Alan Goldhamer, DC: Water Fasting—The Clinical Effectiveness of Rebooting Your Body

Interview by Craig Gustafson

***Alan Goldhamer, DC**, is the founder and education director of TrueNorth Health Center in Santa Rosa, California. Under his guidance, the center has supervised fasts for thousands of patients and grown into one of the premier training facilities for doctors wishing to gain certification in the supervision of therapeutic fasting.*

Dr Goldhamer is on the faculty at Bastyr University in Seattle, Washington, where he teaches a course on clinical fasting. He is the primary investigator in 2 published, landmark studies that demonstrate the benefits of water-only fasting, and he is the author of The Health Promoting Cookbook *and coauthor of* The Pleasure Trap: Mastering The Hidden Force That Undermines Health and Happiness.

***Integrative Medicine: A Clinician's Journal* (*IMCJ*):** What made you interested in pursuing the effects of fasting?

Dr Goldhamer: I got started very young—about 16, actually. I wanted to be a better basketball player than my friend, Doug Lisle, who currently is the director of research and a clinical psychologist at TrueNorth Health Center. We grew up together and he could always beat me in basketball. I was looking for an edge.

So I started reading and came across the books on natural hygiene by Herbert Shelton, ND, and others, and it made a lot of sense. Ultimately, I met Alec Burton, MSc, DO, DC, who specialized in fasting supervision. He was the president of the Pacific College of Osteopathic Medicine. After I graduated from chiropractic college at Western States, I went to Australia, attended Pacific College, and did an internship with Dr Burton.

There, I had a chance to see what happens when you do nothing intelligently or use fasting appropriately. And it was pretty mind-bending. So I saw a lot of people who I had been trained to not get well, get well, and they did that consistently through the use of fasting and a vegan SOS-free diet—a plant-based, whole-foods diet free of sugar, oils, and salts.

They applied this regimen in a variety of conditions from diabetes and cardiovascular disease to autoimmune diseases. Conditions that seemed to be tied to dietary excess tended to respond predictably to the use of fasting followed by a health-promoting diet.

I returned to the United States in 1984 with my wife, Jennifer Marano, DC, and opened up the TrueNorth Health Center in Santa Rosa, California. We have been operating it for 30 years and had 10 000 patients go through the fasting protocol.

We do first-level therapeutic order naturopathic intervention. So we actually are doing what would be considered naturopathic medicine. It is just naturopathic medicine that is not prominently practiced out in the real world: diet, sleep, exercise, and fasting. That is the dominant intervention that we do.

TrueNorth Health Center is one of the few chiropractic-run inpatient facilities that I am aware of where chiropractic philosophy drives an integrative medical facility. I think that makes us a rather unique situation as well, and it is particularly of interest to chiropractors who are interested in that type of exposure and training: a chance to work with a variety of doctors on an inpatient basis—actually working with sick people, seeing them get well, and using methodology consistent with what we were taught in school.

We offer an internship program for doctors of chiropractic and naturopathic, as well as medicine, so that they can come in and do a rotation, either as part of their training or after their graduation, so they can get a chance to experience seeing sick people get well using diet and fasting.

We have our nonprofit foundation, a 501(c)(3), called the TrueNorth Health Foundation, with the mission of public education and research. So our goal is to do primary research, which we have begun by looking at trying to identify these mechanisms, provide public education about the work that we are doing, and particularly train doctors who are interested in the application of these therapies. What we are trying to do right now is to expand our research program and bring in people who are interested in helping us really ask and answer the question who we all are interested in.

***IMCJ*:** And that is: How to promote health?

Dr Goldhamer: Absolutely. It is very hard to gain direct inpatient control of subjects for long periods of time where you control all variables. It makes us an ideal human subjects research site.

***IMCJ*:** So far, what have you been able to report on the effects of fasting?

Dr Goldhamer: We have been able to document the effect on cardiovascular disease. We have published a paper in the *Journal of Manipulative and Physiological Therapeutics*, or *JMPT*, "Medically Supervised Water-only Fasting in the Treatment of Hyper-tension." The cohort included 174 consecutive patients with hypertension—174 people achieving blood pressure low enough to eliminate medication and the largest effect sizes that have ever been shown in treating high blood pressure in humans with an average drop of 60 points in stage III hypertension, independent of the medication effects.

These people were all nonmedicated at the end of treatment, and so they dropped 60 points plus whatever effect medication might have been having on them prior to withdrawal.

