

Moods and the Immune System

How Low-Dose Naltrexone Can Make You Feel Better, Mentally and Physically

By Thomas Cowan, MD

I remember a poignant and pivotal moment when I was in medical school back in the early 1980s. I was doing gastroenterology with a proctologist, a doctor who treats diseases of the anus and rectum. The patient was a farmer who had a frank way of talking. He told the proctologist that he had an itchy butt.

The doctor then explained that there would be a number of causes of his condition. It could be parasites, it could be ulcerative proctitis, it could be cancer of the rectum or anal region, and that he would have to order some tests. So he ordered a stool test, he ordered a blood test, and he did a sigmoidoscopy and a colonoscopy of the lower GI, which is a barium X-ray of his lower bowel. And all this cost about ten thousand dollars and took a couple weeks.

Then the farmer came back to his office and the doctor said, "I've found out what's the matter with you. You have *pruritus ani*." *Pruritus ani* in Latin means "itchy anus." I started to laugh, which probably wasn't a good thing for my grade. I knew a little bit of Latin at the time and I said, "But he told you that."

But the proctologist was very serious: "Yes, but this is an official medical diagnosis. There is a very specific treatment for *pruritus ani*, using cortisone creams. You can find it in the textbooks."

DISAPPOINTING ANSWERS

Unfortunately, a lot of medical diagnoses are like the diagnosis the farmer got from his proctologist. For example, eczema means “skin rash” in Latin. So you go to an expensive dermatologist and tell him that your skin itches. The dermatologist looks at it and five minutes later he tells you that you have eczema. My guess is that 80-90 percent of all medical diagnoses are actually the Latin translation of what the patient told the doctor.

And that’s not what you want these days. That’s not why people are going to the doctor. The question is, what are patients really looking for?

Let me answer this with an analogy. Let’s say you’re a young man and you’re interested in a young woman at your office. You ask her out for a date and say, “I’ll meet you at this bar at seven o’clock on Friday night. I’ll see you there.” And she agrees. You’re really interested in her but you’re not so sure she’s interested in you. So on Friday evening, you show up at the bar. You wait and wait, until after eight o’clock, and she doesn’t show up.

When you see her at the office the next day you ask her, “What’s the deal? You didn’t show up for our date? You said you were going to come.”

And she answers, “Well, you know, the bus system in San Francisco is not very good. There’s all kinds of trouble. The supervisors are arguing with each other about the public transportation system. They don’t really run on time, and so I wasn’t there.” How do you feel when you hear this kind of answer? It’s definitely an explanation, and it’s probably true. Yes, there is trouble with the public transportation system. But the question is, how do you feel when you hear that explanation? You feel disappointed or unfulfilled, which is pretty much the same as you should feel if you’re told you have *pruritus ani* after a lot of expensive tests. There’s a sense of inner disappointment. This is not a fulfilling experience.

So you go back to the young woman and say, “I don’t really like this explanation. Could you say more?”

“Well,” she says, “dates are not necessarily good things because they lead to relationships, and I don’t really like relationships, and so I’m

not sure about how much that was going to work. Anyway, human history has been clouded by trouble with relationships.”

So now how do you feel? Not good, right? She’s given you an unfulfilling answer.

Today we live in the age that Rudolf Steiner, founder of Anthroposophy, called the Age of Consciousness. And today, there is only one answer that would satisfy you in this situation, which is: “I don’t like you. I didn’t want to show up because I didn’t want to spend that two hours on a date with you.” That answer might hurt you, but it would also provide a deep satisfaction because it gives you the reason why this happened. You are disappointed but you’ll move on because there is a certain sense of completeness and fulfillment in the experience.

