses and states that in most cases of autoimmune disease, there are probably multiple types of CWD bacteria present. Another strong source of evidence for the presence of these organisms is the Jarisch-Herxheimer ("die-off") reactions that sarcoidosis and Lyme disease patients experience in response to the use of the few antibiotics that are able to effectively combat the CWD forms (12).

Scientific Background

A number of quite new research findings have already been cited, but it should be stressed that much data that supports this theory and approach has been in the scientific literature for years. For instance, the standard medical textbook, *Harrison's Principles of Internal Medicine* confirms elevated angiotensin converting enzyme (ACE), and 1,25 D in sarcoidosis (25). The textbook states that the 1,25-D form of the vitamin D hormone is produced by the macrophages and that sometimes excess calcium is found in the urine or blood as a result. In general, the possible role of infectious organisms in stimulating autoimmune diseases is commonly discussed and studied, and has been gaining ground in recent years. For instance, it has been a major focus of recent international autoimmunity research conferences, this last one taking place in November, 2004 in Budapest, Hungary, as well as being the subject of a new book, *Infection and Autoimmunity* (26). Diseases very similar in appearance to autoimmune arthritis are known to be initiated by infection (e.g., Lyme disease, Reiter's or reactive arthritis).

The role of angiotensin II in inflammation and immune diseases has also been elucidated in recent years (e.g., 2, 4, 27, 28). Also, it should be noted that 1,25 D elevation can cause phosphate retention (25), and there has been some suggestion of excess phosphate being a problem in fibromyalgia (29), one of the illnesses that has been showing an elevated 1,25 D level (for more on the phosphate issue, see future issues of this newsletter). By lowering excessive 1,25 vitamin D, the Marshall Protocol may correct any excessive phosphate retention, which can contribute to abnormal soft tissue calcification.

For over 30 years, an eminent scientist who helped establish the American Rheumatism Association, Dr. Thomas McPherson Brown, treated rheumatoid arthritis and other autoimmune diseases with antibiotics like minocycline, and this approach has spread to many other doctors, particularly for rheumatoid arthritis. Antibiotic therapy has been shown to be successful in the often fatal autoimmune illness, scleroderma, by Harvard researcher, Dr. David Trentham and coworkers (30). The Roadback Foundation has helped promote education and research on this approach (31). Another independent study in sarcoidosis also showed benefit from minocycline, although it treated less severely ill patients than those who participated in the study using the Marshall Protocol (32). In my view, one of the main reasons the use of antibiotics in autoimmune illnesses has not caught on more among mainstream doctors and scientists is its relative slowness compared to the immune suppressing approaches. The relative slowness means that in short term trials, the immune suppressing approaches, with their damaging long term side effects, may appear superior in symptom reduction. However, it appears that this new protocol using information on the role of angiotensin II and vitamin D, could potentially change this by producing more rapid responses with less discomfort from die-off reactions and probably a more complete eradication of the disease-causing bacteria.

With regard to evidence for the role of bacteria in other diseases, a high percentage of fibromyalgia, Gulf War syndrome and chronic fatigue syndrome patients have tested positive for Mycoplasma species compared to healthy controls (32, 33). At least anecdotally, many with these illnesses have been helped by antibiotics. The approach discussed here might prove more effective for many of those patients who have had less favorable responses to antibiotic treatment alone.