We subsequently published a second paper in the *Journal of Alternative and Complementary Medicine*, or *JACM*, working at borderline hypertension on these people who had blood pressure that was high enough to increase the risk of death but not enough to justify medication. The effect sizes in this study were proportional to those of the *JMPT* article.

We did a third paper where we looked at cost effectiveness. We had become a fully covered medical benefit for California's most powerful labor union, the International Union of Civil Engineers, Local 3. We took 30 consecutive union admissions and looked at their cost of medical care in total prior to and after this intervention. They were able to reduce the cost of medical care more than the cost of the program in the first year. So we continued that for a number of years. And another summary paper appeared in the *JACM* looking at that data.

For people who are interested, all of these papers are available on our Web site at http://www.truenorthhealth.com.

***IMCJ*:** What are you currently working on?

Dr Goldhamer: We have recently received approval from the Bastyr University human subjects committee to do a long-term study with follow-up looking at obesity and hypertension. We will be looking at biogenetic marker changes before and after fasting, as well as normal lab parameters and physical parameters. We hope to begin recruiting for that study in the next few weeks.

We have also completed a major safety study of fasting. We took 2000 consecutive patients with fasting and looked at their adverse events, all-cause mortality, and complications for a safety study that we will hopefully be able to place in a major impact journal this year. They are just finishing the final work on the statistical analysis of that paper now, so we hope to submit that paper by summertime.

***IMCJ*:** Many people out there promote their own ideas for fasting. Describe your approach to fasting.

Dr Goldhamer: Fasting, by definition, is the complete absence of all substances except water in an environment of complete rest. So the clinical fasting or the therapeutic fasting that we do by definition is complete absence of all substances except pure, distilled water in an environment of rest. Our program supports fasts from 5 to 40 days in length.

***IMCJ*:** When would you consider fasting to be medically indicated?

Dr Goldhamer: The process is really quite simple. Generally, patients coming to the TrueNorth Health Center, most often, are under a referral from physicians—clinicians refer their patients specifically for medically supervised, water-only fasting. Fifty percent of our patients come from out of state. Fifteen percent are foreign. We see about 1000 new people a year.

Those people present with a variety of situations. Typically, the conditions that we treat are the ones that are determined to be the most responsive to fasting: the diseases of dietary excess. These conditions are caused by excess consumption of calories, particularly animal fat and protein and/or refined carbohydrates. So we are talking

about high blood pressure, diabetes, and autoimmune diseases. These make up the majority of these people we treat.

The way that it works is the patients go online and complete our registration forms, which give us a detailed medical history. That is reviewed by me. The patients call for a free consult. We determine whether or not, based on history and a review of laboratory results, they are a likely candidate for a stay at the TrueNorth Health Center, whether it be for water fasting, modified fasting in the form of juices, or a healthy eating program.

Some patients, about 15%, are also coming into the center for chronic musculoskeletal problems. They may or may not be a candidate for fasting, but we have 5 chiropractors, a naturopath, a clinical psychologist, and 3 medical doctors on the staff. So there are a variety of skills and services available from a management standpoint.

Once they have been screened, every patient at the TrueNorth Health Center is seen by one of the medical doctors on staff for evaluation and medical management issues: dealing with getting rid of their drugs and other medical management issues.

When they are at the Center, they are seen twice a day by one of the staff doctors. Most of the time, that is going to be our doctors of chiropractic who do morning and evening rounds, where vitals are collected, questions are answered, and plans for the next day are formulated. They are also interacting with our interns. We have an active internship program, where about 30 physicians a year train with us in rotations that range from 1 month to 1 year.

Fasting patients are put through an intensive educational program. They are seeing a program in the morning at 10:00 AM and in the afternoon at 2:00 PM. These include topics like exercise, meditation, yoga, cooking classes, and lectures with the staff doctors. In addition to these 2 live programs a day, there is an extensive audio-educational program on DVDs that are watched according to the patient's own taste and interest.

Patients stay with us for a variety of times. Again, fasting ranges from 5 to 40 days. Every patient who fasts goes through a refeeding, which means that they have a period at least half the length of the fast for clinical refeeding. So a person who fasts for 3 weeks will typically be with us at least a month.

***IMCJ*:** How is the length of the fast determined?

Dr Goldhamer: Fasting itself is diagnostic, as well as therapeutic, so careful clinical monitoring, observing the laboratory values, as well as the clinical values, guide us in advising a patient on duration.

For example, if a person has high blood pressure and they come in at 240 over 140 on medication, our goal is to get them stable, off all medications, as close to 90 over 60 as possible. So we are going to fast until their blood pressure normalizes.