I would submit to you that it’s exactly the same with medicine. You go to the doctor and you say, “My butt itches, I have a skin rash. When I walk upstairs, I get chest pain.” Or, something that is very common these days: “I’m emotionally depressed. I feel sad and lonely about life, especially in the winter.” When you tell your doctor that you are depressed during the winter months, you don’t want to hear, “You have seasonal affective disorder.” That’s like telling you that the buses don’t run on time when you’ve been stood up on a date. Seasonal affective disorder means sadness during winter. Well, that’s what you told the doctor. “Now it’s winter and I’m sad, and you tell me I have seasonal affective disorder?”

Let’s say that you feel sad all the time, that you have depression. Sometimes the doctor will say you have clinical depression. Clinical means a clinician (such as a doctor) told you that you’re sad. Would you feel satisfied with that response? “Oh, now I know what’s the matter with me.” Of course not!

We live in the Age of the Consciousness Soul. Anything less than conscious choosing about how we are going to live our life leaves us feeling unsatisfied. And conscious choosing means that we accept the consequences of our choices. In other words, most people want to know, when they go to a doctor, what did I do? What are the consequences of the choices that I made with my diet, with my movement, with my spiritual development, with my emotional life, with my choice of laundry soap, with my choice

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of partners, with my choice of houses? What is it that I chose that has led to my butt itching? Or to my sadness in the winter? Is it because I believed the dermatologist who said I should never go out in the sun? Or that I believed the doctors who said I should never eat animal fat because it is full of cholesterol?

It turns out that vitamin D is made from sunlight interacting with the cholesterol in the fat of our skin. So if you choose to believe your doctors, avoiding the sun and animal fats, you're going to have low vitamin D and you're going to be seasonally affectively sad because of the consequences of that choice. Such an answer might make us feel bad—like being stood up on a date—but ultimately it is the kind of answer that satisfies us in this Age of Consciousness.

Unfortunately, if you insist on answers like this from your physician, most of them will be very frustrated because they don't think like this. They don't have a conception of the world that's based on people choosing and accepting the consequences of their choosing. Instead, they blame most disease on germs or genes, something we can't see and presumably have no control over.

A FRAME OF REFERENCE

Every doctor who's working with patients has a frame of reference that he or she uses to understand the manifestations of a person's illness. For the vast majority today, the frame of reference is one of materialistic science, which leads to a Latin diagnosis and treatment with a pharmaceutical prescription.

My frame of reference is inspired by the work of Rudolf Steiner. It is a frame of reference based on deep philosophical questions—something frowned on by conventional medicine.

People living today basically have two conventional philosophical views to choose from. One is the notion of intelligent design, namely that plants, animals and humans were created by

God, and then boom, it's all over, here's the finished product. The other is the Darwinian theory of evolution, a slow evolution by chance, without any choices, without any direction, from slime mold up to humans, step by step, billions of years. Those are the two models we have to choose from.

However, when you look into the world, you will find some phenomena that cannot fit into either a "by chance" or an "intelligent design" model. Steiner proposes a third model: gradual evolution through conscious intel-



ligent design. The premise is that life forms were created at certain times in such a way that certain functions were actually cast out from the human being into nature and exist there as self-contained entities that we call an animal or a plant or a mineral. It's like saying, "In the beginning was human being," or "In the beginning was everything."

A good analogy is a sculpture. What did Michelangelo say about the creation of the statue of David? "The statue of David, the form, exists inside the marble and I took the extraneous bits away and the form emerged as the statue of David." That's

exactly what Michelangelo said. Amazingly, that's what Rudolf Steiner said about the evolution—a kind of reverse evolution—or the creation of the human being.

IN MAN, IN NATURE

Think of the digitalis plant—think of it as one chip of marble that falls to the ground during the creation-evolution of man and grows into the foxglove plant. At the same time on an inner plane, the human heart is formed. That's a pretty wacky idea but that's what Steiner said. Steiner said that we will know that the foxglove was formed in parallel with the formation of the human being because when you look into the human being, you will find the remnant or essence of digitalis still remaining there. And he is correct because the human heart actually has digitalis receptors, which are like locks. Digoxin is produced in our adrenal glands. It goes into the blood and works like a key on the locks in the heart. Amazingly, this chemical is only otherwise produced in nature by the foxglove plant. This fact is a very difficult thing to explain through either natural selection or intelligent design.