For More Information

This article is not intended to provide sufficient detail for treatment using this new protocol, but only as an outline that includes most of the main components. Any doctor or patient who is interested in this approach should refer to the scientific literature and the details of the treatment protocol, much of which can be accessed on the web sites listed below. One can find essential information on the ways in which sun and bright light exposure needs to be reduced, help in interpreting laboratory results, how to avoid consuming vitamin D in food and supplements, a list of drugs that are incompatible with the protocol, and how to deal with side effects etc... Discussion groups at the web sites (see

below) include expert advice from patients, doctors and scientists (including Trevor Marshall, Ph.D.) on diagnosis and treatment, and how to find a doctor who uses the protocol. Information helpful for people undergoing financial hardship can also be found in the discussion groups (e.g., cheaper sources for Benicar, like Consumer Discount Drug, 888-272-9834 and Costco). It should be stressed that patients and doctors must study the protocol carefully before applying it, because it involves lifestyle adjustments, is still very new (particularly for diseases other than sarcoidosis), and is continually being refined. Many may choose to just study the protocol for several months or longer and observe the progress reports of others, which are posted in the web site discussion groups, rather than to attempt to start it right away.

The Marshall Protocol staff are unpaid and all information is free of charge. One should make every effort to respect the staff's limited time by studying the information on the web sites thoroughly so as to avoid the need for repetitions of very basic questions and answers in the online groups. However, if there is an urgent question and/or the patient is unable to find the answer themselves, patients are encouraged to ask their questions online and the staff and others in the group will attempt to provide answers. Doctors also have the option of contacting Dr. Marshall by phone or email (see below).

Web sites: www.AutoimmunityResearch.org and its associated web sites, www.sarcinfo.com and www.marshallprotocol.com provide free access to many articles on various aspects of the protocol as well as scientific papers and discussion groups. It is important for patients to join one of the Internet discussion groups on one these sites in order to obtain help with the protocol. Ideally, one's doctor should also be a member of the forum for doctor's only (at marshallprotocol.com). Particular articles of interest include the newly revised article, "The Marshall Protocol: Phase One--The First Three Months" (sarcinfo.com/phase1.pdf), information on measuring and interpreting vitamin D levels (sarcinfo.com/d-ratio.htm), information on Benicar safety (marshallprotocol.com/forum2/11.html), links to scientific articles on the approach (marshallprotocol.com/forum2/2274.html), a partial list of drugs that should not be taken on the MP (marshallprotocol.com/forum2), the answers to frequently asked questions (marshallprotocol.com/forum32) and an article and interview on the Marshall Protocol at www.immunesupport.com. To obtain a list of doctors in your area who might be already using the Marshall Protocol, one should post a request at either of the above web site's forums. Alternatively, if one needs a new physician, one can look for physicians associated with the following organizations, who might be more interested in trying the Marshall Protocol, since they usually tend to be more open to new approaches: AAEM, www.aaem.com, phone: 316-684-5500; ACAM, www.acam.org, phone: 800-532-3688; The Roadback Foundation, www.roadback.org, phone: 614-227-1556. Trevor Marshall, Ph.D. can be reached at the Autoimmunity Research Foundation (www.AutoimmunityResearch.org, trevor.m@yarcrip.com, 3423 Hill Canyon Ave, Thousand Oaks, CA 91360, phone: 805-492-3693 FAX: 707-897-8687).

(Note: If a patient does not currently have access to a computer and can not find a friend or family member who can help them out, they can write CISRA's Editor (PO Box 70166, Pasadena, CA, email: jcwat101@aol.com). We will try to find the doctor who is nearest to the patient and who is experienced with the Marshall Protocol. If one can be found and the doctor is willing to work very closely with the patient, it may be possible to do the protocol without the patient taking part in the online group directly (the Marshall Protocol staff currently have doubts that this could work). At present, it may be very difficult to find a doctor who will be able to provide enough support and guidance without the aid of the patient's involvement with the Internet discussion and support forums. But, it is hoped in the future, as more doctors join the doctor's Internet MP forum, gain more experience, keep up with MP updates and perhaps even specialize in this approach, it may be possible for the doctor to provide enough support and information from the web sites for the patient to get by without direct patient Internet support . In any case, most patients can find a doctor who can get their D values measured properly and begin with lowering their vitamin D levels, if indicated. If an experienced and very supportive doctor can't be found to help them with the MP, patients might find a doctor who will at least prescribe low dose minocycline, which can be begun at 12.5 mg or 25 mg on alternate days and then gradually increased (**see link below for correction). This can serve as a pre-MP approach, which can start to reduce some of the bacteria, so that presumably one will have a head start that will probably make it easier when one is eventually able to start the MP.)