However, we have to also recognize that people have limitations. So we are monitoring their electrolyte levels, their clinical presentation, and so forth to ensure that we do not transition from the fasting state into the starvation state.

Fasting is what happens when you have labile reserves that you are mobilizing and utilizing. If you exceed those reserves, you enter a process called starvation. If you continue starvation, then the client would die, and that would be really bad for outcome data, so we try not to do that.

I have to say that in 10 000 consecutive patients, everybody who has walked in for fasting has been able to walk out. We have no mortality associated with fasting to date, and as our safety data indicates, this is a safe and effective process when it is done according to protocol.

***IMCJ*:** During a fast, what are the things that you are watching for? What are some of the adverse effects that could happen during a fast that you need to be careful of?

Dr Goldhamer: Well, you would prefer not to have people die. So number 1 on the list is avoiding mortality. Patients are going to have all kinds of adverse symptoms. They are going to experience a foul taste in the mouth. They are going to get low back pain in early phases of fasting because of referral activity from changes in the kidneys. They are often going to get skin rashes, discharges from mucous membranes, headaches, irritability, nausea, and vomiting. Orthostatic hypertension is a common issue, so we have to train patients to move slowly as they get up so they do not experience orthostatic events.

Many times, people go through the classic healing crisis where chronic problems become acute, and it can become quite distressing. So our job is differentiating an acute response generated by the body in its attempt to get well from a problem. These often look, on the surface, very much the same. The way we do that is with twice-daily evaluations; laboratory monitoring, including blood and urine; noninvasive diagnostic testing, including electrocardiographs, barometry, etc; and when necessary, more invasive diagnostic testing in terms of ultrasound, etc.

We do standard clinical monitoring, but carefully, and then use the body's response to guide the duration and intensity of treatment. So the principals are the same as managing any condition. The difference is that we have a lot more data points because the patients are living in our facility. They are under our direct and continuous control 24 hours a day, 7 days a week. And so we have the ability to control everything in their environment from their rest to their diet—even the input and stress that they are exposed to, to a large extent.

That control gives us the opportunity to manipulate even the subtle effects, in terms of their hydration and other factors, and it is what allows us to ensure a safe experience. The body does all the healing, which is what generates the effects of the experience.

In addition, we have the ability to introduce any appropriate conservative therapies, in terms of chiropractic

manipulation, physical therapy, body use instruction, etc, in an environment with intense education. We call it a residential health education program. Its primary focus is teaching people what they are going to need to do when they go home, so they can get a good result and make us look good.

We do require a 50-year follow-up. We ask our patients to maintain optimum health for 50 years when they depart this facility, and then, after that, they can do whatever they want.

Interestingly enough, I am just getting my first 30-year follow-ups. I just saw some of the first patients I saw 30 years ago. This one gentleman, in particular, is 85 now. He was 55 when I first worked with him, and he said the only problem he has had is that he has outlived all of his friends and, actually, one of his kids.

***IMCJ*:** What else are you seeing from these people?

Dr Goldhamer: If you treat high blood pressure medically, they tell you, "You must take these drugs the rest of your life." If you have diabetes, they'll tell you, "You'll be on these medications the rest of your life." If you have autoimmune disease, like lupus, rheumatoid arthritis, ulcerative colitis, ankylosing spondylitis, psoriasis, or eczema, you will be told, "You must be on medications the rest of your life," because medicine guarantees you will never recover. They promise you, if you follow their advice explicitly, you will be sick the rest of your life.

This approach offers people an option to make lifestyle changes, eliminate the cause of the problem, and stabilize their conditions, to the point where the medication is no longer needed. So it is a very different approach to managing these diseases of dietary excess—the diseases of kings, if you will—than conventional medicine, which is more about the suppression of the symptoms associated with the disease, rather than removing the underlying mechanisms by which they are caused.

***IMCJ*:** You have said that fasting really does not cure anything. Can you expound that?

Dr Goldhamer: I believe that nothing really cures anything. The fact is you are managing literally everything and trying to create a whole new static balance where the body can try to heal itself. So I do not think fasting is a cure.

Fasting is just a way to create an environment that gives the body a selective advantage at mobilizing and eliminating the accumulated intermediary products of metabolism, the toxic byproducts that can be associated with suppression of the body's ability to heal itself. So you are just removing, or giving the body a chance to remove, impediments to healing and it does it rapidly.