Likewise our bodies produce feel-good chemicals that are also produced in nature by plants like marijuana and the opium poppy. This is one of the most amazing medical discoveries of the last twenty years. The endorphins, the so-called feel-good chemicals in our bodies, are the same

as those produced by certain plants. If you are a thinking person, if you are truly conscious, these discoveries will require you to engage in some deep philosophical considerations.

WHAT IS ILLNESS?

We now come to the question, "What is an illness?" According to this line of thinking, an illness is a situation where at a particular place in your life, you need to be reunited with something in the natural world outside yourself, say, with the digitalis plant, for your future health and evolution to progress. The disease represents an inner need for reunification with something that was cast out of you into the world, and you need to have it brought back. So the process of healing is a kind of reunification process, reunification with something we prematurely lost as a human being. In this way of thinking, the world out there was created as a reservoir for us so that when we need to be reunited, it exists out there in a form that we can use. That's a really different view of medicine!

Let me give you some examples of the process of conscious choice, leading to repercussions, that is illness, and ending up with a need for reunification. In other words: see the world out there, choose something from the world, reunite with it, make all better. That's the process.

Let's take the case of a Jane Smith who makes a conscious choice to consume a lowfat diet and to use margarine instead of butter. She chooses this way of eating because she thinks it is the proper, conscious choice for a human being. Then, as the years go by, she becomes overweight and sluggish, with sluggish thyroid function, and she ends up with sluggish gall bladder function.

At this point we can discuss biochemistry. We know that we make bile acids (also called bile salts) out of cholesterol and healthy fats. If you lead a life of eating *trans* fats, if you eat processed transformed fats which don't have the right chemistry, you will end up with bile acids that are too thick and sludgy. As the years go by, the bile gets thicker and thicker, and Jane Smith's body gets into a kind of negative feedback system because the bile salts digest fats. You have weird bile salts, you don't digest the fats right. Therefore, it's harder to make healthy bile salts. The whole

process just keeps going round and round and Ms. Smith ends up with sluggish bile flow, pain when she eats, difficulty digesting fats and maybe even gall stones. You can see how this happens. You can see that whole process from conscious choice into the biochemistry into physiological consequence into pathology—that is, gall stones that you can see on an ultrasound.

Then she goes to the doctor and says, "I have pain when I eat fat and the pain is here." He looks and does an ultrasound and says, "You have gall stones." For the thinking patient, this is an unsatisfactory answer because you knew you probably had gall stones. The conventional solution is to take your gall bladder out. So the physician takes Jane's gall bladder out—but she's not restored. There's no reunification, there's no learning, no change in diet. There's just more to the vicious cycle because people who have their gall bladder out have a higher incidence of cancer of the colon. That's because the bile doesn't flow properly. So taking Jane's gall bladder out is a very unsatisfying solution for her.

TRUE HEALING

If you want to restore healthy bile flow, what do you do? There are two actions necessary. One is to make different choices, which means eating healthy fats, eating healthy cholesterol, and therefore making healthy bile acids which help digest the fats properly. The other is to look for a substance out there in the world that represents bile flow.

Steiner often described plants as three-fold, flipped-upside-down versions of the human being. The human body has three main areas, the head, the heart and lungs, and the belly or metabolic area where digestion and reproduction take place. Plants are organized in the same way, only flipped upside down. The nerve or head pole of the plant is in the roots, where the plant senses environmental conditions and takes in nutrients; the breathing is in the leaves; and the metabolic-reproductive pole is in the flowers.