**For Correction, see Issue 8 Preview-- Marshall Protocol: Conference, Update, Corrections

References

(1) Marshall TG, Marshall FE: Remission in Sarcoidosis. *Clinmed* 2002 Aug 22;2002080004v1.
(2) Marshall TG, Marshall FE: Antibiotics in Sarcoidosis - Reflections on the First Year. *JOIMR* 2003;1(3).
(3) Marshall TG, Marshall FE: Sarcoidosis succumbs to antibiotics-implications for autoimmune disease. *Autoimmun Rev* 2004;Jun;3(4):295-300.
(4) Marshall TG, Fenter, B, Marshall FE: Putative antibacterial mechanisms for angiotensin II receptor blockers. *JOIMR* 2004; 2(2):1.
(5) Marshall TG, Marshall FE: Sarcoidosis succumbs to antibiotics-implications for autoimmune disease. Fourth International Congress on Autoimmunity, Nov. 3-7, 2004, Budapest, Hungary (www.kenes.com/autoim2004/program/session1.asp.
(6) Marshall TG, Marshall FE.:Poster Presentation. AACFS Seventh International Conference on Chronic Fatigue Syndrome, Fibromyalgia, and other Related Illnesses Conference, Oct. 8-10, 2004, Madison, WI.
(7) Marshall TG, Marshall FE: Poster Presentation. International Lyme and Associated Diseases Society (ILADS) Conference, Oct. 23-24, 2004, Rye, NY.
(8) www.marshallprotocol.com or www.sarcinfo.com.
(9) Waterhouse, JC: Excess of active form of vitamin D (1,25 D) linked to chronic fatigue syndrome, Lyme disease, fibromyalgia and autoimmune illnesses. *CISRA's Synergy Health Newsletter* 7:1-3, Chronic Illness Support and Research Association, Pasadena, CA.
(10) Adams, JS, Lee G: Gains in bone mineral density with resolution of vitamin D intoxication. *Annals Int Med* 1997;127(3):203-206.
(11) Waterhouse, JC: Food Allergy/Sensitivity: The Pulse Test and Other Strategies. *CISRA's Synergy Health Newsletter* 1999;5:1-11. Chronic Illness Support and Research Association, Pasadena, CA.
(12) Mangin, M: Jarisch-Herxheimer Reactions in Sarcoidosis. *JOIMR* 2004 2(1):1 Comment on: Antibiotics in Sarcoidosis - Reflections on the First Year. JOIMR 2003;1(3).
(13) Marshall TG, Marshall FE: New treatments emerge as sarcoidosis yields up its secrets. *Clinmed 2003* Jan 27;2003010001v1.
(14) Wagner J, Jan Danser AH, Derkx FH, de Jong TV, Paul M, Mullins JJ, Schalekamp MA, Ganten D: Demonstration of renin mRNA, angiotensinogen mRNA, and angiotensin converting enzyme mRNA expression in the human eye: evidence for an intraocular renin-angiotensin system. *Br J Ophthalmol* 1996;80(2):159-63.
(15) Cantwell AR Jr: Histologic observations of variably acid-fast pleomorphic bacteria in systemic sarcoidosis - a report of 3 cases. *Growth* . 1982 Summer;46(2):113-25.
(16) Cantwell AR: The Eccrine Sweat Gland as a possible Focus of Infection with Acid-Fast Cell Wall Deficient Bacteria. *JOIMR* 2003;1(1):1.
(17) Cantwell AR Jr. Bacteria in Sarcoidosis and a Rationale for Antibiotic Therapy in this Disease. *JOIMR* 2003;1 (5):1
(18) Mattman, L. *Cell Wall Deficient Forms: Stealth Pathogens*, 2000. CRC Press.
(19) Almenoff PL, Johnson A, Lesser M, Mattman LH: Growth of acid fast L forms from the blood of patients with sarcoidosis. *Thorax* 1996 May;51(5):530-3.
(20) Wirostko E, Johnson L, Wirostko B: Sarcoidosis associated uveitis. Parasitization of vitreous leucocytes by mollicute-like organisms. *Acta Ophthalmol* (Copenh). 1989 Aug;67(4):415-24.
(21) Nilsson K, Pahlson C, Lukinius A, Eriksson L, Nilsson L, Lindquist O: Presence of *Rickettsia helvetica* in granulomatous tissue from patients with sarcoidosis. *J Infect Dis* 2002 Apr 15;185(8):1128-38.
(22) Brorson O, Brorson SH: In vitro conversion of *Borrelia burgdorferi* to cystic forms in spinal fluid, and transformation to mobile spirochetes by incubation in BSK-H medium. *Infection* 1998 May-Jun;26(3):144-50.
(23) Brorson O, Brorson SH: Transformation of cystic forms of *Borrelia burgdorferi* to normal, mobile spirochetes. *Infection*. 1997;25(4):240-6.
(24) Mursic VP, Wanner G, Reinhardt S, Wilske B, Busch U, Marget W: Formation and cultivation of *Borrelia burgdorferi* spheroplast-L-form variants. *Infection*. 1996 May-Jun;24(3):218-26. Erratum in: *Infection* 1996 Jul-Aug;24(4):335.
(25) Fauci, Anthony S., and others, editors: *Harrison's Principles of Internal Medicine*. 1997. McGraw Hill.
(26) Shoenfeld Y, Rose NR: *Infection And Autoimmunity*. 2004. Elsevier Science Pub Co.
(27) Ruiz-Ortega M, Lorenzo O, Ruperez M, Konig S, Wittig B, Egido J: Angiotensin II activates nuclear transcription factor kappaB through AT(1) and AT(2) in vascular smooth muscle cells - molecular mechanisms. *Circ Res* 2000;86(12):1266-72.
(28) Mezzano S, Droguett A, Burgos ME, Ardiles LG, Flores CA, Aros CA, Caorsi I, Vio CP, Ruiz-Ortega M, Egido J: Renin-angiotensin system activation and interstitial inflammation in human diabetic nephropathy. *Kidney Int Suppl* 2003 Oct;(86):S64-70.