The unique thing about this ancient practice of fasting is that it gives the body a chance to rapidly mobilize and eliminate these accumulated intermediary products and toxic products. So you see clinical changes very quickly. Things that might take weeks or months with careful feeding can happen within days or weeks with fasting.

***IMCJ*:** When do you caution against fasting?

Dr Goldhamer: Fasting is not for every patient. Not every patient has the adaptive capacities to go through the rigors of fasting. Some patients require careful replenishment prior to fasting. In other words, you do not want to take a patient who has depletion issues into fasting because their adaptive capacities to hold up to fasting are limited. So we might go through careful refeeding and replenishment prior to fasting for patients who have depletion issues.

***IMCJ*:** Traditionally, fasting has often been connected with a spiritual journey. Is there a spiritual aspect to fasting at TrueNorth?

Dr Goldhamer: Every major religion has a tradition of fasting, and there is a reason. It is because fasting changes the way people think and feel about themselves and the world around them.

There is a book written by a patient of mine. It is called, *Fasting: An Exceptional Human Experience*, by Randi Fredricks, PhD. Dr Fredricks reviews in that book all of the different religious traditions and where they come from. We recognize that we are not a spiritually directed facility. In other words, we have doctors with all kinds of different beliefs. We are not the place to teach people how to get into heaven or what flavor of religion to believe. We certainly respect and acknowledge the fact that fasting tends to help people tap into an inner self. That is what I would consider as a positive side effect of fasting. Our approach is really a clinical approach, which is creating an environment where the body can do what it does best, and that is heal itself.

***IMCJ*:** You also offer different programs such as juices and nutrition training. How do those interact with your fasting program?

Dr Goldhamer: Well, every patient who undergoes a period of stay at the Center—say, for example, they do a water fast—will then terminate that fast, usually on juices, and then be introduced to whole, natural foods. There is a period of one-half the length of the fast, minimum, of medically supervised refeeding that happens at the Center. So everybody who goes through fasting also goes through a period of replenishment.

Some people are not candidates for water-only fasting. It would be too vigorous, or they may have depletion issues. They may do a modified fasting program, or they may go on a healthy eating program. The fact is, just putting people on a plant-based, whole-foods, sugar-oil-salt-free diet is sufficient to induce intense healing response. It is just not quite as vigorous or as efficient as water-only fasting.

Water-only fasting introduces a unique biological adaptation that is rather unique. But the rapid healing response is also quite vigorous, which is why fasting can sometimes be an intense and miserable experience. The good news is, if patients have dramatically good results, they forgive us for that.

***IMCJ*:** When you are refeeding people, you source the food from your own facility, correct?

Dr Goldhamer: We have a very fortunate situation, being in California. We have a 2-acre organic farm. We also have contracts with local growers that grow specifically for us. We have 2 organic suppliers that come from the San Francisco markets, which supply most of the country with organic produce. And we have an abundance of excellent-quality fruits and vegetables available all year long. So it is a wonderful place to be doing a healthy eating program, just because of the fact that so much is grown right here.

We also have a food service business, TrueNorth Kitchen, where local people can obtain food. This improves local compliance of our patients who happen to live in close proximity to the Center. We have a wonderful chef, Ramses Bravo, who is the author of a cookbook, *Bravo!*. He does a great job, both in terms of health education as well as food preparation, and has a great staff. It is a great fringe benefit for the 39 people who work for TrueNorth Health Center, the 11 clinicians and 28 general staff, because they are able to get their meals at TrueNorth Health, and that tends to be seen as a very positive benefit of working here.

***IMCJ*:** Do you advocate putting a little fast into daily or weekly life? Is there some benefit to doing that?

Dr Goldhamer: As you know, Valter Longo, PhD, looked at the effect of fasting, first in rats and later in people with cancer. He noted that, when rats are treated with conventional therapy, at a certain point, all the rats died.

But, if you fast the rats while introducing the therapy, the rats survived because there apparently is something in fasting that induces a protective response, making healthy cells more protected and cancer cells more vulnerable. He has done that in rats; he has done it in humans.

We are hoping that the safety study that we are about to publish will give him the leverage to be able to get authorization to do long-term fasting in a study. At this point, he has done very short-term fasting. And so, hopefully, he'll see that there's a compounding effect of fasting.

Short-term fasting can have a great benefit, but long-term fasting can have a geometric effect. So the farther you go into fasting, within the person's capacities and reserves, the more profound the effect appears to be.

***IMCJ*:** For somebody who is generally healthy, is there a benefit to incorporating some sort of fasting regularly into their lifestyle?