One plant that stimulates the healthy flow of bile is called *Chelidonium major*, which has a bilious fluid in the roots. According to what's called the doctrine of signatures, you can see from the way a plant grows, and from what the plant does differently from other plants, what this plant

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is telling you. *Chelidonium major* tells us, "I am the reunification of the stimulation of healthy bile flow." So you extract the plant, make a preparation, reunite that with the human being and end up with healthy bile flow. Healthy bile flow plus conscious choices about food and how you live, that's a different kind of healing, true healing that involves reunification and an education of the human being so that his or her life is better. That's what we're looking for.

So the job of a doctor is to read the book of nature and to understand what it is that the human being is expressing, where that similar phenomenon is expressed in nature, and then reunify them to create a healing.

Here's another example. What's the hallmark of Parkinson's disease? There's tremor, shuffling gait and so forth, but these are characteristic of a number of diseases. But there's one thing about Parkinson's disease that's very distinct, very unusual and almost spooky. The essence of Parkinson's manifests in the face with staring, with a wide-eyed, blank face. Where do you see that in nature? You see it in the octopus, which seems to be all head. The whole thing appears to be a head floating in the ocean with an unblinking eye staring out at you. It looks for all the world like the picture of a Parkinsonian face. The octopus is the picture of Parkinson's floating in the ocean.

Here's where it gets interesting. Inside the octopus you find a dark liquid called sepia. They used to use sepia as ink. In fact the US Constitution was written with sepia ink.

So you have this picture of a blank staring face secreting a puff of black inky juice which is how it wards off predators so they don't see it. The site of the pathology in Parkinson's is in the substantia nigra, which means "black substance." In the very deep part of the brain there's a little gland called the substantia nigra which secretes black inky juice. This juice contains dopamine and other neuro-hormones, which supposedly are deficient in the case of Parkinson's. Like the bile salts, many of these neuro-hormones are made of cholesterol. So in addition to requiring unification with something in the outer world, the Parkinson's patient also needs to make changes in his or her diet.

Thus we now have a picture of the Parkin-

son's patient, who for many years chose a deficient diet, resulting in a lack of neuro-hormone production in the substantia nigra, now needing reunification with a certain kind of octopus right down into its black inky juice. That substance can be supplied with homeopathic sepia, made from black ink from a similar species, the squid. Lifestyle choices are also involved because there are certain environmental poisons, such as agricultural chemicals and *trans* fats, which specifically target the substantia nigra.

So, we really have a very different concept about what we mean by medicine and what healing is, which is a kind of reunification combined with education about the choices that led you to develop the disease in the first place.

A LESSON FROM HEROIN ADDICTS

Let's switch gears now and talk about a very interesting medicine called naltrexone. Naltrexone was created in the late 1970s as a drug to treat heroin overdose. This was around the time when there was a lot of heroin use in this country. When you overdose on heroin it depresses your respiratory centers and you go into respiratory arrest and then die. So the pharmaceutical industry spent some time looking for an antidote to heroin overdose and they came up with naltrexone.

Having worked in emergency rooms for ten years on and off, I have prescribed it myself. A person overdoses with heroin, you give him 300 mg naltrexone by IV, and it immediately reverses the respiratory decline from the heroin. The patient wakes up, walks out the door and goes and uses heroin again. Great stuff!

Nevertheless, a number of doctors in the early 1980s decided to see whether naltrexone could help heroin addicts recover from their addiction. They treated a group of heroin addicts, many of whom had AIDS and other immune problems, with 50 mg of oral naltrexone. Two things happened. One, the oral naltrexone bound with the opiate receptors and competitively blocked them. Heroin is like a key that goes into the cell, which has a specifically designed lock that fits only opiates. This is another example, as Rudolf Steiner said, of the opiates being made in a certain relationship to the human being. We actually have receptors for poppy opiate chemicals that live out there in nature.

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When they gave these people 50 mg of oral naltrexone, it blocked the receptors and heroin wouldn't make them high. So the addicts said, "We'd rather be dead than take this stuff." Naltrexone failed as an opiate heroin addiction medicine because all the addicts who used it felt terrible all the time.