(29) Waterhouse, JC: Innovative Approaches to Fibromyalgia.*CISRA's Synergy Health Newsletter* 1996;1:1-5, Chronic Illness Support and Research Association, Pasadena, CA.
(30) Le, C., Morales, A., Trentham, DE., Minocycline in Early Diffuse Scleroderma, *Lancet* 1998;352 9142:1755-1756.
(31) Scammell, H. *The New Arthritis Breakthrough* . 1998 M. Evans & Co, NY.
(32) Bachelez H, Senet P, Cadranel J, Kaoukhov A, Dubertret L: The use of tetracyclines for the treatment of sarcoidosis. *Arch Dermatol* 2001 Jan;137(1):69-73.
(33) Vodjani A, Franco AR: Multiplex PCR for the detection of *Mycoplasma fermentans, M. hominis, and M. penetrans* in patients with chronic fatigue syndrome, fibromyalgia, rheumatoid arthritis and Gulf War syndrome. *J of Chronic Fatigue Syndrome* 1999; 5(3/4):187-197.
(34) Nijs J, Nicolson GL, De Becker P, Coomans D, De Meirleir K: High Prevalence of *Mycoplasma* infections among European chronic fatigue syndrome patients: Examination of four *Mycoplasma* species in blood of chronic fatigue syndrome patients. *FEMS Immunol Med Microbiol* 2002;34:209-214.

Click here to return home: CISRA--SynergyHN Home Page