Dr Goldhamer: Everybody incorporates fasting every day. We go to bed after eating dinner. We wake up and break our fast with something called breakfast. And so there is some suggestion that—for patients who are looking, for example, for weight control—they can use *intermittent fasting*. I think it would be better termed *intermittent feeding*.

By limiting the window of time that people are feeding during the day—not eating until 10:00 AM or noon, and limiting the consumption after 5:00 PM or 5:30 PM—you can also significantly narrow caloric consumption. And, as a consequence, that reduction of dietary excess is associated with a healing response. So I think the intermittent feeding may have benefit as a weight control technique.

The idea of fasting 1 day a week, arbitrarily, is a bit of a misnomer because the main biological and therapeutic benefits of fasting actually take place progressively over time. It is not the first day or two that are the most efficient at detoxification: It is the last day or two.

The most biologically expensive part of fasting is actually the early part of the fast, as the body is adapting. So, yes, it is possible that intermittent fasting may have some utility in an individual clinical case, but we do not want to confuse it with the clinical benefits of fasting that we are seeing with long-term fasting because the changes that take place accumulate progressively as you get farther into the fast.

So to arbitrarily say, "I am going to fast 1 day a week" and think that I am getting proportional clinical benefits to those of a longer fast done once or twice a year would turn out to be a mistake—although the research we are doing will hopefully elucidate further exactly what is going on.

Anything that prevents overeating, however, is going to allow the reversal of the disease of excess. Intermittent feeding may be a very powerful clinical tool to help modulate feeding and eliminate dietary excess. But it is not going to likely be inducing the same mechanism tree that we are seeing with long-term fasting. I think the two put together may turn out to be dramatically more effective than just long-term, intermittent feeding. Intermittent feeding may very well be useful, in terms of maintenance and support and reversal of disease of excess over time. But I do not think it is going to be inducing the same mechanisms that you see in water-only fasting. It is just another clinical tool to help doctors get people well and help keep them that way.

The problem with fasting, as I see it, and the reason you see so many people pursuing modified fasting and intermittent fasting lies in the need for a controlled environment for patients, often an inpatient environment.

It is problematic for people to have to take a break, rest, and give the body a chance to do the type of intense healing it does with water fasting. So there are structural limitations to being able to do this clinically. Everyone wants something that they can do on an outpatient basis that is quick, simple, easy, pleasant, but still going to have the profound effects.

***IMCJ*:** That is one of the vices of American culture—that we cannot ever shut things off …

Dr Goldhamer: And maybe that is part of the benefit some of our patients get: They are forced to turn things off. We say that fasting is very similar to rebooting the hard drive in a computer. Sometimes, the computer gets corrupted and you do not know exactly where the problem is. But if you just turn it off and reboot it, a lot of times, that corruption gets cleared out.

The same thing happens in the human body. We develop issues, and when you turn the system down with fasting and allow it to reboot, a lot of things—from gut flora, microbiota in the gut, to chronic inflammatory conditions—tend to sort themselves out. So it is analogous to rebooting the hard drive in a computer, and we find that that is very beneficial.

***IMCJ*:** Do you think that just unplugging and pulling people out of unhealthy patterns forces them into a stress-reduction situation and rebalances cortisol response?

Dr Goldhamer: Right, it will be interesting to see exactly what changes happen to the neuroendocrine system, and that will be one of the things we are able to investigate as we go forward with our research model.

In other words, we've gotten a lot of interest from universities, including places such as Harvard, that want alloquats of our blood samples because we are the only people right now that have approval from the human subjects committee to do long-term water-only fasting that I am aware of. They want to see the changes that are occurring. They know that for those patients with lupus, the acute reactive proteins are going down. They are getting well. And if they can identify where those changes are taking place, then they might be able to come up with a drug that will do something similar.

So I think a lot of people are interested in this, not from a holistic health standpoint, but just from a mechanistic standpoint. They want to know where the changes are occurring, so they can approximate what the body does naturally in fasting because, obviously, it would be much more practical if you could do that by giving a pill than actually forcing people to live health healthfully.

Nonetheless, it is letting us get access and potentially play with people who have amazing equipment, and we have a common interest in identifying those mechanisms. Our philosophy may be different, but our scientific interest is mirrored.

***IMCJ*:** You have certainly set a high bar for yourself.

Dr Goldhamer: I hope that we can meet those goals. I think, in reality, that when you need an intense response, there is nothing that is going to turn out to be as effective as doing nothing.