Why did it make them feel so bad? That question led to the discovery of something probably everybody has heard of, which are endorphins, our body's own feel-good chemicals. Endorphins comprise a category of at least twenty neuro-hormones, meaning hormone-like chemicals that are made in the nervous system and other places in the body, specifically in the adrenal glands. Some of these are biochemical copies of the opiates the poppy plant makes, or perhaps we should say that the opiates the poppy plant makes are biochemical copies of the endorphins we make in our bodies. The same is true for the cannabinoids—our bodies make the same chemicals the marijuana plant makes.

Rudolf Steiner would put it like this: when the nervous system was organizing itself into a functional system, it made neural chemicals, the endorphins, in our body. As a reservoir, it put the poppy plant and the marijuana plant on the outside world as free, growing plants. As all heroin addicts have learned, if your own opiates are not being produced, or the receptors are not working (probably because of dietary choices that you have made for many years), you have a strong urge to reunite with the identical chemicals produced in the world outside yourself. They make you feel good for a while until they wear off. And of course, because they are not carefully regulated like the ones in our bodies, those from nature have terrible side effects.

The failure of naltrexone for heroin addiction directly led to the discovery of endorphins and to the discovery that feeling good, having an elevated mood, has something to do with the chemicals in our body. The research also confirmed the fact that the world out there is a mirror of the world inside ourselves.

The next step in this story involved a neurologist and immunologist named Bernard Bahari in New York City, who had a lot of AIDS patients who were heroin addicts. He had the insight to check their endorphin levels. Lo and behold he

found that their endorphin levels were extremely low, maybe as a consequence of taking heroin but maybe just naturally occurring. If you take heroin it actually suppresses endorphin production, so it's hard to know which comes first.

The next discovery was even more amazing. The researchers isolated the T-cells and found that most of the receptors on the cells of the immune system—the B-cells, T-cells, thymus cells and so forth—are endorphin receptors. That's right, over 90 percent of the receptors on all the immune cells of our bodies are endorphin receptors. These cells are like an endorphin-coding apparatus. Here's another way of saying it: the endorphins are the fuel for the proper functioning of our immune system. Without endorphins, the B-cells don't work, the T-cells don't work, and eventually our immune system starts misbehaving.

Just think of how clever your body is! It hooks up your immune system—your protection against bacteria, viruses, cancer and autoimmune disease—with the chemicals that determine how you feel about life. This is a very profound statement by the body. In other words, if you find yourself saying, "I don't feel very good, I don't really like my life, it's not going very well," but don't make any changes to remedy the situation, this chronic condition of feeling bad will have a profound impact on your immune function and even on your propensity to get immune-related illnesses such as cancer. If you're feeling bad, you're not supplying your immune system with the fuel it needs to function properly. So how you feel is not just emotional matter. There is no division of body here and mind there. There's just you. How you function and how you feel about how you function is a direct reflection and manifestation of how your body will work. One of the best ways of seeing this is through this whole endorphin story. The endorphins control the immune system.

INCREASING ENDORPHIN LEVELS

Now let's consider how to go about increasing the endorphin levels in people. We need to consider the premise that low endorphin levels are what cause people to use drugs like heroin in the first place. They're a supplement for addicts, who have an endorphin deficiency, which makes them feel bad. So if we get them to make more

endorphins or give them more endorphins, maybe they'll feel better and maybe that will stimulate their immune system to function properly so they won't get diseases like AIDS.

Researchers have tried all different ways to increase endorphin levels. Intravenous human endorphins cost one hundred thousand dollars per shot, last about five seconds and don't really work very well. They tried giving them orally. Like insulin taken orally, they don't get absorbed and so that doesn't work either.

In the process of this research they discovered a few things that naturally boost endorphin levels. The first is high-intensity exercise, the so-called runner's high, that feeling that you get when you're really exercising, when you have your second wind and you feel you won't ever get tired. We know that high-intensity exercise absolutely will boost our endorphin levels.

Another one is acupuncture. Probably one reason you can take someone's appendix out under pure acupuncture anesthesia, or do dental procedures, is because acupuncture seems to release these bursts of endorphins so you don't feel anything painful at all. You feel that life is good so you don't feel pain.

The third one, which every woman knows about, is chocolate. Chocolate has a chemical called l-phenylalanine which prevents the breakdown of endorphins, so it's a bit like sustained-release endorphins, except it doesn't last forever. Then you need more chocolate. A lot of women have found that out the hard way.

The fourth way to increase endorphin levels, which was discovered in the mid 1980s, is low-dose naltrexone. Remember that the researchers found that 50 mg blocks the endorphin receptors all day, which makes you feel terrible. But what about giving addicts 3 mg of naltrexone? And what about giving it to them right before bed?

It takes about two hours for naltrexone to get absorbed and block the receptors, and the low dose of naltrexone will only block the receptors for about an hour. Then the block wears off. The body looks at this situation and says, "Hey, somebody blocked my receptors. I need more endorphins." So it responds by producing more.

The reason you can almost consider this natural medicine is because the low amount of

naltrexone doesn't do anything harmful, except, in a few cases, inhibit sleep. Instead, it tells your body to respond in a certain direction. It is the most powerful, effective, easy and simple way discovered to boost endorphin levels. A lot of these early heroin addict patients with AIDS were treated with low-dose naltrexone in the early 1980s, and many of them are still alive.

AUTOIMMUNE DISEASE

According to the *New England Journal of Medicine* (November 13, 2003), "Preclinical evidence indicates overwhelmingly that opioids alter the development, differentiation and function of immune cells, and that both innate and adaptive systems are affected." Bone marrow progenitor cells, macrophages, natural killer cells, immature thymocytes, T-cells and B-cells are all involved. Thus the whole gamut of cells that we associate with the immune response is dependent on naturally produced opiates. In other words, autoimmune disease is really an endorphin deficiency—that's the proper diagnosis. These diseases are not caused by an over-activity of the immune system, as we've been told. They are caused by the immune system not getting what it's looking for. The immune system wants to be reunited with the poppy plant. Low-dose naltrexone helps the body reunite with its inner poppy nature by stimulating it to produce more endorphins, and when that happens, your autoimmune disease vanishes.

Multiple sclerosis (MS) is an autoimmune disease. Bernard Bahari treated 44 patients with MS. Forty-two of them went into remission—their disease stabilized and they stayed that way for the next fifteen or more years. When they discontinued taking it, their symptoms returned within one month. So this treatment does not really heal anything. But if there is anything that will help someone with MS feel better, will alleviate their spasticity and perhaps stop the autoimmune attack on their myelin, I'm all for it.

Crohn's disease is a debilitating autoimmune disease. The April 2007 issue of the *American Journal of Gastroenterology* published an article entitled, "Low-dose Naltrexone in Crohn's Disease." The researchers found that 67 percent of Crohn's disease patients went into remission with no other therapy but 3-4 mg of low-dose naltrexone before bed. About 80 percent of the participants reported a significant improvement.

I have used low-dose naltrexone successfully for Crohn's disease, ulcerative colitis and even Hashimoto's thyroiditis. In fact, for the first time I can see the way towards successfully treating autoimmune thyroid disease whereas before nothing really worked.

Low-dose naltrexone also works for rheumatoid arthritis, Sjögren's syndrome, lupus, in fact any autoimmune disease. However, it will not work with osteoarthritis, which is not an autoimmune condition.

Basically every illness that researchers have looked at—MS, irritable bowel syndrome, Crohn's disease, ulcerative colitis—shows improvement with low-dose naltrexone. The first thing that happens, as you would expect, is that people feel great because their inner poppy plant deficiency has been resolved. The second thing is their disease over time (usually two to four months) starts to go into remission, as if their cells are getting what they need and the proper fuel is there. It sure beats eating a ton of chocolate.

THE GAPS DIET

I would like to correlate these findings with the Gut and Psychology Syndrome (GAPS) diet described in the book by the same name by Dr. Natasha Campbell-McBride, because there are always deeper ways of looking at any of these diseases. By the way, the correlation with the gut and the brain is not something that Dr. Campbell-McBride came up with. Other books have explored this subject, including *The Second Brain*, published in 1999 by Michael Gershon, head of gastroenterology at Cornell.

Rudolf Steiner also made this connection. He once said, "The brain is just smooshed up guts." If you imagine the intestines coiled up into the cranium, that's what they would look like. The gut has the same receptors as the brain, including receptors for serotonin, and it works on the same sort of biochemistry as the brain.

For those who have heard Dr. Campbell-McBride, you know that the two most predominant chemicals in the GAPS syndrome, chemicals that alter the immune function as well as our neurological responses, are glutemo-morphines and caseo-morphines. These are morphine-like chemicals made from gluten in grains like wheat and casein in milk. These mimic the endorphin system of our bodies and cause it to get imperfect chemicals or morphine-like derivatives, not the ones it's really looking for, which are naturally made endorphins. It's as though your body is making abnormal poppy plants in your gut. You feel weird and that's why your immune system is dysfunctioning.

This is somewhat similar to the mechanism of low-dose naltrexone. What you need to do is stimulate healthy endorphins and get rid of that block as you heal the leaking gut and get rid of these toxic morphine-like derivatives. That will lead to the whole resolution of the autoimmune disease and at the same time create a feeling of emotional well-being.

THE TREATMENT

Of course, I never use low-dose naltrexone as the only treatment. Patients need to change their diet and to exercise. I usually start them out on a GAPS diet and then they transition to the more liberal Weston A. Price Foundation principles. Exercise is important and I particularly recommend Superslow weight training (see sidebar).

One hundred years ago, the healthiest people lived on farms. They ate nutrient-dense traditional foods and did hard physical labor. It would

be good if we could live as close to nature and its rhythms as possible, even getting rid of electricity, microwaves, computers and cell phones. That's impractical today—nobody wants to live without all these modern inventions. But we can still be healthy by following the principles of healthy diets, exercising and, when needed, reuniting ourselves with certain plants that produce the same substances our bodies produce.

In the case of the endorphins, however, those same substances produced by plants can be addictive and have harmful effects. That's where low-dose naltrexone comes in. When you take heroin, you tell your body that you won't be needing it to make endorphins anymore, that you will just get them from the outside. So when the heroin wears off, you feel terrible. With low-dose naltrexone, you can convince the body to make its own endorphins by blocking the receptors for just a short time. And this happens when you are asleep, so the body can devote considerable energy to this process.

THE RIGHT DIAGNOSIS

We started this discussion by talking about making the right diagnosis. Telling patients that they have an auto-immune disease, depression or addiction is like telling them they have eczema or *pruritus ani*. It's just a way of stating the obvious.

But when we diagnose these conditions as an endorphin deficiency, we provide a satisfactory, fulfilling answer, one that allows us to come up with a solution that really works. That solution includes the use of low-dose naltrexone to stimulate the body into making the natural opiates it needs to be healthy and feel good. ☺☺

PROTOCOL FOR LOW-DOSE NALTREXONE

Naltrexone is a prescription drug that requires a doctor's prescription, available from specialized pharmacies that know how to make it in that dose. Do not use a time-release version. There are about seven pharmacies that can produce low-dose naltrexone, including one in Scotland and one in Canada, listed at lowdosenaltrexone.org. If you contact these pharmacies as a patient, they will give you the names of physicians who will prescribe it. You usually start with 3 mg taken before bed. The website is also a resource for the many studies carried out on low-dose naltrexone.

There are virtually no reported side effects from low-dose naltrexone except, in rare occasions, temporary sleep disturbances. Some patients have taken it for 25 years, and it seems to not lose its effectiveness. The most common reported effect is an increased sense of well-being.